Miroljub Ignjatović*

SOME CHARACTERISTIC OF EUROPEAN (FLEXIBLE) LABOUR MARKETS

ABSTRACT

In this article, the author analyses the structure of the European labour market(s) and the correlation between the welfare state regimes and the types of labour markets in Europe. Using the data from the Labour Force Surveys and cluster analysis as a statistical tool, the author gets slightly different picture of European labour markets from those proposed by some other authors. The cluster analysis revealed 4 distinctive, regionally structured and coherent clusters (groups) of labour markets, which could be ranked from a more traditional, industrial type to the modern, flexible type of the labour market. Similar structure, with even greater regional coherence, is found regarding the characteristics of the labour market flexibility. It is argued that for such results cultural as well as economic factors, that are hidden behind the notion of welfare state regimes, are responsible.

Key words: (European) labour market(s), cluster analysis, welfare state regimes, flexibilization

Introduction

Labour market is one of the main pillars of the modern (welfare) states and work performance on the labour market is (still) the predominant way of securing the conditions for certain living standards for individuals and whole societies. But conjunctural and structural changes[1] in the different areas of the modern societies in the last 30 years influenced, among others, some changes in the structure, position and the significance of the labour market and work to the individual and the society. Moreover, rising of the unemployment, apparent inefficiency of the labour market in most of the European countries and consequences[2] that such changes brought into societies, made the relationship between welfare state and the labour market even more significant.

* Miroljub Ignjatović, MA in sociology, is a Ph.D. candidate and a senior research fellow at Faculty of Social Sciences, University of Ljubljana

Although they mutually affect each other - the activity and conditions on the welfare state affect the activity and conditions on the labour market and vice versa -, in his book "The Three Worlds of Welfare Capitalism" Esping-Andersen concentrates his research mainly on the first part of the relationship. Following the Esping-Andersen's statements that "of the many social institutions that are likely to be directly shaped and ordered by the welfare state, working life, employment, and the labour market are perhaps the most important" (Esping-Andersen, 1990:141) and that "peculiarities of welfare states are reflected in the ways in which labour markets are organised" (Esping-Andersen, 1990:142), we would expect important differences in functioning of the labour market between countries. To almost the same conclusion came also Esping-Andersen[3], but for him was much more important to find out the similarities in functioning of the welfare states between countries. On the basis of these similarities he came to conclusion that in the developed part of Europe exist three distinctive welfare state regimes (Liberal, Social Democratic and Conservative) and that "each of our three welfare-state regimes goes hand in hand with a peculiar 'labour-market regime'." (Esping-Andersen, 1990:142).

These statements were the inspiration for this paper. Taking in account main Esping-Andersen's findings and following some critiques, especially one that "given the emphasis on identifiable 'regimes' in which various welfare state and labour market characteristics cluster into distinct pattern, none of the authors uses a statistical technique designed to identify such clusters" (Stephens, 1994:209), we will concentrate our analysis (with the suggested technique – cluster analysis) on the outcome of the relationship between welfare state and labour market - the characteristics of the labour markets. In that way, our scope with this paper will be much more modest.

Instead of totally connecting the welfare state regimes with the labour market's characteristics, our hypothesis would be that similar outcome (similar labour market characteristics) can be achieved using different measures of the active and passive employment policies as well as other social policies i.e. with different (but similar) welfare state regimes. Welfare state regimes, of course, play important role in selecting these measures and providing the socio-political frame for the labour market, but there are some other important factors[4] behind the scene that, to some (great?) extent, condition the nature of the welfare state regime, limit the range and applicability of the selected measures and channel their results.

Cluster analysis

Cluster analysis[5], as one of the more complex methods for systematic research, is especially useful in the case of the multidimensional analysis[6] in which we search for the cases with greater similarity. The result is maximal possible homogeneity (minimal variation) inside between each cluster. Cluster analysis starts with maximal number of groups (e.g. each case represents it's own group), then, on the basis of the (dis)similarity matrix, it consecutively combines two most similar cases until all cases are combined.

The most similar cases are joined in the earlier steps, on the other hand the least similar cases are joined together at the end of the clustering - in the last steps.

Using the squared Euclidean distance as a measure for dissimilarity between the cases and the Ward's hierarchical method for clustering (which is usually most suitable for unknown pattern of arrangement between cases) of the cases, we will obtain certain result which is usually presented with the visual presentation of clustering called dendrogram. Once again, cases joined together nearer to the left end of the dendrogram are more similar than the cases joined together nearer to the right end of the dendrogram. For the completing of the analysis one must, at the end, arbitrarily, on the basis of distances between cases in the matrix, select the cut-off point, which would put cases into most adequate number of groups.

Since we are interested in the European labour markets, all 15 EU countries[7] were selected for the clustering, and also data from the Slovenian LFS were added. Thus we obtained group of 16 countries-cases in the cluster analysis. Two of the main reasons for such selection of the cases were limited time for preparation for the analysis and easy access to the comparable data[8] needed for the analysis. Those were also the reasons for not including all other European countries, especially those in central and eastern Europe, although it would be very interesting to see what would be the composition of the groups after the cluster analysis is performed with all these countries.

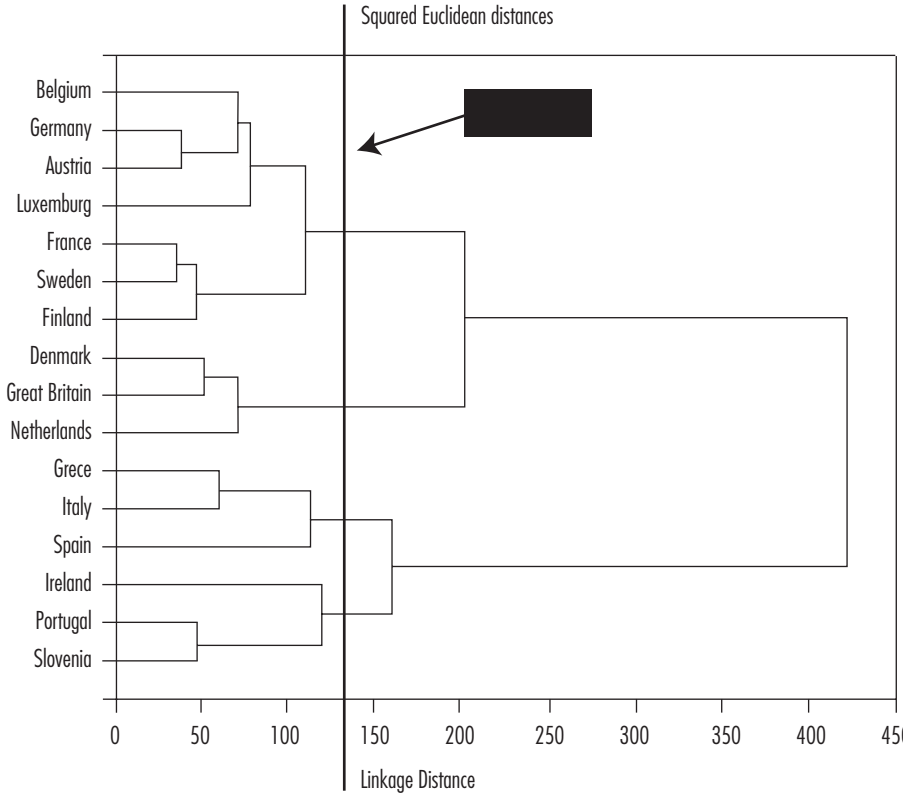
From the data, 53 variables[9] were selected. Chosen variables were grouped in 4 different sections (Demographics, Labour Force Allocation, Labour Force Utilisation and Structure of Unemployment) which allowed easier interpretation of the results.

Before we proceed explaining the results of the cluster analysis, it should be pointed out that presented connections between countries (within groups and between them) are more relative than absolute. That means that countries appearing in the clustering inside particular group are more similar than others, according to the variables used in the clustering, but differences between them can be still noticeable[10]. Appearance of the new country in the analysis or inserting new variables, can (not necessarily) slightly alternate current positions and links between the countries.

European Labour Markets

Using all 53 selected variables in cluster analysis we hope to get, as reliable picture of the situation on the European labour market as it is possible. The result of the cluster analysis is shown in the dendrogram 1.

Dendrogram 1
European Labour Markets
Ward's method



With the cut-of point placed at the place shown on the dendrogram we got four quite distinctive groups of labour markets:

Group 1: Belgium, Germany, Austria, Luxembourg, France, Sweden, and Finland;
Group 2: Denmark, Great Britain, and Netherlands;
Group 3: Greece, Italy, and Spain;
Group 4: Ireland, Portugal, Slovenia.

Chart 1
Geographic location of the European labour markets

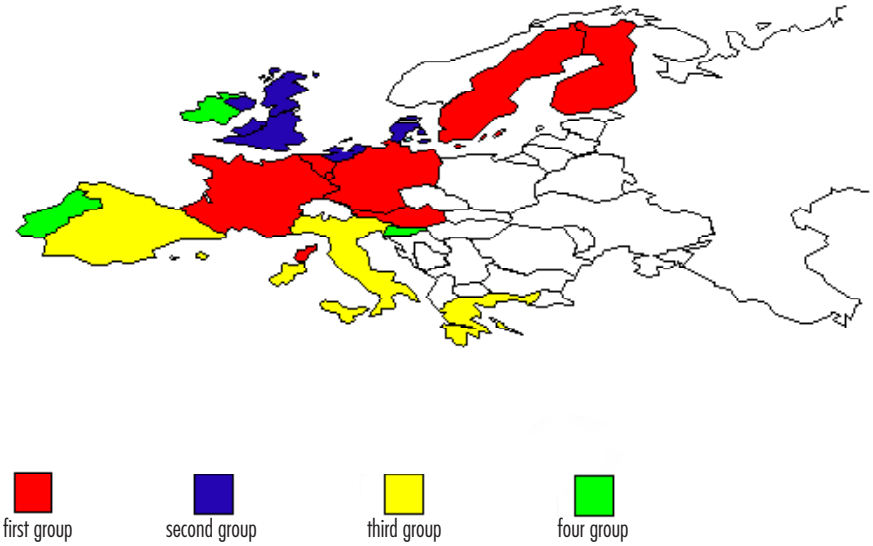


Chart 1 shows geographic location of the four groups of the labour markets in EU. It is very clear that there is regional pattern of clustering the European labour markets. Actually, if we take the cut-off point slightly to the right we would get two very big and distinctive groups (countries from the North and continental Europe on the one side and countries from the South Europe on the other side), with each group containing two sub-groups.

Due to the limited space, we could not present here all the characteristics for all 4 groups. Instead, it would be possible from the table 1 to gather some impressions about the differences between groups. As for other data, we would ask readers for a little trust, that the following descriptions of the 4 groups are reliable translation of the data.

Table 1
Some characteristics of the 4 groups
(mean values for all 16 countries and for groups)

	A04	A05	A09	A10	B01	B03	C01	C02	C05	C11	C18	D09
Total -mean	**47.5**	**83.1**	**66.3**	**46.7**	**15.8**	**28.6**	**76.0**	**38.2**	**7.4**	**9.5**	**39.8**	**44.7**
1.group	44.5	84.6	65.5	47.8	11.8	28.0	77.7	36.2	7.3	4.6	42.3	36.6
2.group	66.5	85.0	71.1	53.6	10.7	25.7	79.7	58.3	5.7	13.7	73.1	38.4
3.group	38.6	76.3	62.8	35.8	26.7	28.2	66.5	24.7	9.3	11.7	25.7	58.4
4.group	44.5	84.3	67.1	47.9	19.5	33.1	77.9	36.7	7.5	14.4	15.0	56.0

For the *second group* (which could be taken for the one of the two opposite poles on the imaginary scale in our classification of the labour markets), it could be said that there is a high connection between the welfare states and the labour markets. High activity rates[11] and employment/population ratios for younger and 'prime age'[12] workers and both sexes, imply that there is a gradual transition from the welfare state to the workfare state – "the welfare state which could be afforded" (Svetlik, 1995:1-2). Lower unemployment rates, smaller shares of the long-term unemployment, higher incidence of the persons in employment with part-time employment and voluntarity of it, and higher shares of employed working 46 hours and more per week, are characteristics which point to the greater utilisation of the labour force and more flexible labour market. If we are looking for the ideal types, this could be named **flexible model** of the labour market. It could be, conditionally, linked to the Esping-Andersen's liberal model.

The *first group* is, according to its characteristics, similar to the second. Activity rates and employment/population ratios are slightly lower than in the second group. The share of the employed in industry is a little bit higher; also the share of full-time employed and average numbers of usually and actually worked hours. Higher are also: the share of the job seekers seeking full-time employment, the share of the unemployed registered at the public employment office, the share of the job seekers seeking through the employment office and the share of the long-term unemployed after loss of job. All that characteristics imply milder conditions on the labour market caused by the activity of the welfare state. This situation could be described as the de-commodification[13] of the labour force. Taking in account regional location of the countries in this group, we can name this type **continental type** of the labour market. If we, again, search for the connections between labour market and welfare state, we can say that the main characteristic of this type is combination of, on the one side, the flexibilization of the labour market conditions and, on the other side, care for the preservation of the social welfare. Comparing with the Esping-Andersen's regimes, we can find in this group members of the two different welfare regimes (Sweden and Finland from the

Scandinavian social-democratic type and Belgium, Germany, Austria, Luxembourg and France from the conservative-corporatist continental type).

The *fourth group* represents the opposite pole to the second group. While it holds some very positive potentials: relatively big share of younger population (which, with the right educational system, could represent a great potential of the highly skilled labour force in the future) and again relatively smaller share of the older population (which means smaller burden to the welfare system), there are some other characteristics that make the situation on the labour markets in these countries less optimistic. Higher share of employed in industry, higher share of self-employed (especially in agriculture), higher share of employed full-time, smaller share of employed part-time and the greater involuntarity of part-time employment among those with such employment, are some of the characteristics of the fourth group. With all additional characteristics, not mentioned in this paper, this group shows characteristics of the more **traditional**, **industrial type** of the labour market.

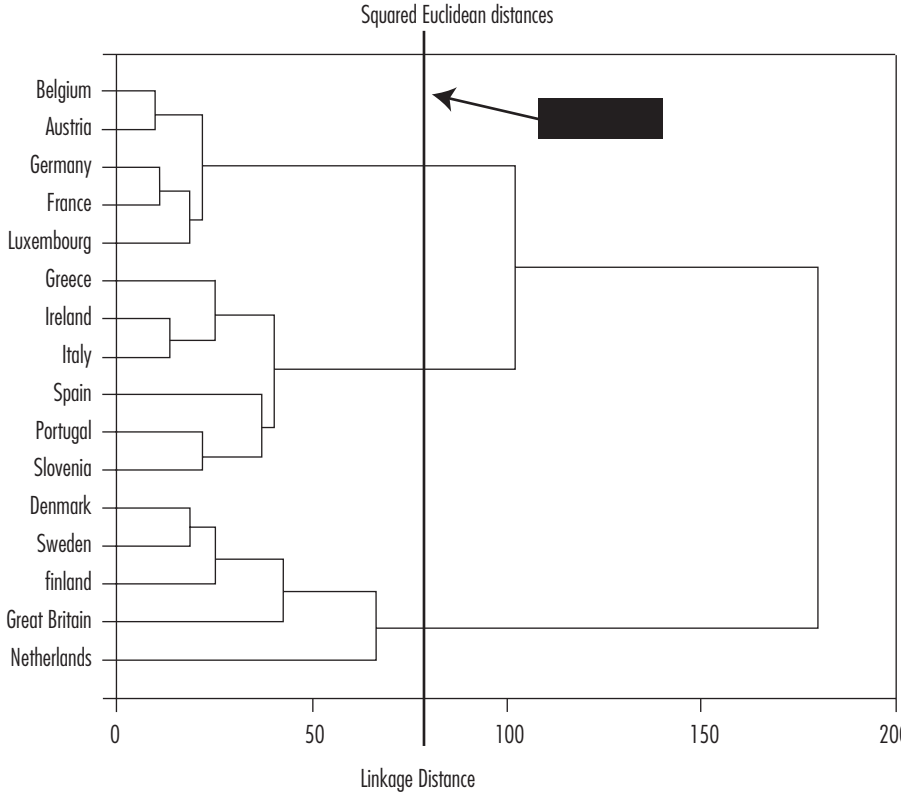
And finally, the *third group* is to some extent similar to the fourth, but only to some extent. This group has relatively older population, lower activity rates and employment/ population ratios (especially of those with the higher education), higher share of the self-employed (especially in services), higher unemployment rates and, as the only group in the analysis, higher share of the temporary employed labour force. Looking to all characteristics and to distinct regional pattern, we can describe this group as **Mediterranean type** of the labour market.

Flexibility of the European Labour Markets

Changes and problems of the modern European labour markets that were mentioned in the introductory part of this paper are often taken as a consequences of the rigidity of the same European labour markets and more broadly as a sign of the crisis of the modern welfare states. Flexibilization is often proposed as the only 'panacea' for the troubled welfare states and especially labour markets. There are some common trends that lead toward greater flexibility of the labour market conditions, on the one hand and of the labour force, on the other. But, again, each welfare state has its own path and strategy how to incorporate flexibilization in the current system.

In this section we will focus on the utilisation of the labour force as a possible sign of the labour market flexibilization. For that purpose we selected 21 variables[14] from the same list of variables. This set of variables should help us show how effectively the labour force in the particular labour market is utilised.

Dendrogram
Flexibility of the European Labour Markets
Ward's method



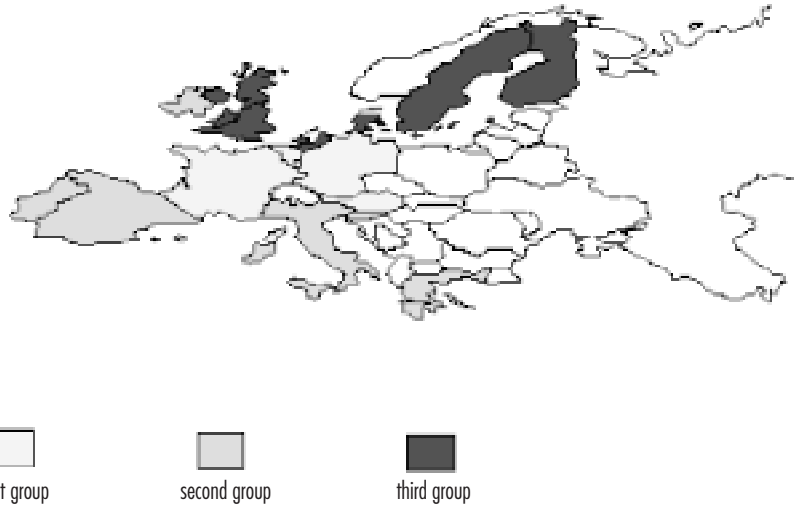
Regarding the utilisation of the labour force, there are three very distinctive groups of labour markets:

Group 1: Belgium, Austria, Germany, France, and Luxembourg;

Group 2: Greece, Ireland, Italy, Spain, Portugal, and Slovenia;

Group 3: Denmark, Sweden, Finland, Great Britain and Netherlands.

Chart 2
Regional structure of the flexible European labour markets



Comparing with the first cluster analysis there is even more distinctive regional arrangement of the European labour markets. According to the selected criteria and from the chart 2 we can divide European labour markets to the northern, continental and southern part.

Some of the key features for the *first group* of countries are: smaller share of the self-employed among persons in employment (11.2%), greater part of the persons in employment in services (67.1%), where, again, we can find smaller portion of the self-employed (10.5%), higher share of employed with full-time employment (86.2%) or, in other words, overall less developed part-time employment, but on the European average in the services (17.5%), where employed have actually worked more hours (39.1) per week. Higher is the share of employed usually working at home (7.3%). Among the part-timers there is a smaller share of younger labour force (9.2%), and fairly higher of 'prime age' group (71.4%). The difference is noticeable also between sexes (less than average share of males (3.5%) and more than average share of females (28.2%)), part-time employment is also less involuntary employment and, finally, particularly small is the share of temporary employed persons (6.8%).

The *third group* has the following characteristics: smaller share of the self-employed among persons in employment (11.8%), greater part of the persons in employment in services (69.9%), where, again, we can find smaller portion of the self-employed (9.8%) (so far there is a similarity with the first group). There is smaller share of persons in employment with full-time employment (75.9%) and (especially) in services, fairly greater portion of persons in employment with part-time employment (28.8%). There is also higher share of those who usually work at home (7.1%). Among employed with part-time employment, there is a extremely high share of younger labour force (24.1%)

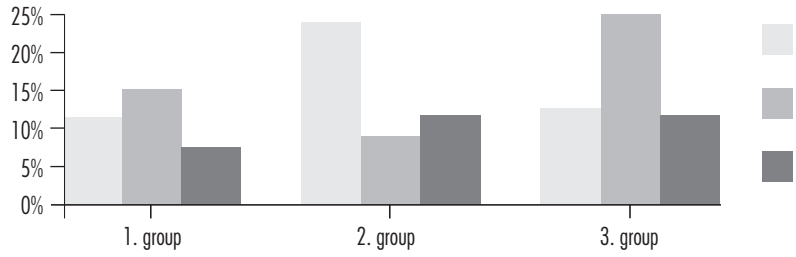
and accordingly smaller of the 'prime age' group (52.0%), there is also the higher share of the males with the part-time employment among all employed males (10.5%) and particularly high share of females with the part-time employment among all employed females (41.0%) (with greater voluntarity for both sexes). There is also higher share of the temporary employed (10.3%). Higher flexibility is also observable among unemployed persons who search more than average part-time and less than average full-time employment (75.6%).

The *second group* has extremely high share of self-employed (23.1%) (also in services (19.9%)). There is distinctively higher share of persons in employment with full-time employment (91.9%) and consequently, particularly in services, a smaller part of those with part-time employment (8.9%) (which rises the average number of actually worked hours in services (38.4) per week). At the same time the (temporal) utilisation of those with full-time is higher - the share of those worked 46 and more hours per week is higher than average (13.1%). The share of those who usually work at home is distinctively smaller (4.0%). There is smaller portion of the employed with the part-time employment: average percentage for younger labour force (16.5%) and lower than average for the prime age group (51.7%), smaller share among males (4.4%) and fairly smaller among females (14.0%). There is also greater involuntarity of the part-time employment. One of the key features for the third group is the higher share of the temporary employed (10.3%)[15].

The most important difference between three groups of labour markets in the analysis is the one in the share of different patterns of flexible employment. Taking in account three most important patterns[16] of flexible employment (self-employment, part-time employment and temporary employment), it can be observed, that on average, there are important differences in the shares and patterns of flexible employment between groups. It appears that each group of countries has its own way of dealing with the problems of producing enough jobs suitable for the characteristics of the existent labour force (skills, age and sex structure, and so on) and at the same time suitable for the characteristics of the economy(ies) and plans of the future development.

From the graph 1 it is very clear that countries (or welfare states) stimulate development of different patterns of flexible employment, mostly in accordance with the historical (and material) development of the economy and society as well as with the plans of future development, and that some patterns are, more or less, consistent with the particular degree of the current development (and other characteristics) of the country.

Graph 1
Some patterns of flexible employment by groups



Taking in account only the characteristics of the utilisation of the labour force (including the patterns of flexible employment), the three different types of flexibilization of the labour market, can be described as follows:

The *third group* (countries in the northern part of Europe) represents **modern, flexible labour market** with greater share of the flexible employment (46.2% of the labour force works in three main patterns of the flexible employment): smaller share of the self-employment, higher shares of part-time and temporary employment. For the *first group* (countries in the continental part of Europe) we can say that represents **balanced labour market** with more proportional and somewhat restricted (only 31.8% of the labour force are in those three patterns) usage of the different patterns of the flexible employment. And for the *second group* (Ireland and Mediterranean countries), we can say that represents more or less **traditional labour market** (41.4% of the labour force works in three main patterns of the flexible employment) - with higher shares of persons in employment in agriculture and industry and greater emphasis on the self-employment.

Conclusion

This basic and to some extent superficial analysis has shown that there are in the EU alone at least 4 distinctive types of labour markets. According to the characteristics of the particular group, we can form the scale on which the labour markets are ranked form traditional, industrial to the modern, flexible type of the labour market. Second, more specific cluster analysis has also shown (already known) differences in the flexibility of the European labour markets, with the distinctive regional differences.

Thus, both cluster analyses performed, show a slightly different picture of the European labour markets than expected from the Esping-Andersen's connection between the welfare state regimes and labour markets[17]. It can be stated that, taken from our results, similar characteristics can be obtained through activity of different welfare state regimes. Or in slightly altered Stephens' words (1994:209) - cluster analysis of different labour market characteristics will not consistently identify the same clusters of countries belonging to the same (welfare state) regime. Even if it is clear that there is positive

correlation "among the various welfare state and employment regime characteristics" (Stephens, 1994:211) and that employment regimes usually follow the path traced by the welfare states, it is at the same time obvious that there are some other factors that have almost equally important role in producing similar or different labour market outcomes.

One of the most obvious features of the performed cluster analyses is almost perfect regional pattern in clustering the European labour markets. At this point it stays open to further analysis to find those factors that contribute to such arrangement. We can only speculate that behind these patterns are the same factors that we mentioned at the beginning of this text (especially historical background - legacy of centuries of cultural and economic regional relations and co-operations that, among other characteristics, produced similar employment patterns and similar conditions on the labour market).

Appendix 1

Variables for cluster analysis – European Labour Markets[18]

A. Demographics

A01. Percentage of persons under 15 in population
A02. Percentage of age group 15-24 in population
A03. Percentage of age group 65 years and more in population
A04. Activity rate for age group 15-24 years
A05. Activity rate for age group 25-49 years
A06. Percentage of inactive in age group 25-49
A07. Percentage of the unemployed in age group 25-59 with the 3.level (ISCED) of education
A08. Percentage of the persons in employment in age group 25-59 with the 3. level of education
A09. Activity rate for men
A10. Activity rate for women

B. Labour Force Allocation

*B01. Percentage of self-employed among persons in employment
B02. Percentage of employed among persons in employment
B03. Percentage of persons in employment in industry
*B04. Percentage of persons in employment in services
B05. Percentage of self-employed in services among all self-employed
B06. Percentage of employed in services among all employed
*B07. Percentage of self-employed among persons in employment in services
B08. Percentage of employed among persons in employment in services

C. Labour Force Utilisation

C01. Employment/population ratio in age group 25-49
C02. Employment/population ratio in age group 15-24
C03. Unemployment rate for men in age group 15-24
C04. Unemployment rate for women in age group 15-24
C05. Unemployment rate for men in age group 25-49
C06. Unemployment rate for women in age group 25-49
*C07. Percentage of persons in employment with full-time employment
*C08. Percentage of persons in employment in services with part-time employment
C09. Average number of usually worked hours in services
*C10. Average number of actually worked hours in services
*C11. Percentage of employed with full-time employment that worked 46 or more hours in working week
*C12. Percentage of persons in employment who usually work at home
*C13. Percentage of age group 15-24 among persons in employment with part-time employment
*C14. Percentage of age group 25-49 among persons in employment with part-time employment
*C15. Percentage of persons in employment with part-time employment among male persons in employment
*C16. Percentage of persons in employment with part-time employment among female persons in employment
*C17. Percentage of persons in employment with part-time employment among married female persons in employment
*C18. Percentage of women in part-time employment who do not want full-time employment
*C19. Percentage of men in part-time employment who can not find full-time employment
*C20. Average number of actually worked hours for men
*C21. Average number of actually worked hours for women
*C22. Percentage of temporary jobs

D. Structure of unemployment

*D01. Percentage of unemployed seeking self-employment
D02. Percentage of unemployed seeking employment after loss of employment
D03. Percentage of unemployed seeking first employment
D04. Percentage of unemployed seeking employment after inactivity
*D05. Percentage of unemployed seeking full-time employment
D06. Percentage of unemployed registered at the public employment agency
D07. Percentage of unemployed receiving unemployment benefit
*D08. Percentage of persons in employment seeking another job due to present temporary employment
D09. Percentage of long-term unemployed

D10. Percentage of long-term unemployed seeking employment after loss of job
D11. Percentage of unemployed seeking employment at the employment office
D12. Percentage of unemployed seeking employment directly at the employer
D13. Percentage of long-term unemployed among young unemployed (15-24)

NOTES

1. Relatively slow economic growth, increased competition in the global perspective (globalization of the capital, production and trade), constant or even ever faster introduction of the new technologies, demographic and cultural changes (ageing of the population in the developed world, greater labour market activity of some marginalized groups, greater significance of the education and knowledge in the society), higher unemployment and so on.
2. Among others, the greater incidence of poverty and social exclusion.
3. "If it can be argued that the labour market is systematically and directly shaped by the (welfare) state, it follows that we would expect cross-national differences in labour-market behaviour to be attributable to the nature of the welfare-state regimes." (Esping-Andersen, 1990:144).
4. Historical background, cultural and religious peculiarities (like the influence of the Protestant ethic), the educational systems, the political power of different groups in society, present state of development, used technology, natural resources and so on.
5. "The scope of the cluster analysis is to find stabile and objective classifications… Stabile in the sense that the acquired clusters would be only marginally changed if (a) new cases were added in the matrix, (b) new variables were added in the group of variables used in clustering or if (c) intrusive mistakes were applied on some of the values of used variables… In our case, objectivity could be defined as the repetition of the result." (Ferligoj, 1989:29)
6. Cluster analysis shows the cross-section of the situation on the particular area of interest at the particular point of time. But, if it is used regularly, it can be also a tool for the longitudinal analysis of trends showing the transitions of the countries from one group to another in time.
7. Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden.
8. For EU countries, data from the EUROSTAT's LFS 1996 and for Slovenia data from LFS 1997/2 were used. One-year difference between the data collection from EU countries and Slovenia should not have any major influence on the comparison of the values and the final results.
9. See Appendix 1.
10. Which can be confirmed or denied by checking the standard deviations for each variable for the particular group or by moving the cut-off point more to the left, which would decrease the differences (standard deviation) between remained cases but at the same time would increase the number of clusters-groups.
11. Average values (means) for particular variable in particular group were compared to the average values for all 16 countries and the evaluations (higher or lower) were made accordingly in respect to those differences.
12. Age group from 25 to 49 years of age.
13. "... the concept refers to the degree to which individuals, or families, can uphold a socially acceptable standard of living independently of (labour) market participation." (Esping-Andersen, 1990:37) Words in brackets inserted by M.I.
14. See Appendix 1 and explanatory notes (footnote 17)

15. With the standard deviation higher than average due to extreme high share of temporary employment in Spain (25.2%), while all other countries in this group have values on average or below the average.
16. As the importance criteria, the shares of labour force employed in those patterns of flexible employment were used.
17. Especially, the Scandinavian labour markets apparently shows, in overall, characteristics related to either continental or liberal labour markets and (as far our analyses are concerned) it is difficult to extract the unique characteristics of the Scandinavian labour markets (welfare state regimes).
18. Variables marked with * and in *italic* were used for the second cluster analysis - flexibility of the labour markets

REFERENCES

Esping-Andersen G_sta (1990). The Three Worlds of Welfare Capitalism. Princeton University Press. Princeton

Eurostat (1997). LFS Results 1996. Data kindly provided by Statistical Office of Republic of Slovenia

Ferligoj Anuška (1989). Razvrščanje v skupine (Cluster analysis). Metodološki zvezki 4. Raziskovalni inštitut. FSPN. Ljubljana

Ignjatović Miroljub (1994). Primerjava indikatorjev trga delovne sile med Slovenijo in državami Evropske unije (Comparison of the Labour Market Indicators between Slovenia and EU Countries). In Pirher Sonja, Svetlik Ivan (eds.). Zaposlovanje. Približevanje Evropi (Employment. Approaching Europe). Fakulteta za družbene vede. Ljubljana

Stephens John D. (1994). Welfare State and Employment Regimes. Acta Sociologica Vol.37 No.2. Scandinavian Sociological Association

Svetlik Ivan (1995). Socialna politika v Sloveniji - iskanje novega ravnotežja. (Social Policy in Slovenia - searching for the new equilibrium) Paper presented at the seminar Employment between the Market and Social Security. 16-17.3.1995. Portorož

SURS (Statistical Office of Republic of Slovenia) (1998). LFS 1997/2. Data kindly provided by Statistical Office of Republic of Slovenia.