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The European Welfare State from the Prospect of New EU Member States

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Abstract

KOUBA, L., GROCHOVÁ, L.: **The European welfare state from the prospect of new EU member states**.

The aim of this paper is to analyse and discuss the heterogeneity level between the old and new EU member states in terms of welfare state development. In order to discuss the research questions, we performed the cluster analysis that provides the overall survey of the welfare state development and besides that, the results were divided into four dimensions: demographic, economic, institutional and social. In comparison with the thematic literature, we modified the dimensions, including our original institutional dimension, and added a dynamic point of view. The cluster analysis resulted in the existence of three clusters: Core cluster, Periphery cluster and Eastern cluster. The Eastern cluster is still relatively stable and covers in a total of nine of the ten Central and Eastern European countries that were included in the analysis: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia (hence apart from Slovenia). On the other hand, using the dimensional approach, the CEE countries were grouped together with the old EU member countries, both from the Core cluster and from the Periphery cluster, within the economic and institutional dimensions. Therefore, we conclude that the new EU member countries, nowadays, do not form an internally homogenous group in terms of the features of their welfare state.

Key words

Welfare state, CEE countries, new EU member states, cluster analysis

JEL: H5, C38

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Introduction

Nowadays, the European economy and society face a lot of serious challenges such as globalization, ageing of the population or the European debt crisis. In our opinion, it is possible to divide these socio-economic challenges into two broadly defined areas.

The first area is related to the phenomenon of globalization, which creates pressure on the structural changes in the European economy. The most visible consequences are the continuing process of de-industrialization on the one hand and the permanently increasing importance of the service sector on the other hand. Moreover, this European move into a service-based economy is accompanied by a constantly growing emphasis on a highly educated labour force. Recently, the services based on a low-skilled and even a medium-skilled labour force have started to be shifted from Europe to less developed countries. The accent on the development of a so-called knowledge economy, which is, in particular, verbally supported across the European Union, should be a solution for the decreasing competitiveness of European economy.

The second area is related to a complex of social and demographic changes that creates pressure on the public finance in most of the EU countries. Among these changes, the phenomenon of the ageing of the population is by far the most significant one seriously threatening the sustainability of pension schemes and health care systems and, in a broader context, the sustainability of the European welfare state as a whole. A solution for this problem is probably an even more delicate question because of the model of the welfare state and the related high level of certainty and protection belong to the basic component of European identity.

In addition to that, the solutions for these problems at a European level should take into account the heterogeneous level of European integration. Furthermore, the heterogeneity problem includes two crucial aspects – a heterogeneous integration in terms of particular policies (e.g. interest rates, duties x tax rates, labour market regulations, etc.) and a heterogeneous integration in terms of particular member countries (core x periphery, countries with/without the Euro, etc.). Besides, there is another factor to consider – the phenomenon of so-called new member states.

This paper is a part of the Seventh framework project Welfare, Wealth and Work for Europe. Mendel University is responsible in the Research area 4 “Governance and Institutions at the European Level” for the Work package 403 “Implications from Central and Eastern European Countries”. Therefore, in this paper, we focus on the impact of the new EU member states on the heterogeneity level in the EU in terms of welfare state development.

Considering topical challenges to the European welfare state from the prospect of the new EU member states, we should start with a question: Are they welfare states, anyway? Looking at various indicators of social systems, health care systems or pension schemes, it is obvious that there are not any significant differences among the level of social protection in the old and new member states. Moreover, eastern countries seem to be even more solidaristic in many aspects, e.g. duration of parental leave, retirement age, and so on. Thus, we assume in this paper that the new EU member countries are possible to be classified as "welfare states".

As regards the heterogeneity level within the group of Central and Eastern European countries (CEEC), undoubtedly, these new EU member states have many shared specific features that are to a considerable extent given by a common history in the socialist bloc. However, in many aspects, we can distinguish clusters of countries that are distinct from the traditional categorizing of old and new member states. As far as the ageing of the European population is concerned, Bulgaria and Estonia together with the three Nordic states count among the countries whose public finance is evaluated as healthy from this point of view. Similarly, exploring competitiveness and development of the knowledge economy in the EU countries, particularly Estonia, Cyprus, Slovenia and Czech Republic, has managed to improve their position and significantly surpass southern old member states. In connection with the current public finance crisis in Europe, there has been started talk about a north-south division in the EU and the new member states are more and more often considered to be a part of the former group.

Therefore, the aim of this paper is to analyse and discuss the heterogeneity level between the old and new EU member states in terms of welfare state development. The aim is closely related to the subsequent research questions:

- After more than two decades of the convergence process, is it still relevant to distinguish among the old and new member states as regards the features of their welfare state?

- Do the CEE countries form a homogenous group as regards the features of their welfare state?

Further to the aim of the paper, the structure is as follows. First, nowadays literature is reviewed followed by the description of methodology, argumentation of the selection process related to variables and identification of welfare dimensions. Next, both overall and particular dimension welfare clusters are identified. Consequently, we address the issue of homogeneity of identified groups and the evolution of dis/similarity over the observed period of time. We conclude responding

to two complementary questions: whether it is purposeful, in terms of welfare, to distinguish among the old and new EU member states and whether these clusters are internally homogenous or not.

1 Literature review

In a broader perspective, the literature on the welfare state regimes is related to the literature on the varieties of capitalism and on the ideal institutional arrangement for economic development. Within this context, we should point out the respected book "Varieties of Capitalism" by Hall and Soskice (2001) that distinguish between two kinds of political economies, liberal market economies and coordinated market economies that (p. 8) "constitute ideal types at the poles of a spectrum along which many nations can be arrayed." In another respected thematic book "The diversity of Modern Capitalism" by Amable (2003), the existence of five types of capitalism are proposed (p. 14) "each characterized by specific institutional forms and particular institutional complementarities: the market-based model; the social-democratic model; the Continental European model; the Mediterranean model; and the Asian model."

In a narrower perspective, it is essential to start with a classic book "The Three Worlds of Welfare Capitalism" by Esping-Andersen (1990) that encouraged research on the welfare states models. Esping-Andersen originally distinguished among liberal, conservative-corporatist and social-democratic welfare states. However, this typology provoked a wide spectrum of reactions – both positive and, in particular, critical. Some authors rejected the whole concept of the welfare state typologies, others re-labelled the Esping-Andersen's welfare state regimes or based them on distinct dimensions, nevertheless, the most popular modification lay in the addition of other welfare state regimes – the Southern model, the Asian model and so on. From our point of view, the attempts to include the CEE countries in these typologies were the most relevant.

In terms of the discussion on a welfare state in the CEE countries, the key question has been: does an Eastern European welfare state type exist? While, e.g. Rys (2001) explicitly rejects the existence of a distinctive Eastern type, most of the authors, e.g. Deacon (1993) or Fenger (2007), tend to admit that the features of the welfare state regimes in the CEEC significantly differ from the other types.

As regards the empirical research on the welfare state in the CEE countries using the method of cluster analysis, we emphasize the papers by Ferreira and Figueiredo (2005) and Fenger (2007). Our methodology has been inspired by these two papers as well, however, we modified the dimensions and added a dynamic point of view.

2 Methodology

There are 2 broad areas of challenges for European welfare states: (i) globalization, structural changes, new technologies, post-industrialization; and (ii) demographic and social changes. In this paper we focus on the second area elaborating the area into 4 compatible dimensions that describe the size and features of the welfare state in Europe: (i) social that aims at human capital development; (ii) economic – since economy determines the possibilities of a welfare state and since there is a pressure on sustainability, we include both major economic indicators and public finance indicators; (iii) demographic that determines the possibilities of sustainability of a welfare state; and (iv) institutional – being our original contribution – that helps with identification and comparison of constraints on the access to social benefits measuring to the size of welfare.

Our aim is then to identify groups of countries that are similar to each other but different from other groups of countries in terms of the aforementioned dimensions of a welfare state. For this purpose we use a cluster analysis that is a convenient exploratory tool for organizing countries into clusters maximizing the similarity of cases within each group while maximizing the dissimilarity among initially unknown groups. The use of clustering procedures depends on the number of cases and types of variables. Since our dataset consists of 19 continuous variables, we employ a (one-step) agglomerative hierarchical clustering technique.

First, we choose the variables describing the similarities and dissimilarities of welfare state dimensions in European countries, in particular EU members, Switzerland, Norway and Iceland (see table I). We use data from Eurostat, Missoc and OECD databases in the years 1999 (Eurozone establishment), 2004 (EU enlargement, accession of CEE countries), 2008 (the financial crisis) and 2011 (contemporaneousness).

I: List and description of variables

ECONOMIC
Total government expenditures as a % of GDP
Gross public debt as a % of GDP
Long-run unemployment
Activity rate
Real GDP per capita
INSTITUTIONAL
Retirement age
Maternity leave in weeks
Paid maternity leave in weeks
Parental leave in weeks
Paid parental leave in weeks
DEMOGRAPHIC
Life expectancy ratio
Deaths per capita
Total population 65 years and over per 1000 inhabitants
Total fertility rate
SOCIAL
Internet users per 1000 inhabitants
Tertiary enrolment per 1000 inhabitants
Human development index
Total private expenditures on health as a % of GDP
Social security transfers as a % of GDP

Next, we standardize the variables subtracting their means and dividing the difference by a standard deviation so that all variables contribute equally to the distance among cases since, in case of different scales, variables with larger values contribute more to the distance measure than variables with smaller values. The standardization then guarantees a uniform contribution of information from all variables and the comparability of distances over time.

Then we identify a criterion for determining distance among cases, i.e. a measure of how far apart two objects are. Since we want to place progressively greater weight on states that are further apart in order to emphasize the distance among dissimilar objects, we have chosen squared Euclidean

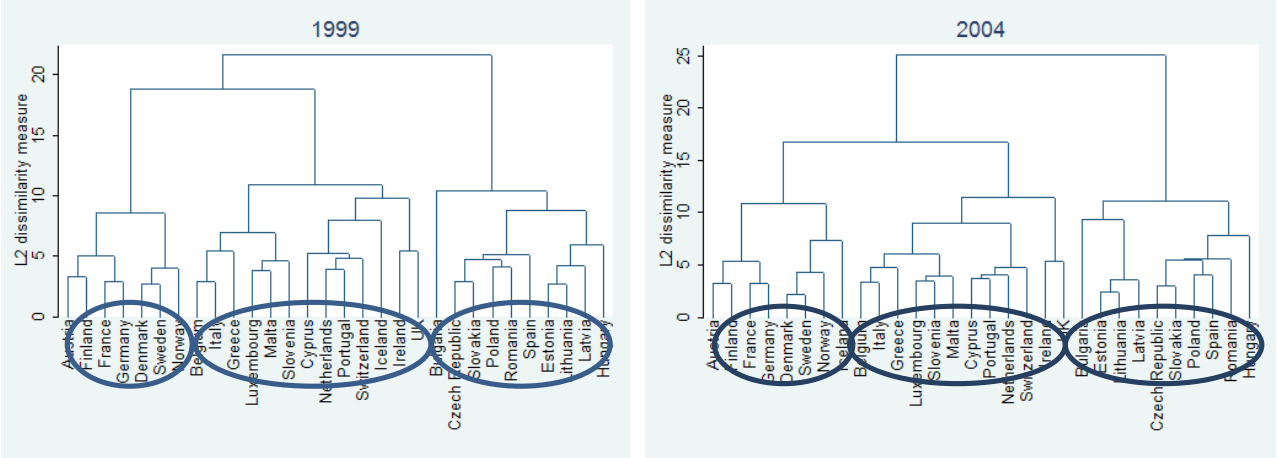
distance – “the most straightforward and generally accepted way of computing distances between objects in a multi-dimensional space” (Burns and Burns, 2008: p. 556).

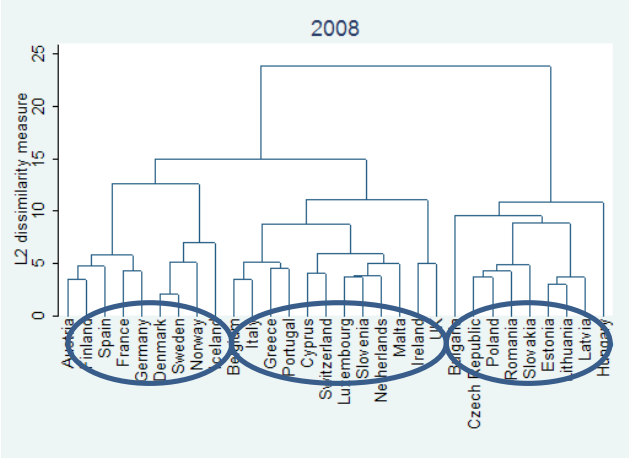
Finally, we choose the best criterion for determining which clusters are merged at successive steps selecting such a method for forming the groups. It is convenient to search for minimum variance inside each cluster emphasizing such an inner homogeneity, which implies the preference of Ward’s method. This method uses an analysis of variance approach to evaluate in our case squared Euclidean distances between clusters. Cluster membership assessment is based on calculation of the total sum of squared deviations from the mean of a cluster. Two clusters merge if they produce the smallest increase in the overall sum of the squared within-cluster distances. In order to determine the number of clusters, we consider the steps at which the merging distance is relatively large.

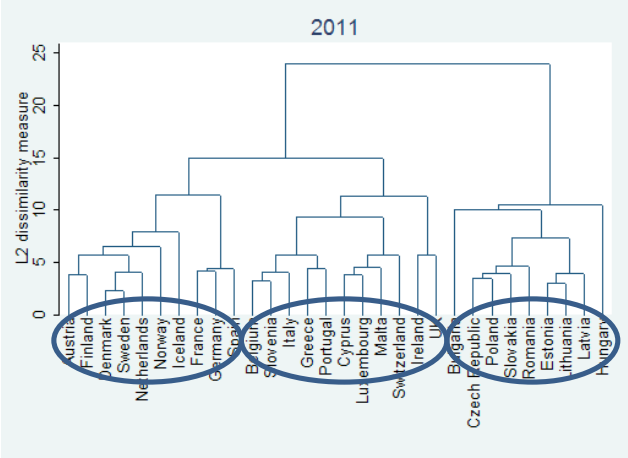
3 Results and discussion

In this part, we offer a dynamic view at the welfare state development across the European countries. Firstly, we will start with the main results in the form of overall dendrograms including all four dimensions in the years 1999, 2004, 2008 and 2011. Subsequently, we will discuss some selected aspects within the particular dimensions.

II: Welfare clusters of OECD countries (1999, 2004, 2008, 2011)







In addition to overall dendrograms, the cluster positions of all particular countries at an overall level, including their development during the monitored period, are demonstrated in the following table.

III: Country pertinence to clusters[1]

	1999	2004	2008	2011		1999	2004	2008	2011
Austria	1	1	1	1	Latvia	3	3	3	3
Belgium	2	2	2 (1)	2 (1)	Lithuania	3	3	3	3
Bulgaria	3	3	3	3	Luxembourg	2	2	2 (1)	2 (1)
Cyprus	2	2	2 (1)	2 (1)	Malta	2	2	2 (1)	2 (1)
Czech Republic	3	3	3	3	Netherlands	2	2	2 (1)	1
Denmark	1	1	1	1	Norway	1	1	1	1
Estonia	3	3	3	3	Poland	3	3	3	3
Finland	1	1	1	1	Portugal	2	2	2 (1)	2 (1)
France	1	1	1	1	Romania	3	3	3	3
Germany	1	1	1	1	Slovakia	3	3	3	3
Greece	2	2	2 (1)	2 (1)	Slovenia	2	2	2 (1)	2 (1)
Hungary	3	3	3	3	Spain	3	3	1	1
Iceland	2	1	1	1	Sweden	1	1	1	1
Ireland	2	2	2 (1)	2 (1)	Switzerland	2	2	2 (1)	2 (1)
Italy	2	2	2 (1)	2 (1)	United Kingdom	2	2	2 (1)	2 (1)

[1] Squared Euclidean distance greater than 14 (15.5 respectively). 1 – Core cluster, 2 – Periphery cluster, 3 – Eastern cluster. For a more detailed description of the clusters see the next text

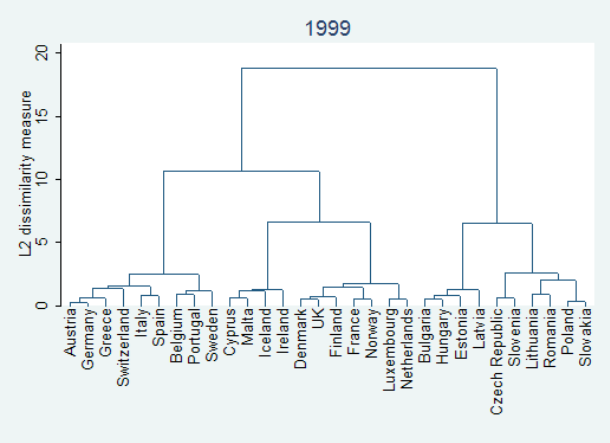
First of all, we emphasize the permanent presence of three main clusters with relatively stable compositions of countries (see graph II and table III). The left cluster, which we call the "Core cluster", stably includes Austria, France and Germany and the Nordic countries. In 2011, the Netherlands also was categorized into this cluster. The middle cluster, which we call the "Periphery cluster", covers Ireland and the southern periphery countries including Cyprus and Malta. Moreover, some solitaires, such as Switzerland or Great Britain, were constantly ranked in this group.

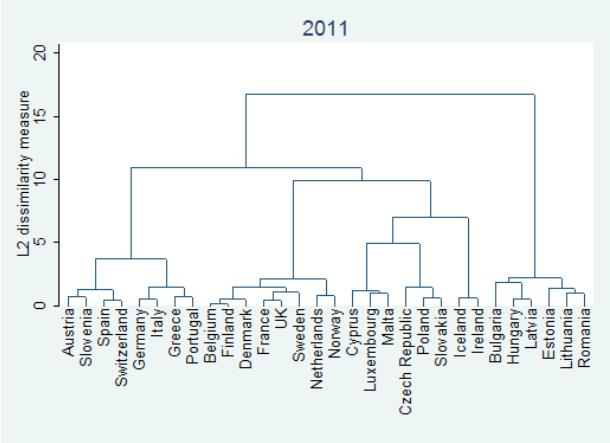
For our purpose, the most significant results are related to the existence of the right cluster which permanently includes 9 CEE countries: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia. Thus, we can call this cluster convincingly the "Eastern cluster". As regards this Eastern cluster, during the whole observed period, there are only two particularities that should be mentioned: the permanent absence of Slovenia and the presence of Spain in 1999 and 2004. As far as the absence of Slovenia, however, it is not so a surprising result taking into consideration the fact that Slovenia has been rated the most developed CEE country during the whole transition period.

The abovementioned Slovenian case casts doubts on the homogeneity of the Eastern model of the welfare state. These doubts are strengthened by analysing the particular dimensions where we can identify both relatively homogenous (demographic and social dimension) and heterogeneous (institutional and economic dimension) welfare state features across the CEEC.

Let's start with the demographic dimension that reflects the overall grouping of the CEE countries in the most evident way. In 1999 and also in 2004 all ten CEE countries, even including Slovenia, were categorized in the Eastern cluster. The explanation is logical – the demographic features are the most inertial. To change the demographic trends, those that had been inherited from the socialist era (such as life expectancy, which had significantly lagged behind Western Europe), needed an even longer time than economic reforms. On the other hand, within our analysis, it is possible to observe the demographic changes in Eastern Europe as well. Already in 2008 and particularly in 2011 (see graph IV), more developed CEE countries – Slovenia, the Czech Republic, Slovakia and Poland – moved into the other two clusters among the old member states. Nevertheless, the Post-Soviet and Balkan states, together with Hungary, remain within the demographic dimension in a relatively homogenous Eastern cluster.

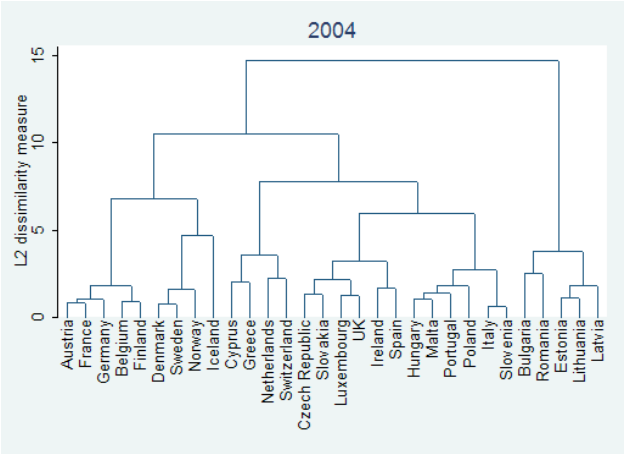
IV: Demographic dimension (1999, 2011)

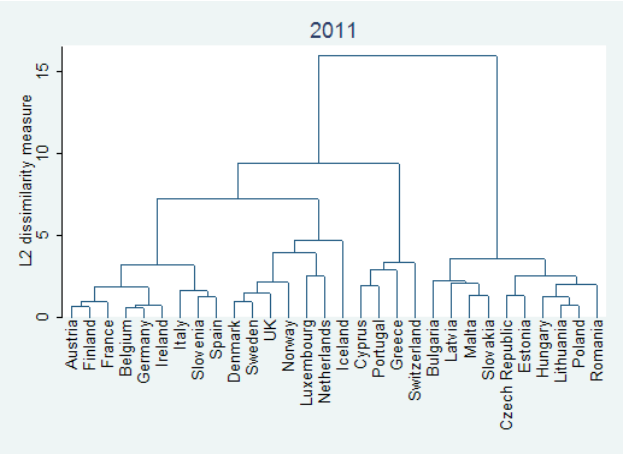




Relatively similar results as in the overall survey can be identified also in the social dimension. On graphs V you can see the formation process of the Eastern cluster. Surprisingly, the formation process has had an inverse direction: whereas in 2004 the Eastern cluster was formed only by the three Baltic and two Balkan states, in 2011 this cluster covered also the Czech Republic, Hungary, Poland, Slovakia and Malta. In 2011, thus, the only exception, which was integrated with old member states, remained Slovenia.

V: Social dimension (2004, 2011)



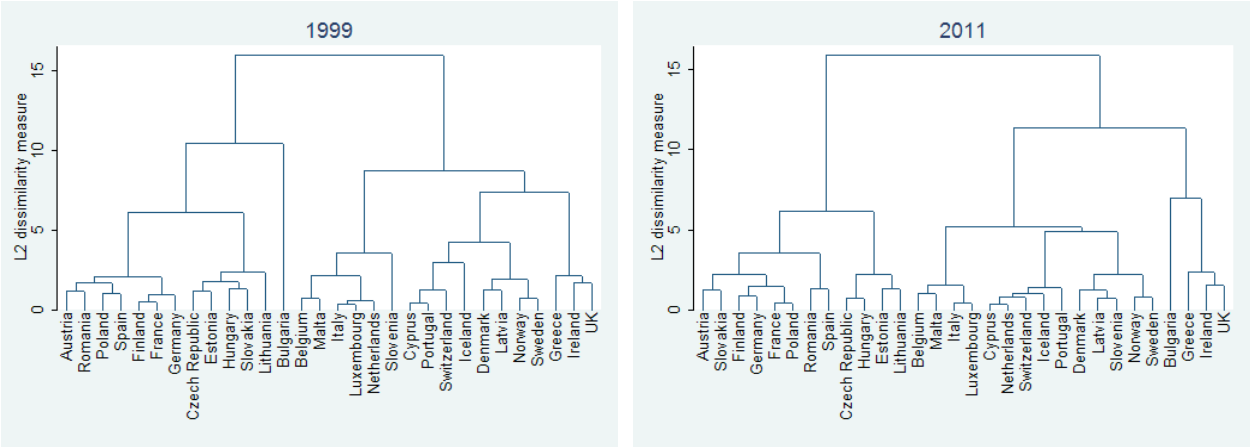


As regards the economic and institutional dimension, the Eastern cluster has not been formed and the CEEC countries were grouped together with various old member countries, both from the Core cluster and from the Periphery cluster. As far as the economic dimension is concerned, this mixed clustering scheme is caused particularly by the inclusion of the public finance indicators: various levels of redistribution and public debt occur across the whole of Europe without regard to the

division between old and new member states, e.g. the cluster based solely on low public debt would be formed mainly by Nordic and Eastern countries. Moreover, the cluster scheme in the economic dimension has been destabilized as a consequence of the economic crisis and its different impact on particular countries since 2008.

And finally, let's have a look at our original contribution to the welfare state analysis – the institutional dimension. The clusters on graphs VI demonstrate that the constraints on the access to the social benefits (maternity benefits, parental benefits, pensions), which are in our opinion the key elements determining welfare state size, are also distributed without reference to the division between old and new member states.

VI: Institutional dimension (1999, 2011)



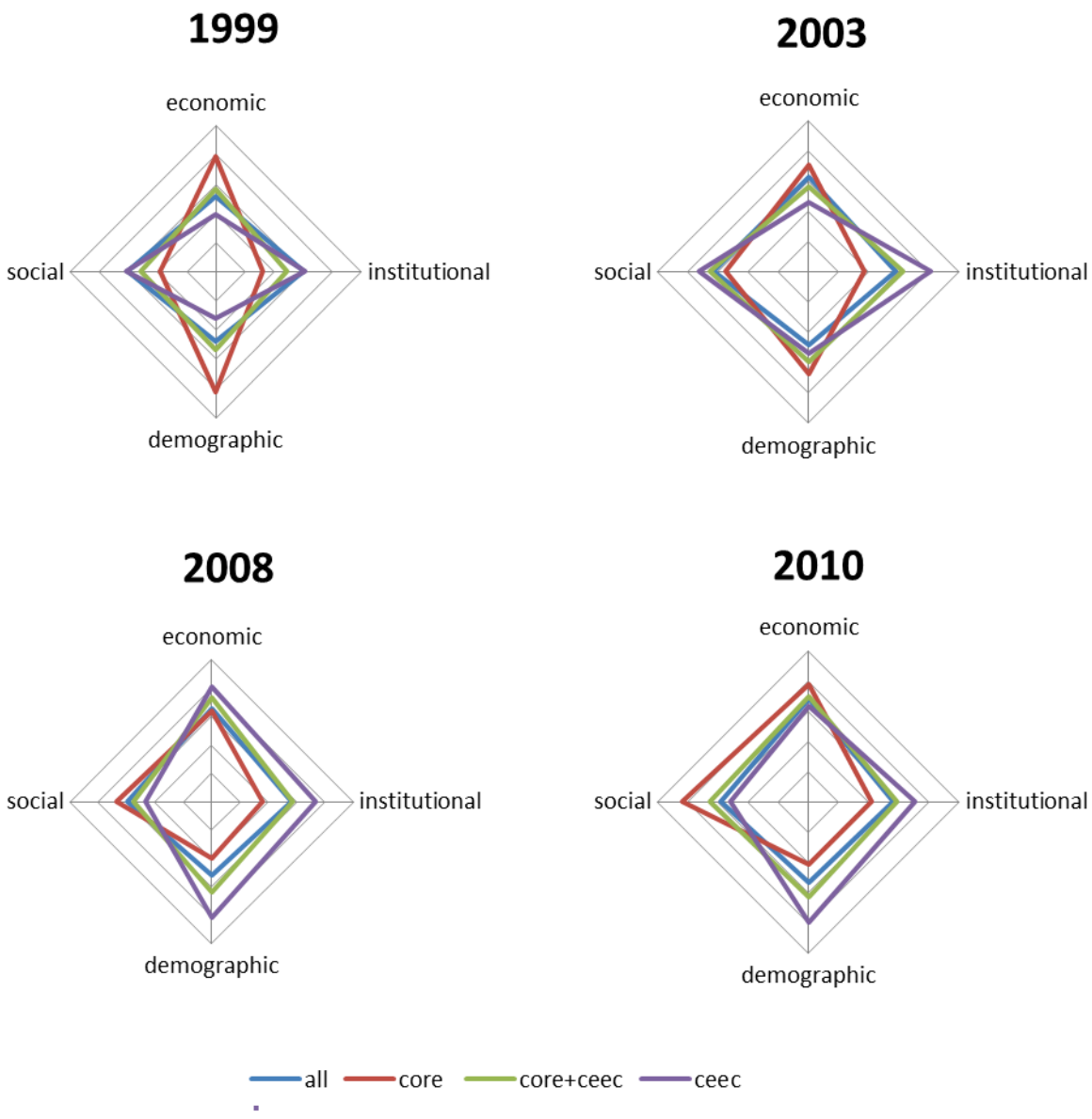
Once we have identified clusters, we focus on the magnitude and evolution of the clusters' homogeneity. The distance among the clusters is measured with the average distance of all clusters capturing both extreme and intermediate distances among clusters, and with the coefficient of variation in distances, which is based on the overall distribution of the clusters. The lower the value the more homogenous the panel of countries is. As can be seen in table VII, while the overall analysis of all European countries, as well as the analysis of economic and demographic dimensions, demonstrates an increase in heterogeneity in the panel from 1999 to 2011, institutional and social dimensions become more homogenous during the observed period.

VII: Distances among countries

Welfare dimension	Year	Mean distance (all countries)	Variance of distances (all countries)
All	1999	6.467	20.162
	2004	6.576	23.8846
	2008	6.662	20.7375
	2011	6.699	20.451
Economic	1999	2.578	7.75196
	2004	3.135	11.6712
	2008	3.294	11.5007
	2011	3.392	11.2519
Institutional	1999	2.995	12.6278
	2004	2.880	12.3371
	2008	2.821	12.3837
	2011	2.812	12.3371
Demographic	1999	2.401	15.1671
	2004	2.435	16.6513
	2008	2.601	16.0032
	2011	2.650	14.6502
Social	1999	3.052	11.2565
	2004	3.163	10.4786
	2008	2.956	8.53646
	2011	2.907	10.0549

Looking at particular clusters in more detail, the position of CEE countries in 4 dimensions can be better seen from radar graphs that compare the homogeneity inside the core countries' clusters, the group of core countries when CEE countries are added and of all countries together.

VIII: Homogeneity inside clusters



Note: A higher value represents greater homogeneity.

In graphs VIII we can see that core countries and CEE countries are those that differ the most in terms of homogeneity in welfare dimensions. In addition, peripheral countries do not contribute to a higher level of heterogeneity than is the dissimilarity caused by the group of core and CEE countries. In 1999 the group of core countries is much more homogenous in economic and demographic dimensions. This heterogeneity in CEE countries can be explained with an originally unequal situation of economies following different transition strategies and a catching-up process. A higher level of homogeneity, in contrast, can be observed in the two remaining dimensions – social and institutional. This pattern persists till the 2008 crisis for social dimension, while in the institutional

dimension the dominative tendency of CEE countries is still alive. This may be due to a still prevailing higher level of solidarity in many aspects like the duration of parental leave, retirement age, etc. in CEE countries. Moreover, there can be seen the tendency of homogenization of CEE countries in the demographic dimension. As already mentioned in terms of the social dimension, CEE countries have become more heterogeneous when compared to the initial structure, since there was a movement of more developed CEE countries into the group among the old member states. Consequently we can claim that even if there is still a visible difference between CEE and core countries, this difference has been vanishing due to the integration of more developed CEE countries into the cluster of core and peripheral countries.

Conclusion

In this paper, we focused on the analysis of the heterogeneity level between the old and new EU member states in terms of the welfare state development. In order to discuss the research questions, we performed the cluster analysis that provides the overall survey of the welfare state development and besides that, the results were divided into four dimensions: demographic, economic, institutional and social. Comparing with the literature dealing with the CEE countries, our modifications lie particularly in the concept of institutional dimension, which is focused on the constraints to the access to social benefits, and in a dynamic view because we observe the development across the years 1998, 2004, 2008 and 2011.

As regards the first research question, "After more than two decades of the convergence process, is it still relevant to distinguish between the old and new member states as regards the features of their welfare state?", we can summarize that the cluster analysis resulted in the existence of three clusters: Core cluster, Periphery cluster and Eastern cluster. The Eastern cluster covers in a total of nine of the ten Central and Eastern European countries that were included in the analysis: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia (hence apart from Slovenia). Moreover, the structure of this cluster was relatively very stable during the whole monitored period 1999-2011. Based on the cluster analysis, thus, we can conclude that it is still relevant to distinguish between the old and new EU member states in terms of their welfare state development at an overall level.

In order to answer the second research question, "Do the CEE countries form a homogenous group as regards the features of their welfare state?", we used the dimensional approach. The clusters

being relatively parallel to the overall clusters can be identified in the case of demographic and social dimensions. Nevertheless, within the economic and institutional dimensions, the CEE countries were grouped together with the old EU member countries, both from the Core cluster and from the Periphery cluster. Furthermore, in our opinion, it is possible to claim that, especially in the case of the more developed CEE countries, there is an obvious trend of gradual convergence to the West. In addition to that, we can name the example of the fully "Western" welfare state model in Slovenia. Therefore, we conclude that the new EU member countries, nowadays, do not form an internally homogenous group in terms of the features of their welfare state.

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