

Regional differences in welfare and well-being in the European Union¹

Erzsébet Nedelka²

ABSTRACT: In the study, it is analysed whether the groups of countries formed in the 1990s and 2000s still fit well to the model represented at that time, and whether the countries of the Mediterranean, Western Europe, Central and Eastern Europe still separate from each other based on the welfare and well-being indicators. Factor analysis and a new indicator, the welfare factor together with well-being indicators were used in cluster analyses. The three years data and the clusters based on them were analysed. It was pointed out that before the crisis the states representing the Northern model were indeed separate, and liberal and conservative states appeared in a group but at the same time still separately, and the Mediterranean countries were mixed with the post-socialist countries. After the crisis, the northern states merged with the liberal and conservative welfare states, and the Mediterranean countries formed a mixed group with the post-socialist states. Greece was separated from each group of countries. 2018 brought even greater changes. Not only Greece but also Slovenia and Czech Republic isolated, and a more composite category was formed from the other Mediterranean countries and post-socialist countries. Taking income and poverty indicators out, it was examined whether the states ranked in each model separated from each other according to them. The result was, however, again a diverse group. Therefore, based on the indicators, it was not possible to clearly prove the Esping-Andersen, Sapir and Baltic theory in today's economic environment (Esping-Andersen, 1991; Sapir, 2006; Baltic, 2011).

KEYWORDS: welfare, well-being, cluster analysis, European Union

JEL Codes: D6, I3, O52

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² senior lecturer, University of Sopron, Alexandre Lámfalussy Faculty of Economics, nedelka.erszabet@uni-sopron.hu

Introduction

After the crisis in 2008, the examination of different models of welfare states were again the centre of attention, and the Scandinavian welfare system got into the focus of these studies as an example that should be followed. These studies emphasized the efficiency of Scandinavian redistribution system, their high level of fairness and their advanced social safety network. However, experience shows that as time goes by it is more and more difficult to sustain the model, its sustainability was questioned both at Swedish and Finnish elections. The downsides of progressive taxation implemented by governments emerged. Moreover, the economic policy measures taken after the crisis were not always compatible with the theory of the Nordic model. Therefore, I suppose, that these countries, namely Denmark, Sweden and Finland, are no longer so different from the conservative welfare states and the 2008 crisis is the reason for it. Through the examination of my hypothesis, I make cluster analysis in order to group the member states of the European Union based on welfare and well-being indicators and I compare the result with Esping-Andersen's, Sapir's and Baltic's typologies. I analyse the years before and after the crisis and recent days with different indicators, what I chose carefully in order to truly reflect welfare and well-being. The further aim of my study is to present the relationship between poverty and welfare models, and to analyse whether poverty or rather material deprivation is the lowest in countries where the northern model was implemented. Finally, yet importantly, I compare Gordon's matrix to Esping-Andersen's, Sapir's and Baltic's categories (Esping-Andersen, 1991; Sapir, 2006; Baltic, 2011).

Welfare and well-being

Welfare and well-being are two dynamically changing concepts in our time. Even before welfare economics were born, there were some definitions about the concept of welfare, but they were mainly based on wealth. Only in the 1930s began real changes and the definition of the exact concept started to evolve after that. Instead of earlier incomplete and incorrect definitions, after the 1930s economists had to deal with hundreds and thousands of new concepts. Because of the overgrowing explanation of terms, I limited the welfare and well-being concepts and took Hausmann and McPher-

son's (1997) study for basis. The authors assembled welfare and well-being theories in two large groups accordingly whether they sketch out any methodology determining welfare and well-being, and whether they define the concrete elements of welfare and well-being. The two large groups are the formal and substantive theories and they distinguish welfare and well-being. While formal theories represent welfare, the substantive ones are closer to the concept of well-being.

The core of formal approach is actually Adam Smith's invisible hand theory, which presumes that the highest level of welfare can be reached if we allow consumers to act based on their own self-interest. Pareto, Marshall, Kaldor and Hicks, and Scitovsky developed this chain of ideas and similarly to Adam Smith, they examined the question of welfare on the level of individuals and determined social welfare by summing, aggregating them up. Pareto stated in his theory, that we could only increase social welfare if we did not decrease other's welfare at the same time, because just an income redistribution would happen in this case and it would not affect the society as a whole (Cullis, Jones, 2008). Marshall saw the opportunity for increase welfare by a kind of income redistribution, a more efficient income allocation. Based on the theory of consumer surplus, he thought that if some portion of income owned by high-income consumers would be deprived and would be given to the low income consumers, would not generate real loss for the riches, but at the same time the plight of the poor could improve significantly, thus Marshall gave a kind of reinterpretation of Pareto-efficiency (Horváth, Király, 2000). Kaldor and Hicks's theory also described the beneficial effects of redistribution of resources, but under less stringent conditions and framework than Pareto's and thus it could become more widely applicable. This theory is often called Pareto-improvement as well. Pareto's theory does not allow making matters worse for anybody, while others get into a better position. At the same time, Kaldor and Hicks believed that if those who performed better could compensate those who were in worse social standing, or performed poorer, so society could achieve Pareto-improvement (Hicks, 1939; Kaldor, 1939). Scitovsky reversed Kaldor and Hicks's theory and propound the question, how much should be paid by potential losers to potential winners to divert them from their original intentions. If we can find answer, if we can determine it, then well-being cannot or would not change. However, he also noted that raising prosperity not only have advantages, but it has to be realized that there are also losers of the process (Kornai, 2002). Formal theories not only defined well-being but as they

developed, they defined an indicator as well, which was considered as an appropriate measure for welfare. This indicator has become GDP/capita.

In contrast to formal theories, substantive theories do not really define the modern meaning of welfare, but they try to determine well-being and those factors, which are intrinsically good for people like happiness and calmness. They criticize the utilitarian approach of formal theories and draw attention to their scantiness, imperfection like the question of luxury consumption (preference for expensive goods) and preferences which are less acceptable for the society (sadism, which means that someone can only satisfy his or her needs, if he or she put someone else in worse position). Hausmann and McPherson rank Amartya Sen and John Rawls among these theories. Moreover, according to their point of view, Richard Layard and Marthe Nussbaum's theory should be mentioned also with them. Rawls theory was not so much about economics as more about justness and equity, however, principles drafting in his theory were taken over from economics as well, because it offered opportunity to determine well-being. Rawls believed that an indicator could be determined – the indicator of primary social goods – which helped to take well-being measurable. He, however, did not definite concretely these goods, but others tried to do so, among which not only elements of material well-being had appeared but also psychological factors, human rights and environment protection.

Amartya Sen (1982, 1993) was critical of both Ravels's and formal theories. According to his opinion, we should not emphasize objects but processes, activities that generate them. Individuals need ability to accomplish activities, to live and have valuable life, and to become what we want to be. Thus, abilities mean a wider approach than the primary social goods, but they still depend on health and human lifetime (Sen, 1999). Layard was engaged in the research of happiness. In 2005 was published his book: *Happiness – lesson from a new science*, in which he demonstrated that although welfare went through on positive changes in the examined half century, it was not noticeable on the increase of happiness. According to him, the reason behind stagnating happiness is the constant competition, which has negative impact on family relationship and friendship, working conditions and public safety. He determined seven factors, which are essential to happy life; this is the reason why it is ranked among substantive theories. Finally, I need to mention Nussbaum and his theory. He enumerated ten basic social rights, which take well-being measurable and which are at the same time necessary to be able to talk about well-being. Among the ten rights are

health, long life, freedom of thinking and movement, non-discrimination, opportunity for active social and political participation.

Welfare states

After I distinguished welfare and well-being, I have to explain the different concepts of welfare states. Welfare has different meaning in different regions like in Northern Europe or Southern Europe. I sorted these types according to Esping-Andersen's classical categorization amplifying with Sapir's theory. The sociologist determined three systems based on political ideologies, delegation of authority, social system, structure of society, relationship between state and market as well as state and families. These three schemes are liberal, conservative and social democrat. Liberal welfare states emphasize the freedom of market mechanisms including welfare social services like public health and education. Government offers just limited advantages and only under strict conditions, which hinder vertical redistribution and therefore in this model are social inequalities the largest ones. The model is rigid and inflexible because wealthier classes of society have not an interest in the change, while low-income households depend on the social benefits of the state.

The conservative welfare states have extended social safety nets mainly for those who have job. So contrary to the liberal welfare states, the state has active role in the maintenance of the system. However, this system, similarly to the liberal one, keeps the vertical redistribution on a low level, because the rate of social benefits reflects to income conditions. Those who have higher income therefore pays more contributions, gets more benefits as well. State keeps out itself from family life, so does not intervene which is also common feature with liberal model, therefore institutions having educational function like nursery schools and kindergartens are not so general in the classical, conservative system as in social democrat one.

In social democrat states also known as Scandinavian welfare states everybody can live with opportunities and services offered by social safety net, because it covers all the citizens. Moreover, state does not let citizens to be at the mercy of market conditions, so their existence depends less on enterprises compared to the other two models. There is neither sharp detachment in services in contrast with liberal model, all the low, middle- and high-income households, citizens receive the same welfare

allowance and the quality of services is also appropriate for high income classes. Contrary to liberal states where low- and high-income households get different services. Further feature of Scandinavian model is the repression of market mechanisms that threaten the welfare of individuals and minimization of their negative effects. Government ensures the operation of the system and pays special attention to children, elderly and disabled people. The aim is to increase employment, maintain the high employment rate and improve productivity. Therefore, the fundamental unit of model is not families with single breadwinner but active workforce.

Sapir (2006) added a further category to Esping-Andersen’s classification, this category was the South European or with other words, the Mediterranean model. Not coincidentally is not welfare in its naming, in these states the amount of subsidy is low and available only for the few. Old age and early retirement pension get the main role in the social safety system, and so the state withdraws a part of working-age population from labour market.

Finally, we need to add a fifth model to categorization. According to Baltic (2011) none of the above-mentioned categories represent post-communist, Central Eastern European countries. In these states, we can observe a so-called transformational dilemma. Transformational dilemma means that these countries had to choose among welfare measures, welfare politics, and economic competitiveness. The result was a model, which was between conservative welfare model and Bismarck’s model (social insurance, universalism, corporatism, effort to equality). The first figure summarizes the models based on their efficiency and fairness according to Sapir’s examination.

		EFFICIENCY	
		Low	High
FAIRNESS	Low	Mediterranean model Spain, Italy, Greece, Croatia, Cyprus, Malta, Romania, Bulgaria	Liberal model: United Kingdom, Ireland
	High	Continental model: France, Germany, Austria, BENELUX and Baltic countries, Czech Republic, Poland, Slovakia, Slovenia, Hungary.	Scandinavian model: Sweden, Denmark, Finland

1. Figure. European welfare systems according to Sapir

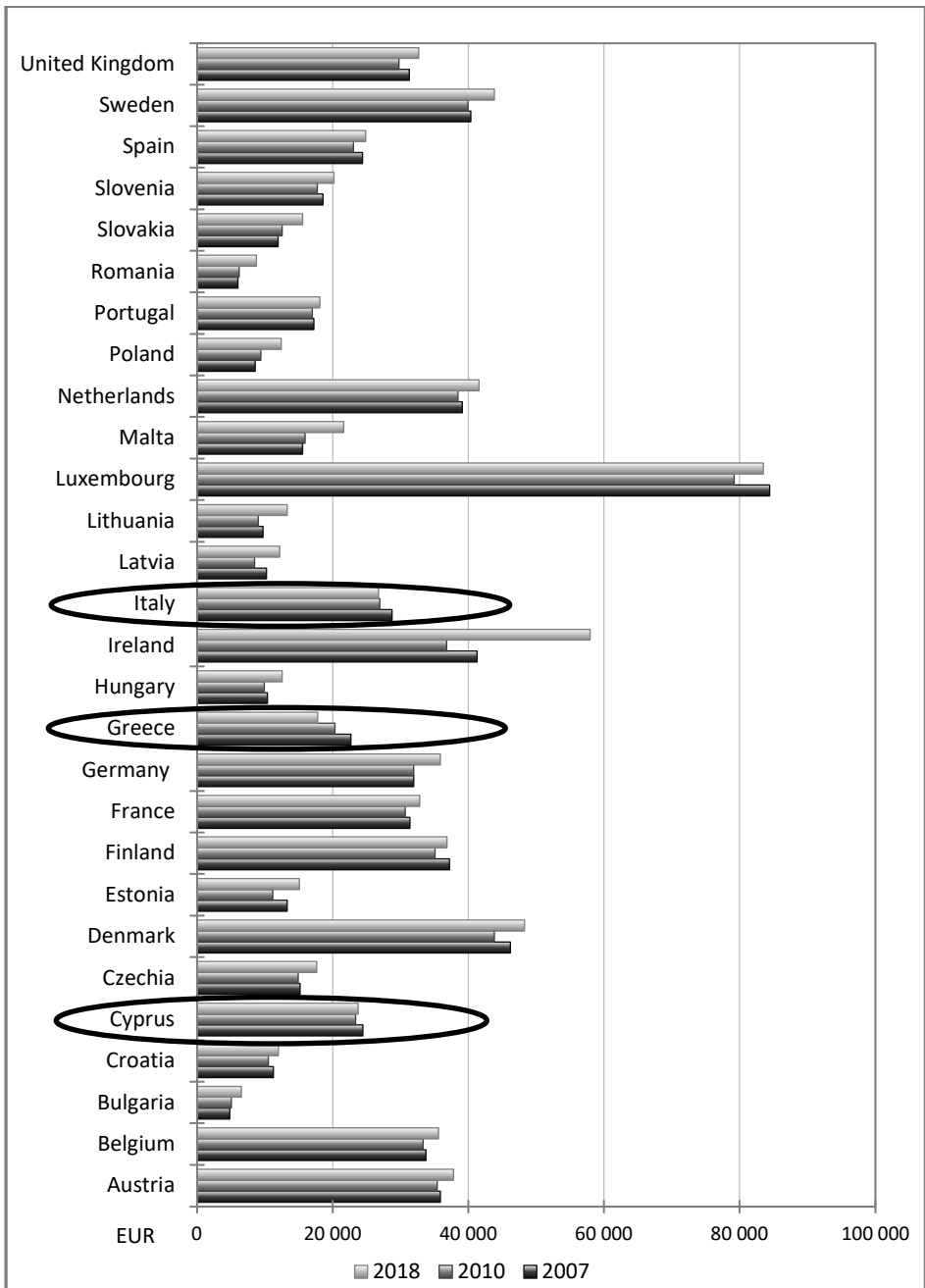
Source: Sapir (2006)

Methodology

I compared three periods in the study along the dimension of welfare and wellbeing. First, one refers to the period just before the crisis, 2007; the second is the after-crisis period, 2010; and the third one is 2017/2018. I took real GDP/capita, poverty and social exclusion, expenses on labour market and social safety net for the basis of welfare analysis. For wellbeing, I used HDI, indicator of quality of life and overall satisfaction of life. Welfare indicators were drawn into factor analysis, in order to reduce the number of indicators. I had to exclude three countries (Luxembourg, Romania, Bulgaria) because of their extreme data, and I also excluded Croatia from 2007 and 2010, Italy and UK from 2018 because their data were inadequate. For 2007 and 2010, I obtained one factor, but for 2018, from the same data, I got two factors. In all the three period, Kaiser-Meyer-Olkin measure of sampling adequacy score exceeded 0.7 (KMO = 0.755, $p < 0.05$). After all I adopted cluster analysis using the data of factor analysis, subjective wellbeing and HDI, thus I determined different groups of countries and compared changes that happened in each group in the three periods. I analysed and how the clusters fitted in Esping-Andersen typology extended with Sapir's and Balitc's categories. In addition, I adopted Gordon matrix, which is suitable for presenting well-being and welfare in the same graph, in order to outline the extent to which individuals are at risk of poverty and social exclusion because of their income and overall life satisfaction. Data were in different units, therefore I standardized them, after I made factor and cluster analysis, as I have already indicated it. Before presenting my results, I briefly describe my samples based on some selected indicators.

Changes in welfare and well-being in the European Union

The effect of crisis was clearly visible on a certain decline of GDP per capita, and in many countries, the small differences between 2007 and 2018 data refer to the prolonged feature of crisis. Greece, Italy and Cyprus did not reach pre-crisis level, Luxemburg and Finland stagnated, while countries in less developed regions, such as Romania, Bulgaria, Poland, Slovakia and Hungary, increased with more than 20%.



2. Figure. The changes in the GDP/capita during the analysed period

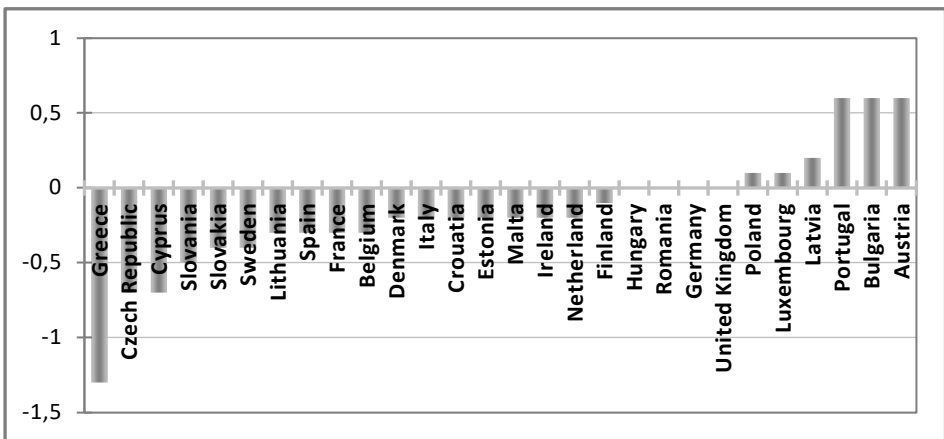
Source: Eurostat, 2020

Despite the crisis, the proportion of people at risk of poverty and social exclusion did not increase significantly in the Member States; moreover, there were some countries, where their number decreased because of welfare measures taken by government in order to ease on the negative effect of the economic crisis. Exceptions are the three Mediterranean countries, Greece, Italy and Spain, and Estonia, Luxembourg, Sweden, where the risk of poverty and social exclusion was more than 1% higher in 2018 than in 2007. In Luxembourg was the largest increase, from 15.9% to 21.9%. While the three best performing countries were Bulgaria, Poland and Romania. Bulgaria reduced the ratio of threatened social strata with 27.9 percentiles, Bulgaria and Poland with 15 percentiles. The favourable figures can be partly explained by expenditures on social security, which were reduced only in three countries between 2007 and 2017 as a proportion of GDP: in Hungary and in Ireland with more than three percentiles, in Malta with two percentiles. However, it is important to mention that in case of Malta, the absolute value of social safety expenditures do not decreased at all, even increased by 66%, from EUR 700 million to EUR 1278 million. Similar to Ireland, where there was in fact an 8% increase. Conversely, the negative changes could be observed not only in the percentage of GDP but also in absolute value in Hungary (from EUR 17,599 million to EUR 17,383 million).

Government spending on labour market policy increased significantly from 2007 to 2010 because of the crisis, but as it was withered away, these expenditures were reduced by all countries except nine (France, Finland, Sweden, Austria, Malta, Lithuania, Luxembourg, Bulgaria, Estonia) and in three countries the total amount was even less than in 2007. Romania's spending was only 44% in 2017 compared to 2007, in Germany it was 90% and in Poland 92%. Both in Poland and in Romania were and still are the labour outflows significant, which contribute to decreasing domestic unemployment rate, while in Germany, the economy is struggling because of labour shortage, and therefore government does not have to spend so much on job-seeking or back-to-work programs. At the other end of the ranking are Estonia, Bulgaria and Luxembourg. Estonia spent exceptionally high on labour market policy in 2017 compared to 2007, the sectoral support increased from EUR 24 million to EUR 190 million. Bulgaria and Luxembourg doubled their expenditure.

In order to measure well-being I used Human Development Index and European Quality of Life Survey, whose part is subjective well-being. According to the HDI, Germany was on the first place in 2007 followed by

Sweden, Denmark and the Netherlands. On the other side of the rank were Bulgaria and Romania, which had just joined to the community in that year. For 2010, some minor changes happened in the ranking. After Germany came the Netherlands, Denmark, and Sweden was just the fourth one. Bulgaria and Romania remained the last ones (Czeglédy, 2016). In 2018, Germany lost its first position and was replaced by Ireland despite the fact that Ireland was only the 10th in the ranking in both 2007 and 2010. They were followed by Sweden, the Netherlands and Denmark. The largest improvement could be seen in Bulgaria, Poland and Malta. For subjective well-being, we took one question as a basis: *taking all things together, how happy you are*, because it includes satisfaction with education, work, housing, family, health and social life as well. According to the survey, in Finland, Denmark and Sweden were people the most balanced, while in Bulgaria, Latvia and Poland were they at least. For 2011, there were not any significant changes at the top of the ranking, but among the least satisfied countries, there were. Followed Greece and Latvia, Bulgaria got the very end of the list and for 2016; the Greeks became the most dissatisfied nations followed by Bulgaria and Italy. In addition, in many countries, it is clearly visible on the base of citizens' responses that satisfaction does not reach the pre-crisis level. The largest declines were in the Czech Republic, Cyprus and Greece, and only three countries show significant positive improvement. In most of them did not change the satisfaction in detail.



3. Figure. Subjective well-being between 2006 and 2016

Source: Eurostat, 2020

Factor and cluster analysis

In order to reduce the number of indicators, I made a factor analysis for each of the three years, and based on this, amplifying with well-being indicators, countries were classified into clusters. In the pre-crisis period, in 2007, the variables referred to as welfare indicators got into one factor. Within the factor GDP per capita was the strongest one followed by social spending per capita and severe material deprivation. The latter, the proportion of those who are at the risk of poverty and social exclusion, had a negative influence on the factor, while the other variables had a positive one, which means that the higher value of this factor means higher level welfare, therefore I named it as welfare factor. Based on the welfare factor, Human Development Index and subjective well-being indicator I conducted a cluster analysis to compare its result with Esping-Andersen categories amplified by Sapir and Baltic.

In the first period under survey, in 2007, Hungary, Latvia, Lithuania, Poland, Slovakia and Portugal were among the worst performing countries. Twenty-nine percent of the population were at the risk of poverty and social exclusion in these countries and 18% suffered from severe material deprivation. In this group, governments spent the least on social protection, averaging 1163 EUR/capita. According to the two well-being indicators, to HDI and subjective well-being, these states are also the poorest performing ones. The average HDI was 0.82 points and subjective well-being 7.15 out of 10 points. The Mediterranean countries and some states, which joined in 2004, got into the second cluster: Cyprus, the Czech Republic, Estonia, Malta, Slovenia, Greece, Italy and Spain. Twenty-two percent of people living in these countries were at risk of poverty and social exclusion and 7.3% suffered from severe material deprivation. Governments spent an average 2,600 EUR/capita on social protection and 0.5-1% of their GDP on labour market policies. The third group included Western and Central European countries as well as the United Kingdom and Ireland. These countries represented the continental and liberal welfare models. Indeed, the United Kingdom spent significantly less on labour market policy compared to other countries in the group, only half percent of its GDP, while the others spent more than 1%. However, Ireland spent above the average on labour market policies and social protection, which no longer give reasons for the “liberal welfare state” attribute according to the aspects I examined. In the fourth group, the northern welfare states (Denmark, Finland and Sweden) were placed.

These countries really had the lowest proportion of citizens who are at risk of poverty and social exclusion (16%) and who are suffering from severe material deprivation (3%). Both the labour market expenditure were significant and social protection expenditures also. Governments spent 1.75-3% of their GDP on labour market and 6700 to 9200 EUR/capita on social protection.

My next period covered the year immediately after the crisis, and I made a factor analysis again with the same variables. I was able to put all the welfare indicators into one factor, too and then I clustered the countries again based on this welfare factor, HDI and subjective well-being. The crisis has led to significant changes both the composition of countries and their average performance as well. Although, Greece did not show any outlier values during the examination compared to the other countries, it was still impossible to classify into any other clusters, therefore Greece became separated. Poland got out of the first group, because its welfare and well-being have risen to the level of countries in the second group. While France fell into the second group from the third one because its GDP/capita decreased with EUR 710, and labour market and social protection expenditures were also reduced. The ratio of people suffering from severe material deprivation increased from 4.7% to 5.8% and subjective well-being decreased from 7.8 points to 7.4 points at the same time. Italy also belonged to this group. The third cluster, as I already mentioned, was Greece by itself, where the GDP/capita was close to the EU average, but it was one of the five poorest performing countries according to the poverty and social exclusion and severe material deprivation, and based on the labour market expenditures it was on the same level as former socialist countries. Finally yet importantly, it achieved the worst result on subjective well-being. The fourth group became a mixed group, where Mediterranean, Scandinavian, liberal and conservative countries can be found as well. Spain stepped forward and joined to the best performing countries due to a significant increase in the spending on labour market and social protection, with which the government tried to ease on the negative effects of the crisis. This measurement can be partly considered successful, because subjective well-being improved a bit from 7.6 points to 7.8 points, so citizens felt maybe that the government tried to provide some kind of safety net for them. The change, however, is interesting, because those ratio who live at risk of poverty and social exclusion increased with three

percentile and those who suffer from severe material deprivation with one and half percentile.

1. Table. The result of cluster analysis for 2007, 2010 and 2018

2007			
Denmark	Austria	Cyprus	Hungary
Finland	Germany	the Czech Republic	Latvia
Sweden	Belgium	Estonia	Lithuania
	France	Greece	Poland
	Ireland	Italy	Portugal
	the Netherlands	Malta	Slovakia
	the United Kingdom	Slovenia	
		Spain	
2010			
Austria	Cyprus	Estonia	Greece
Belgium	France	Hungary	
Denmark	Italy	Latvia	
Finland	Malta	Lithuania	
Germany	Poland	Slovakia	
Spain	Slovenia	Portugal	
Sweden	the Czech Republic		
the Netherlands			
the United Kingdom			
2018			
Austria	Slovenia	Croatia	Greece
Belgium	the Czech Republic	Cyprus	
Denmark		Estonia	
Finland		Hungary	
Germany		Latvia	
Sweden		Lithuania	
the Netherlands		Malta	
the United Kingdom		Poland	
		Portugal	
		Slovakia	
		Spain	

Source: Own edition based on calculation, 2020

The third period was 2018 and my preliminary assumption was that the changes caused by the crisis would withered away at least at the level of indicators and the clusters would be similar to the first year, to 2007. However, I have achieved a very different result and there is even a larger difference among countries and group of countries compared to 2010. Greece was still not integrated in any groups and two other countries became similarly separated. The Czech Republic and Slovenia formed together an individual group. The other Mediterranean countries together with the states joined in 2004 represented another one. While the Netherlands, Finland, Sweden, Austria, Germany, France, Denmark, Belgium

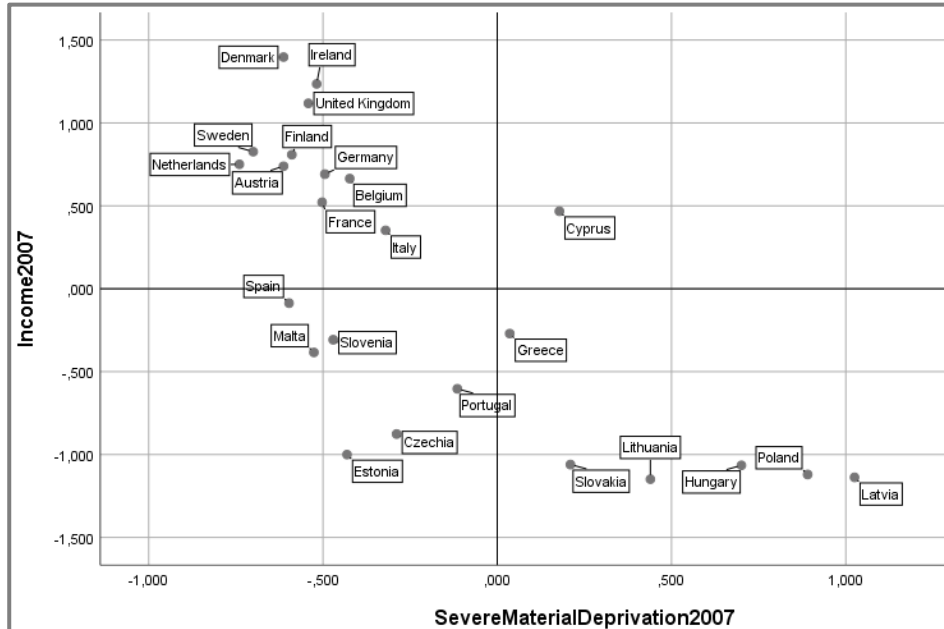
and Ireland remain among the best performing countries. The Greek GDP/capita declined further and was even under EUR18.000, severe material deprivation showed extremely high value (16.7%) which was on the same level as Bulgarian and Romanian. The government drastically reduced labour market expenditures but tried to keep maintain the social spending at the level of previous years. This is the reason why Greece cannot fit into any groups. In the case of the Czech Republic and Slovenia, they should have been among the post-socialist countries according to their GDP/capita, but the poverty rate and the ratio of severe material deprivation was on the level of the best performing countries, this is why they could not have been categorized into the other clusters. Following table contains clusters of each analysed years.

Gordon matrix

I compared Esping-Andersen's, Sapir's and Baltic's grouping not only with our clusters but also with the Gordon matrix, in order to see if the countries show similarities according to the author's classification and the risk of poverty and social exclusion. Gordon (2006) identified four groups based on two aspects. One axis of his matrix represents the median income; the other one shows the deep of material deprivation. The four groups are called as "not poor", "poor", "rising" and "vulnerable". In "not poor" countries, material deprivation is low and average incomes are high. In "poor" countries, material deprivation is high and incomes are low. In "rising" countries, incomes are higher but material deprivation is still significant, while in "vulnerable" countries, material deprivation is not significant yet, but incomes are already lower than the EU's average. In 2007, just before the crisis, Latvia, Poland, Hungary, Lithuania, Slovakia and even then Greece were regarded as poor country according to the matrix. In Greece, both incomes and deprivation were under the EU's average in that time. There was only one rising country, Cyprus where incomes were a bit higher compared to the poor group, but material deprivation was still significant. Spain, Malta, Portugal, the Czech Republic and Estonia belonged to the vulnerable countries. The rest of the countries were among the non-poor countries.

Compared to the cluster analysis, groups show strong similarities. The countries of the two most developed clusters can be seen in the non-poor category, while the countries of the worst performing cluster are

among the poor ones except Greece, which was in the third cluster that time.

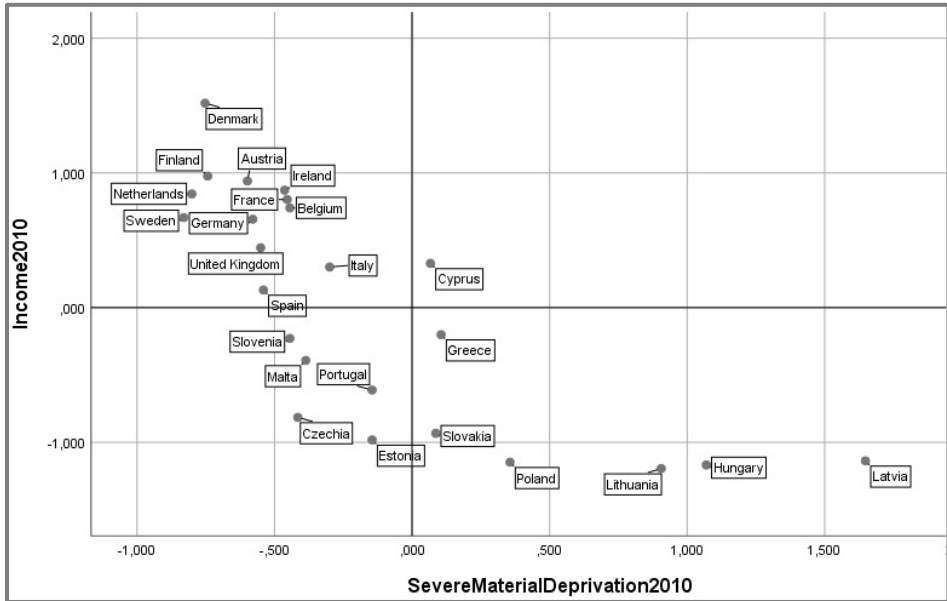


4. Figure. Gordon matrix based on data for 2007

Source: own edition and calculation based on Eurostat, 2020

After 2010, some minor changes occurred among the groups, but within-group rates changed apparently. The poor countries became even poorer. The share of people who live in severe material deprivation increased the most in the Baltic States, in Latvia by 3.6 percentile, in Estonia by 3.4 percentile, in Lithuania by 3.3 percentile. At the same time, some countries were able to reduce the proportion of people living in extreme poverty, thanks to the fast response to the crisis and to the well-targeted social measures: Poland with 8 percentile, Slovakia and Cyprus with 2 percentile. Spain rose among non-poor countries because of the increase in average income, while Slovakia got closer to the border of vulnerable countries and Cyprus to the border of non-poor countries. The Spanish change corresponded to the result of the cluster analysis, as the country was temporarily placed among the best performing countries in 2010. However, for many other countries there is a discrepancy between Gordon

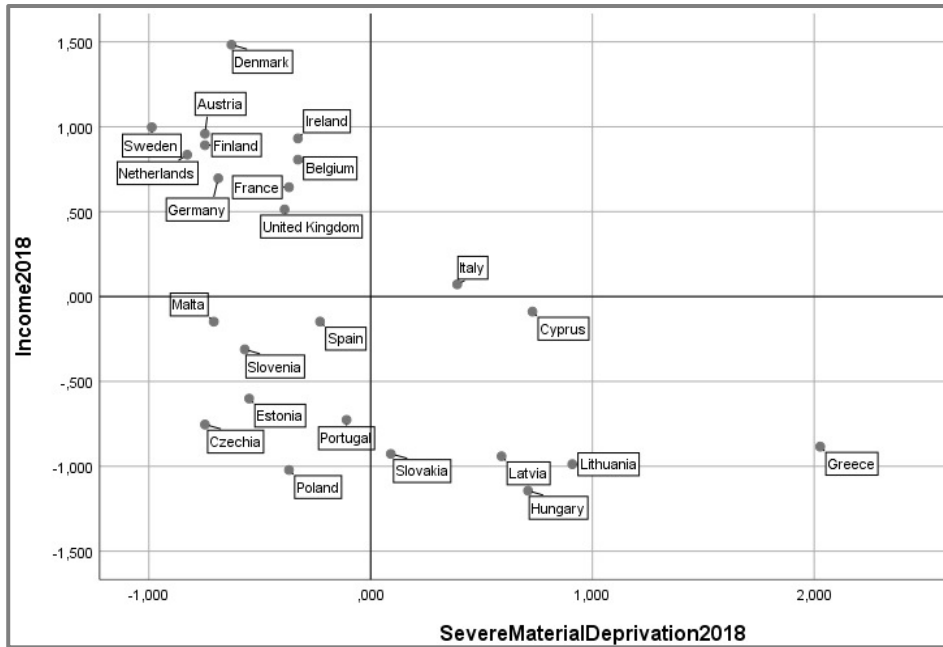
matrix groups and cluster analysis. Although France and Italy do not belong to poor countries, according to the cluster analysis they were still in the same group with Malta, Slovenia and the Czech Republic, while Portugal remained among the poorest countries along with Estonia.



5. Figure. Gordon matrix based on data for 2010

Source: own edition and calculation based on Eurostat, 2020

By 2018, more changes occurred not only within the groups but also among them. Cyprus fell into the group of poor countries, Greece got into the edge of them, Italy moved to the rising group and Spain returned to the vulnerable category. In Latvia, the proportion of people suffering from severe material deprivation has dropped significantly, thus it got closer from the edge of its own group to the vulnerable countries. A similarly positive change happened in Hungary as well, where the ratio of people experiencing severe material deprivation decreased by 11.5 percentile between 2010 and 2018. Poland moved from poor to vulnerable countries because of the 9.5 percentile decrease of material deprivation. Comparing with cluster analysis, the most developed countries were still in the non-poor category, while countries belonging to the economically underdeveloped economies of the European Union appeared among vulnerable and poor countries.



6. Figure. Gordon matrix based on data for 2018

Source: own edition and calculation based on Eurostat, 2020

Conclusion

The purpose of my study was to review the well-being of Europe. I examined whether the Esping-Andersen country groups amplified with Sapir category can be verified by welfare and well-being indicators. The variables included in the study reflected the effectiveness of social welfare systems and the level of welfare. We took the different dimensions of poverty, labour market and social safety expenses and gross domestic product into account. However, determined clusters did not reflected Esping-Andersen's and Sapir's categories. According to 2007 data, the liberal and continental states were not separated, and the post-socialist and Mediterranean countries were mixed with each other. The Scandinavian welfare states formed still one unit, although, in the next examined period these states appeared also together with others. Only Batic's (2011) post-socialist model could and still can be clearly distinguished over the years – but we have to notice that there are some outlying states within the category. The Mediterranean countries are “mixed” with the post-socialist states,

while the United Kingdom and Ireland, which are considered as liberal welfare states, mixed with Scandinavian welfare countries, Finland, Sweden and Denmark. Thus, the welfare typology of Esping-Andersen cannot be verified in today's economic climate.

Similar conclusion was reached through the Gordon matrix analysis. The countries of Western and Central Europe, the Nordic countries, the United Kingdom and Ireland formed consistently a bloc, as Latvia, Lithuania, Hungary and Slovakia did and Slovenia, Malta, the Czech Republic and Estonia were also separated. However, these groups show even differences in several points with my cluster analysis, therefore they hardly match with Esping-Andersen's and Spair's categories. Finally, the third point of my examination was the analysis of the long-lasting impact of crisis on welfare. I supposed that the protracted crisis would have a negative impact on poverty and material deprivation, but I observed the opposite. Poverty increased only in five countries and stagnated in two. From the aspect of material deprivation, four countries was growth and two states stagnated.

Based on my result, I would like to strengthen my establishments with further analyzes and I would like to increase the number of indicators as well in order to be able to clearly state whether Esping-Andersen's and Sapir's model still works or not.

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