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ECONOMIC AND SOCIAL POLARIZATION DYNAMICS IN THE EU

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Economic and social polarization dynamics in the EU

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Abstract

Inequality, from a social and economic point of view, produces a widespread sense of injustice, which culminates in the erosion of trust in institutions, politics, and the market economy. This is also relevant from a geopolitical perspective, especially when placed in correlation with the crisis of liberal democracies, often accompanied by the spread of nationalist currents capable of bringing into question the pillars of the EU system.

In the past, differences in opportunity were prevalent only in less developed countries but recently, disparities have extended to Western countries and industrial economies as well. Financial crisis, market distortions, asymmetrical globalization and political choices are some of the factors underlying growing inequality around the world.

We are seeing a progressive impoverishment of the middle class and the correlated concentration of national wealth in favor of a small minority (Stiglitz, 2014), the rise of a hyper-paid elite (Piketty, 2018; Saez and Zucman, 2019), and reduced upward economic mobility (Krueger, 2021). These phenomena should be considered in light of the aggregation of individual behaviors to better understand the increasing disintegration of the social fabric, which is in many cases considered the cause of the political metamorphosis of some States. This research analyzes statistical evidence with the aim of carrying out a comparative analysis between countries and regions, in order to assess dynamics of social and economic polarization in the EU. The results of the study, considered on a local scale, could contribute to better policy making to achieve the Agenda 2030 objectives.

Keywords: Socio-economic polarization, Inequality, Poverty
JEL Classifications: H5, I3.

1. Introduction

The issue of economic and social inequality is complex, varied and extremely widespread on a global scale. It concerns, to varying extents, all regions of the planet and affects above all the weakest fringes of the population, more exposed to the risks of poverty and injustice. The growing concentration of wealth in the hands of a few and the increase in the number of people living in poverty are two emblematic aspects of social polarization. Increasingly marked boundaries between protected and unprotected categories of people, rich and poor, those who can access essential services, such as education and healthcare, and those who cannot, are symptoms of this dynamic.

The economic crisis of 2007-2008 and the ongoing Covid-19 crisis have led to an increase in unemployment, low-paid work and precariousness, negatively affecting many dimensions of human living (Corbelle Cacabelos and Troitiño Cobas, 2013; Rueda-Cantuche, 2021; OECD, 2021). This exacerbates inequalities, especially among those already living in marginal conditions (Carta and De Philippis, 2021).

Poverty, material deprivation and social exclusion are interconnected critical issues (Sen, 2010), the search for sustainable and effective solutions should necessarily start from the analysis of their underlying causes. Socially and economically, inequality produces a widespread and profound sense of injustice, culminating in the erosion of trust in institutions, politics, and the market economy. This is also relevant from a geopolitical perspective, especially if we consider the polarization of individuals and countries, or if we consider its correlation with the crisis of liberal democracies.

In this paper, the theme of inequality is addressed through the analysis of certain key indicators – relative poverty, gross domestic product (GDP) and the Gini coefficient – which, read interrelatedly, allow us to interpret recent evolutionary trends. EU countries and Italian regions are analyzed comparatively based on Eurostat and Istat data. This analysis will allow us to observe and interpret dynamics of social and economic polarization, highlighting how certain drivers of inequality behave at different scales, providing guidance for future policies, also considering the effects of the Covid-19 pandemic.

The paper is structured in six sections. In section two we propose a literature review. Section three contains some methodological notes and section four illustrates our principal results. In section five, data are considered from a geographical perspective and some findings are outlined and conclusions are drawn in section six.

2. Literature review

The increase in inequality, reinforced by a pronounced social polarization and fueled by a marked inequality in income distribution (Stiglitz, 2014; Piketty, 2018), is a topic of absolute centrality. While in the 1980s, policy makers treated this issue almost marginally, today it receives growing interest (Perocco, 2018).

Inequality poses a real threat to the stability of democracies and for the harmonious development of territories as stressed by different international organizations. The Global Risk Reports (World Economic Forum since 2006) analyze the dynamics of inequality in relation to various aspects like climate change and the environmental crisis, the gaps detected in digitalization processes and the negative outcomes of the pandemic (WEF, 2017; 2021).

The distortion inherent in the relationship between wealth distribution, income generation, and the increase in inequality and poverty is confirmed by data reflecting how, between 1980 and 2016, 27% of the total increase in global wealth ended up in the hands of the richest 1% of the planet's population. This confirms the existence of a distortion in the relationship between wealth distribution, income generation, and the increase in inequality and poverty.

However, despite this concentration of wealth in the hands of a few people, the living conditions of the poorest 50% of the population have improved, mainly due to the boom in emerging economies. Nevertheless, as the 2018 World Inequality Report points out, this improvement only affected 12% of the total (Alvaredo et al., 2017).

There are different and interrelated causes at the base of inequality in wealth distribution, mainly liberalist pressures, the financialization of the economy, the asymmetric globalization, and the political choices of different countries. In this respect, the World Inequality Lab highlights how world economies have responded in different ways to the changes that have taken place in contemporary society, in some cases succeeding in reducing (but not eliminating) inequality thanks to the adoption of special welfare systems, as has happened in Europe (Ibid).

The process of transition from neo-Keynesian policies to the new economy has therefore not prevented social inequalities from becoming explicit and expanding even within and between EU countries, creating social conflicts and problems of spatial justice in the territories. (Prisco, 2013).

Inequality, in fact, creates a widespread and deep sense of injustice (Saez and Zucman, 2019), which culminates in the erosion of trust in institutions, politics, and the market economy. This is also relevant from a geopolitical perspective, especially if we take into account the crisis of liberal democracies, often accompanied by the spread of nationalist currents.

These problems also affect the exacerbation of polarization regarding employment (Krueger, 2021), with a labor market characterized, on the one hand, by the growth of highly specialized and well-paid occupations, and on the other hand, by low-skilled and lower-paid occupations. This widens the wage gap at the expense of a middle class that, especially in the last 10 years, has been significantly weakened (Tricarico, 2019). The Committee on Employment and Social Affairs of the European Parliament expressed its views in this regard in its Report (2019/2188(INI)) of January 27, 2021.

In this policy document, after taking stock of the serious situation of European countries due to the increase in inequality and poverty and after highlighting some specific critical issues, member states and the Commission were invited to adopt concrete measures to reduce the conditions of disadvantage that afflict millions of citizens.

As mentioned, an already critical situation was exacerbated by the consequences of the pandemic which, as highlighted in a recent Oxfam report (2021), is contributing to worsening inequalities, above all to the detriment of the groups most at risk of poverty.

The effects of the pandemic are felt in all EU countries, including Italy, which was already bearing the brunt of inequality before the crisis, although it has, in recent years, seen improvements with the roll-out of new welfare benefits such as inclusion income and citizenship income.

While in 2019, 4.6 million people were living under the poverty threshold in Italy (7.7% of the population), and 1.7 million Italian households were in poverty (6.4% of families), it seems that the pandemic has set the country back 10 years in terms of poverty and economic situation. The crisis triggered by the spread of Covid-19 has afflicted above all the most fragile categories (women, young people, unprotected workers, the unemployed, etc.), although the adoption of measures such as emergency income has partially mitigated the negative effects.

Yet, it is noted that the inequality gap was wider in 2020 than it was at the time of the 2008-2009 crisis (Istat, 2020). The complexity of the situation, also due to the current historical period in which digital technologies are deeply pervasive in all areas of human life, has favored the emergence of new facets of inequality.

This is demonstrated by data on the increase in educational poverty (Da Lauso and De Capite, 2020) and the difficulty of accessing new technologies (WEF, 2021). It is evident that the less educated and those unable to use digital tools have been more exposed to the effects of an economic and social crisis defined as "unprecedented" (OECD, 2021).

3. Methods and data

The aim of this paper is to investigate some dimensions of inequality, mainly related to the fields of poverty and wealth, in relation to specific geographical areas (EU countries and Italian regions). Indeed, poverty and wealth are two important drivers which, when read interrelatedly, show how certain socio-economic dynamics evolve over time and space.

The analysis was carried out on the NUTS 0 and NUTS 2 levels and using the Gini coefficient, a specific poverty indicator, and GDP per capita. For the Nuts 0 level, data were extracted from Eurostat's database for the 28 EU countries in relation to the years 2009 and 2019, to highlight trends over a sufficiently long time period to detect possible variations and deviations. The absence of some data (2019 for the United Kingdom and 2009 for Croatia) led to a reduction in the number of countries considered to 26.

The analysis on the NUTS 2 level focused on the Italian regions and the autonomous provinces of Trento and Bolzano. The data were taken from the Istat database for the years 2007 and 2017, this being the last year for which the Gini coefficient was officially calculated at regional level.

At country level, to measure poverty, the Eurostat composite indicator "People at risk of poverty or social exclusion", expressed as a percentage, was used, whereas the Istat "risk of poverty or social exclusion" index, also expressed as a percentage, was used for the Italian regions.

Real GDP of the Italian regions (referring to the years 2007 and 2017) was taken with chained values as of 2015, while for the EU countries GDP per capita expressed in PPS was used for the years 2009 and 2019. To obtain GDP per capita at regional level, real GDP was divided by the resident population in each region for the years 2007 and 2017 (Istat data on the resident population on 1 January 2008 and 1 January 2018 were used).

To measure poverty (Pov), data were transformed by dividing the corresponding percentage of each region by the regional average. The same process was followed to transform the poverty indicator to the NUTS 0 level.

$$PovReg1 = \frac{Pov\ Reg1/100}{\frac{\sum_{1-21}(PovReg/100)}{21}} \qquad PovState1 = \frac{Pov\ State1/100}{\frac{\sum_{1-26}(PovState/100)}{26}}$$

The Gini coefficient was also transformed by dividing the value of each region and state by the corresponding average value.

$$GiniReg1 = \frac{Gini\ Reg1}{\frac{\sum_{1-21} GiniReg}{21}} \qquad GiniState1 = \frac{Gini\ State1/100}{\frac{\sum_{1-26}(GiniState/100)}{26}}$$

Once all the data had been transformed, correlation coefficients were calculated between Poverty and Gini, Poverty and GDP, Gini and GDP, considering both the NUTS 0 and NUTS 2 levels.

Poverty indicators and the Gini coefficient were also analyzed by dividing the scatter plots into four quadrants in order to analyze the positioning of different territorial units over time in relation to the levers of inequality considered.

4. Results and Discussion

In this section we first analyze the dynamics at the level of European countries. During the period considered, in which the GDP per capita growth trend was positive, there was a substantial reduction in the proportion of people at risk of poverty and social exclusion and a slight increase in the income concentration indicator. At Italian level, the dynamics were quite different because, amidst a substantial reduction in per capita income, the poverty indicator worsened and the Gini coefficient increased slightly.

If we look at the correlations between the three indicators, there are considerable dynamics in all three cases. The correlation between Poverty and Gini was already extremely strong in 2009 and as it strengthened further over time, it is clear that the devising of policies to reduce inequality can only come through the reduction of income concentration, i.e. income redistribution policies. The link between the two indicators and GDP has weakened, and this could be a sign of the inadequacy of GDP per capita in reflecting poverty (Table 1). It is clear that these considerations must be adequately confirmed by robust statistical causal mechanisms.

Table 1. *Trend in analyzed indicators (2009-2019).*

	2009	2019	% changes 09-19
GDP UE26	99.65	103.54	+ 3.9 %
Poverty index EU26	0.240	0.211	- 0.029 %
Gini coefficient EU26	0.296	0.308	+ 0.016 %
GDP Italy	108	96	- 10%
Poverty index Italy	0.249	0.256	+ 0.007%
Gini coefficient Italy	0.318	0.328	+ 0.01 %
Poverty/Gini	0.697	0.878	+ 0.181 %
Poverty/GDP	- 0.58	- 0.33	+ 0.25 %
Gini/GDP	- 0.324	- 0.177	+ 0.147

(Source: our processing of Eurostat data)

In the following two charts (Figures 1 and 2) we see how the relative position of the different European countries has evolved. Compared to the origin of the axes identified by the coordinate point (1.1), corresponding to the EU26 average values, we see, for example, that the trend in Italy's poverty indicator is extremely negative, going from 1.04 in 2009 (4% higher than the average value) to 1.22 in 2019 (22% higher than the average value).

In addition, the strengthening of the correlation indicator between the Gini coefficient and the poverty index depends on the rapprochement of some eastern European countries (Hungary, Romania and Bulgaria) to the center of the scatter plot. This makes it possible to imagine transnational anti-inequality measures, since the link between the two indicators is now very clear in all countries.

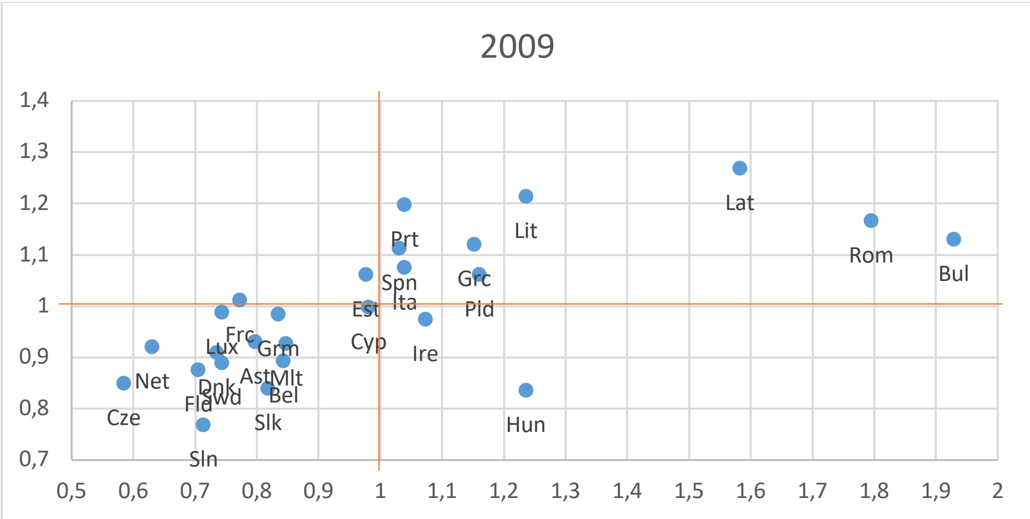

Figure 1. *Correlation between Gini coefficient and Poverty index – 2009 NUTS 0 level (Source: our processing of Eurostat data)*

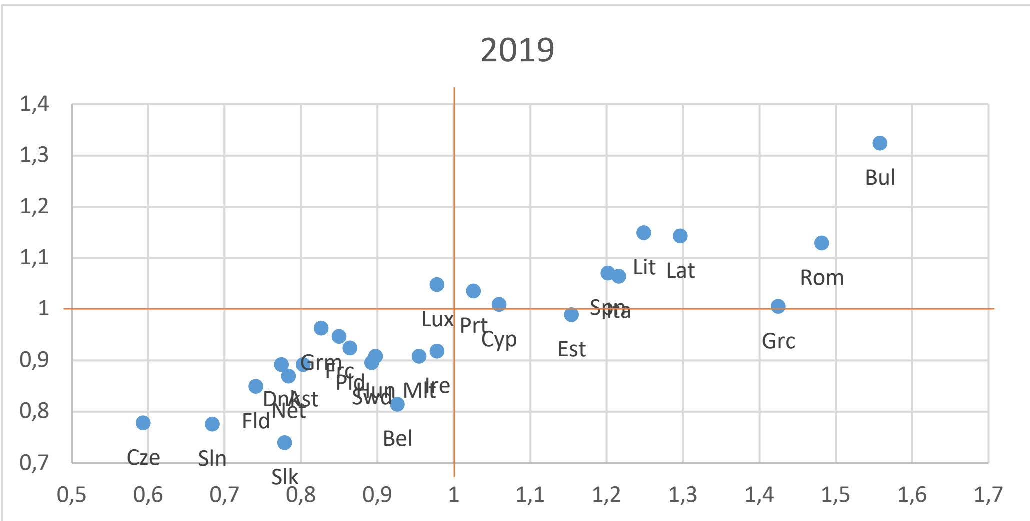

Figure 2. *Correlation between Gini coefficient and Poverty index – 2019 NUTS 0 level (Source: our processing of Eurostat data)*

Let us see below how the situation has evolved at the level of Italian regions. Although the reference period is slightly different, the dynamics are similar to those already seen in the EU26 values, namely a sharp reduction in GDP per capita, a substantial increase in the poverty indicator, and a slight increase in the Gini coefficient.

In this context, regional dynamics see Sardinia further penalized with the reduction of GDP per capita and with the accentuated dynamics of the inequality indicator. If we look at the correlation indices, however, the situation that appears is rather different from that described earlier. As the correlation between the poverty index and the income concentration index (-10.8%) weakens, there is a very strong negative correlation between GDP per capita and poverty, an effect of the fact that in Italy, more than throughout Europe, the roots of poverty are mainly due to the lack of economic resources (Table 2).

Table 2. *Trend in analyzed indicators (2007-2017).*

	2007	2017	% changes 07-17
GDP Italy	30105	27968	- 7.11 %
Poverty index Italy	0.244	0.280	+ 0.036 %
Gini coefficient Italy	0.269	0.288	+ 0.019 %
GDP Sardinia	21847	20191	- 7.60 %
Poverty index Sardinia	0.303	0.381	+ 0.078 %
Gini coefficient Sardinia	0.288	0.304	+ 0.016 %
Poverty/Gini	0.831	0.723	- 0.108 %
Poverty/GDP	- 0.891	- 0.894	- 0.003 %
Gini/GDP	- 0.636	- 0.501	+ 0.135 %

(Source: our processing of Istat data)

We complete the analysis with the scatter plots (Figures 3 and 4) showing that in 2007 regions are very clearly divided between southern Italy where the poverty and concentration of income indicators are both above the national average and regions in northern and central Italy, which, apart from Lazio, Lombardy, Emilia Romagna and Liguria, show both indicators below the national average. Ten years later, the separation is clearer between regions of the first quadrant (southern regions) and third quadrant (central and northern regions).

Abruzzo and Molise trend away from this clear dichotomy in one direction (as the worsening of the poverty index is accompanied by the improvement in the Gini coefficient), and Lazio now moves into the first quadrant due to the increase in the income concentration indicator. Overall, these shifts lead to an increase in the dispersion of points with a weaker relationship between the two indicators.

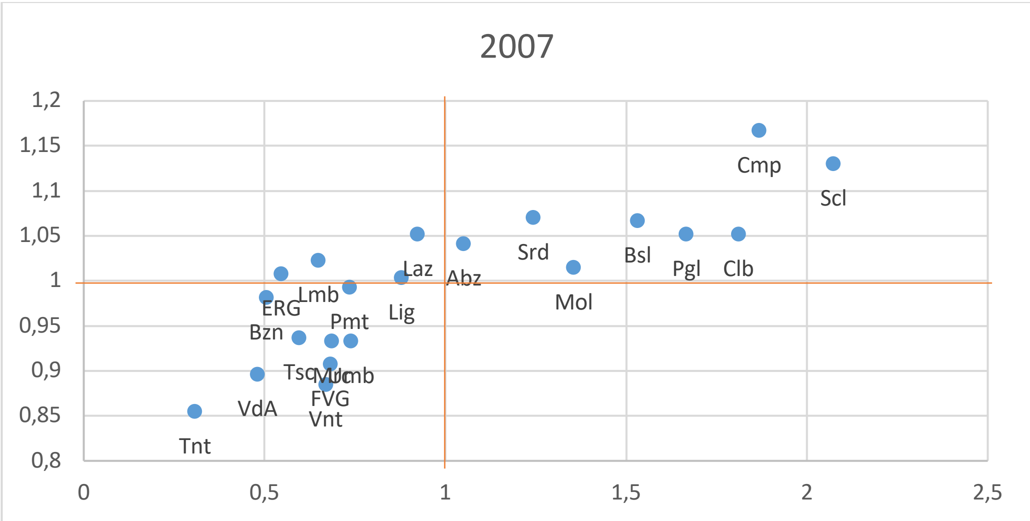

Figure 3. *Correlation between Gini coefficient and Poverty index – 2007 NUTS 2 level (Source: our processing of Istat data)*

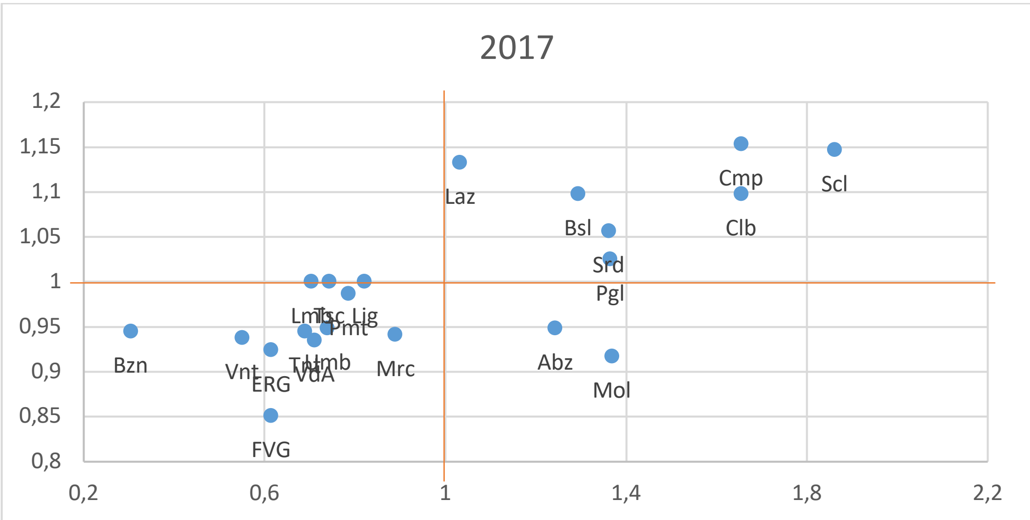

Figure 4. *Correlation between Gini coefficient and Poverty index – 2017 NUTS 2 level Source: our processing of Istat data)*

5. Some evidence from the spatial analysis of the data

The data used for the previous analysis could be examined spatially from a geographical perspective, at least at country level. The geographical analysis highlights some situations of homogeneity and differences in certain phenomena in the EU. The European context is indeed characterized by strong regional disparities requiring the implementation of targeted and differentiated policies.

Knowing and interpreting the dynamics of inequality affecting the regions and European countries in consideration of their geographical specificities allows us to focus on certain developments and criticalities. Having a clear and detailed framework, capable of highlighting trends and changes, makes it possible to better focus on existing problems in order to identify possible solutions.

Policy makers would certainly benefit from this framework, a useful guide to direct their actions and encourage their adoption of data-based and region-specific policies capable of governing processes based on the potential expressed by the territories.

This study highlights the positive dynamics in terms of the growth trend of GDP per capita in the 2009-2019 period, and a (slight) concurrent decrease in the poverty rate.

Through an evidence-based approach, considering the specificities of the regions, it is possible to reorder the socio-economic mosaic of the EU distinguishing three macro-regions, characterized by different growth trends, within which the correlation between the factors investigated (GDP - Poverty Index - Gini) is the cause-effect of very different phenomena (Figure 5).

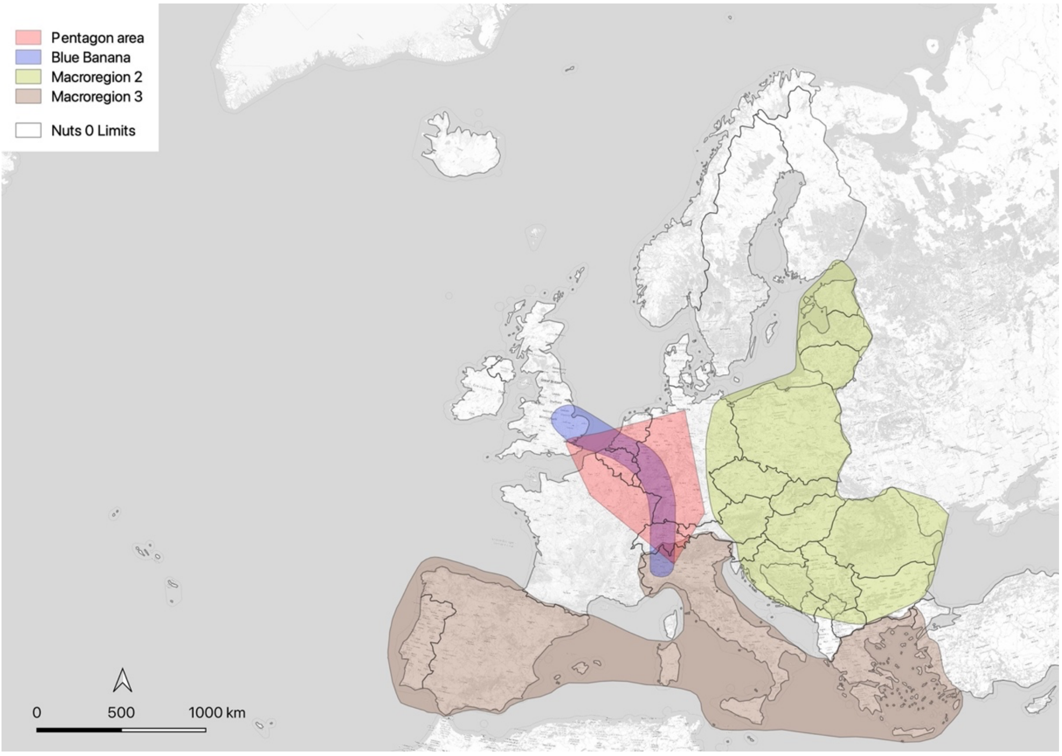

Figure 5. The different European macro-regions: our processing of Eurostat data)

Macro-region 1: In Western Europe we identified an economic area coinciding with the “Blue Banana” (Buent 1989, in Faludi and Waterhout, 2002) which traverses the "European pentagon" and includes Central Europe. This area is the top performer in terms of economic productivity and the most profitable in the EU. It is the macro-region with the highest GDP per capita in absolute terms.

Despite this virtuosity, the poverty index in some of these countries (Belgium and Luxembourg) and even the Gini coefficient (Germany) show an upward trend. In this specific context, where the distribution of income does not present inequality (this macro-region has higher values than the EU average) and the problem is not a lack of material goods, the levers on which to act do not relate to equalization, but rather to process equality and equal opportunities.

In this case, the analysis revives a research issue that has been central to the international scientific debate and which questions the adequacy of GDP as a benchmark for measuring economic performance, i.e. whether the economy of the average citizen should be evaluated rather than "the performance of the economy on average" (Stiglitz, 2018), in order to better direct policy making.

Macro-region 2: The Euro-Mediterranean area presents a complex geo-economic context, being peripheral to the EU not only geographically but economically as well. In the Italy-Spain-

Greece quadrant, there are increasing rates of poverty, a significant contraction in GDP, and higher Gini coefficients than the EU-15 average. Another critical point concerning Italy, where income distribution is particularly uneven, confirming the country's bipartition into two distinct geo-economic realities: prosperous northern Italy, close to the European core, and the deeply recessive South, which continues to show significant asymmetries compared to the average performance of the EU area.

In this situation, policy interventions must be framed within a general policy of revitalization aimed at reducing structural gaps, which, in the case of the analysis conducted here, targets the elimination of conditions of initial disadvantage and forms of social polarization, guaranteeing citizens greater accessibility (and not only geographically) to resources and greater upward social mobility.

Macro-region 3: The overall positive performance in terms of constant productivity growth recorded in the EU is largely influenced by the performance of the Union's eastern quadrant, as a result, it can be inferred, of the results of the convergence policy of the last programming cycle. Within this area, which, it should be noted, is on a path of convergence towards the EU's average standards, it is nevertheless possible to further differentiate between states: the Visegrad four represent the most solid economies in the eastern EU, where not only do we observe greater GDP growth in absolute terms, but we also see a more balanced distribution of income. On the other hand, the south-eastern backbone of the EU is markedly fragile: in Romania and Bulgaria, the correlation between poverty and inequality is worsening and it is in this quadrant that material and social deprivation is exacerbated in absolute terms and is accompanied by forms of exclusion from even essential goods and services, drawing attention to the need to implement more incisive sectoral policies in terms of equalization and accessibility to resources.

6. Conclusions

With this paper we have analyzed some of the dynamics underlying the growing inequality on a European and regional scale. Starting from a literature review on regional disparities, also in light of the effects of the pandemic, we focused on certain indicators and their mutual correlation. In particular, the Gini coefficient, GDP per capita and various poverty indices were analyzed.

These analyses have highlighted how at European level a positive dynamic in GDP per capita correlates with a reduction in the percentage of people at risk of poverty and social exclusion and how the concentration of wealth has also slightly increased, revealing a scenario that is not overly negative.

On the contrary, at the Italian level, amidst a substantial reduction in per capita income, we observe a worsening of the poverty indicator and a slight increase in the Gini coefficient.

At European level, we notice that the correlation between the Gini coefficient and poverty strengthened due to a less marked dispersion of countries, as seen in the comparison of scatter plots (Figures 1 and 2), but the concluding observations highlight the need to examine inequality from an extra-economic perspective as well in order to better understand the differences that characterize the EU area.

However, as the scale changes, further variations emerge, as in the case of the Italian regions. Their analysis highlights how a reduction in GDP per capita is accompanied by growth in the poverty indicator and slight growth in the Gini coefficient (the latter's behavior is in line with the European trend). Nationally, it is precisely the poverty variable that causes the greatest concern, as a result of the fact that in Italy, more than in Europe, an increase in poverty is mainly linked to economic issues.

As highlighted by the comparison between the scatter plots, if in 2007 the Italian regions proved to be more consistently grouped around the same trend, in 2017 greater variability can be seen in the regions that are starting to move away.

On the basis of the foregoing arguments, we believe that purely economic indicators may be used to highlight differences and trends relating to inequality at the national and regional level, but to understand the territorial heterogeneity that can be found on a regional scale, the results should be observed considering the EU's different geographical and economic realities.

To do this, we divided the EU into homogeneous areas in order to understand the nature of the phenomena examined and to outline policy processes consistent with the different regional specificities. This approach leads to further analysis in this direction in order to describe the trend of inequality in the various local systems and to identify different growth and development paths for each observed macro-region.

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