

## **Inequality and elections in Italy, 1994-2018**

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### **Abstract**

The article investigates the role of inequality and socio-economic conditions in the evolution of Italian politics in 1994-2018. Voting in Italy's regions for the Centre-Left and Centre-Right coalitions is examined in seven rounds of general elections, before and after the 2008 crisis - a key divide in these relationships. Centre-Left vote is mainly associated to greater average wealth and high employment. Centre-Right vote is mainly affected by the impoverishment of the middle classes. While political and cultural factors are important to understand political changes, our findings show that a more unequal and impoverished society has clear effects on electoral behaviour.

### **Keywords**

Inequality, economic conditions, electoral politics, two-party system, Italian regions

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## **Introduction**

The article investigates the role that inequality and socio-economic conditions have played in affecting electoral behaviour in Italian regions over the period 1994-2018. In economic terms, this period is marked by slow growth, recessions and a rise of income and wealth inequality (Franzini and Pianta 2015; Acciari et al. 2021). In political terms, the first part of the period was characterised by a bipolar electoral competition and alternation in government between centre-left and centre-right coalitions. After the 2008 crisis, with worsening economic conditions, mainstream parties have lost ground, new forces acquired large electoral support in 2013 and 2018, and different governing coalitions have emerged (Armingeon and Guthmann 2014; Ceccarini and Newell 2019; Chiaramonte and De Sio 2019).

We explore the interplay between economic factors and voting trends in seven rounds of general elections (1994, 1996, 2006, 2008, 2013, 2018). We use an original dataset that integrates economic and voting data in Italian regions, considering inequality in incomes and wealth, unemployment, precarisation, educational levels and other variables. The 1994-2018 period is also split in two sub-periods, before and after 2009, in order to identify the impact of the crisis. This research strategy allows us to take into account territorial socio-economic conditions and local political subcultures, which have long been identified as key factors in the political evolution in the country (Agnew 2007, Diamanti 2009). In this article we focus on the determinants of the long-term right-left cleavage, exploring the vote for the centre-right and centre-left coalitions; a specific investigation is carried out on voting for Lega withing the centre-right.

Our main results confirm the relevance of differences in the socio-economic conditions associated to voting for the centre-left and the centre-right; we show that higher average wealth is a driver for centre-left voting, reversing expectations of greater support by poorer income groups. Conversely, centre-right voting is mainly driven by the impoverishment of the middle classes.

The article is organized as follows. We first locate our theoretical contribution within the existing literature on the connection between economic conditions and changes in voting. We then move to summarise the Italian case and the political change we aim to investigate. Third, we present the relevant electoral and economic data, discussing key relationships between inequality and political variables. We then build a model to test the links between our variables and illustrate the empirical results. The concluding section discusses the implications of our findings.

## **1. Studies on inequality and voting behaviour**

Though focused on Italy, this article contributes to the growing literature on inequality and political developments in Western democracies, that has opened up novel interdisciplinary perspectives.

An important stream of economic research, started by Piketty (2013), has investigated the long term evolution of inequality and its impact on political developments. In an influential work, Piketty (2019, chapters 14-15) has studied the effects of multidimensional inequality — as measured by income, wealth, and education - on voting trends in France, Great Britain, and the US from 1948 up to 2017, using post-electoral individual surveys. His argument is that a “class-based” party system was in place in the 1950s and the 1960s, when lower education and lower income electors tended to vote for left-wing parties, while upper and middle classes’ electors tended to vote for centrist or right-wing parties. As class divisions began to blur in the 1970s and the 1980s. Left-wing vote has then gradually become associated with higher education as well as with low income. A “multiple-élite” party system has emerged in the 2000s-2010s, with high-education élites voting for the left, and high-income/high-

wealth élites voting for the right. Contextually, the massive increase in non-voting is related to the behaviour of lower education and lower income groups who feel politically unrepresented. Additional studies using the World Inequality Database (Bauluz et al. 2021; Gethin et al. 2021) have extended this approach to other countries, including Italy, where the ‘multi-élite’ explanation appears to be weaker than in other cases, as both income and education factors did not change significantly since the 1970s in relation to the left-right orientation of voters.

A second stream of research has focused on the transformations in class voting. Oesch & Rennwald’s (2018) study on 20 national elections finds out that the left is broadly supported by workers in socio-cultural professions and by the working class; the right by managers, small business owners and the self-employed; the radical right competes with the centre-right for the votes of the latter, and challenges the left its its working-class stronghold. Old and new patterns of class voting therefore co-exist; old patterns are structured by the labour-capital conflict; new cleavages —opening up the political space for the radical right— are structured by cultural conflicts over immigration, multiculturalism and European integration. Investigating relationship between inequality and the rise of radical right parties, focusing on 16 European countries, Han (2016) suggests that income inequality encourages poor people to vote for radical right parties, while it concurrently discourages rich people from doing so. Similarly, Burgoon et al. (2018) observe that ‘positional deprivation’ correlates with a higher propensity to vote for radical right parties and for parties that incorporate nationalist claims in their party manifestos.

Thirdly, interest for economic factors has increased since the economic crisis of 2008. Literature on economic voting has shown that the massive electoral punishment of the incumbents has been a function of the depth of the recession. In a comparative analysis of 42 elections in 28 OECD countries in the period just before, during, and after the recession, from 2007 through 2011, Bartels (2014) confirmed that citizens reward or punish incumbent governments based on economic growth in the one or two years preceding each election. Subsequent works exploring the impact of the Great Recession have argued that both rising economic insecurity and the lack of responsiveness of established parties have fuelled the populist reaction of those left-behind (Kriesi 2014). Both economic and political crises contributed to the growth of right-wing populist parties, especially so where the two types of crisis occurred together, such as in Southern and Central-Eastern Europe (Kriesi and Pappas 2015). Based on a database of electoral outcomes for all relevant parties in 30 countries covering two national pre-crisis elections and post-crisis elections up to 2014, Hernández and Kriesi (2016) conclude that incumbents have been heavily punished, especially in the hardest hit countries of Western Europe, with the main beneficiaries of the crisis having been parties of the populist radical right and of the radical left, as well as new parties. In their analysis of voting and trust-beliefs across 26 European countries before and after the Great Recession, Algan et al. (2017) show that the rising voting shares for anti-establishment parties follow increases in unemployment. Similarly, Guiso et al. (2017) analysis on 24 European countries finds that lower income, financial distress and higher economic insecurity from exposure to globalization and competition of immigrants are drivers of lower trust in incumbents and of populist vote. More in general, studies of political change have called for “bringing capitalism back in social movement analyses” (della Porta 2015) in order to understand the large protests that have developed since 2011 in a context of closed political opportunities.

In addressing this debate, we introduce two methodological innovations. The first novelty is the consideration of a wide range of indicators on inequality and socio-economic conditions. Most studies have relied on individual survey data, which are usually based on limited samples and provide little information on inequality. Moving the analysis at the level of regions allows us to capture the structural economic and social conditions and the patterns of inequality.

Second, by analysing the regional level, we address a territorial dimension that has long been studied by scholars of Italian politics. Four main areas (the North-West, the North-East, the Centre, and the South) are characterized by significant voting stability, associated to the diversity of local economic models (Bagnasco 1976; Diamanti 2009). The mediating power of territorial subcultures on voting choices has proved to be persistent, and the regional dimension remains a key variable to understand electoral outcomes, including its changes in more recent years (Chiaramonte and De Sio 2014).

## 2. Italy's politics from 1994 to 2018

After the 'clean hand' investigations had disclosed a deeply rooted system of corruption, contributing to a collapse of the party system that had characterized Italy until the beginning of the 1990s, (della Porta 1992), in 1994 Italy entered in the so-called 'second republic', that initially saw the presence of two opposing coalitions. The centre-left was based on the alliance between the Democrats of the Left (DS) and La Margherita (the Daisy party), who in 2007 merged into the Democratic Party (PD). The centre-right coalition included Forza Italia (FI, the party of media tycoon Silvio Berlusconi), Alleanza Nazionale (National Alliance, with a post-fascist base) and the Lega Nord. In the 2008 elections the two coalitions together gained more than 70% of the votes.

Before the two-coalition system could fully consolidate, the effects of the 2008 economic crisis and the ensuing recession led however to its demise. In the beginning of the years 2010s, the economic crisis brought about a sudden decline of the mainstream parties that had established themselves in the previous two decades. As in other Southern European countries (Bosco and Verney 2012), the growing distrust towards traditional parties has been linked to a 'democracy without choices', which in Italy took the form of the government led by the economist Mario Monti in 2011-2013, supported by PD and FI. Already in 2013, the electors heavily penalised both parties, leaving space to the first electoral success at national level of the Movimento 5 Stelle (M5S), that obtained about 25% of the votes, while the centre-left and the centre-right coalitions got around 29% each. After negotiations between the PD and the M5S failed, centre-left led governments were formed in uneasy alliances with part of the centre-right parties. In the 2018 election, the PD received a low 18.8% and FI, with 14%, lost the leadership of the right-wing to the Lega (17.4%) which moved from being a 'regional' party rooted in Northern Italy to a leading national role with a nationalist, anti-immigrant political agenda. The M5S achieved instead a large success, obtaining 32.7% of the votes. As, once again, negotiation between the PD and the M5S failed, the M5S and Lega formed a government coalition (Albertazzi et al. 2018; Ceccarini and Newell 2019), which lasted about an year, followed by an government coalition between the M5S and the centre-left. In parallel, abstention in general elections constantly increased, especially after 2008, from 14% in 1994 to 27% in 2018.<sup>1</sup>

Political scientists have provided explanations of Italy's political turmoil that have generally focused on the evolution of political factors, including party transformations, emerging leaders, new forms of party competition, policy platforms, and political communication (Bellucci et al. 2017). The electoral performance of the M5S in 2013 has been interpreted as the voters' reaction to austerity measures implemented by the Monti government, with a narrative contrasting 'the people' with the elitist ruling class - the '*casta*' - associated to EU institutions (Mosca and Tronconi 2019). However, the M5S also addressed typical social movement issues such as environmental protection and the re-municipalisation of water provision which had been the issue of a victorious 'referendum from below' held in 2011 (della Porta et al. 2017). The electoral success of the M5S appeared therefore as a combination of political dissatisfaction and policy preferences (Passarelli and Tuorto 2018).

Few scholars only have looked at the influence of social class on voting choices, underlining the role of the lower middle classes and the unemployed in the rise of the Five Star Movement; the progressive transformation of the Democratic Party into a party of public employees, retired people and wealthy

voters; and the ability of the Lega to attract electors from both the self-employed and the working class (Maraffi et al. 2013; Maraffi 2018; De Sio 2018).

The persistent relevance of regional political subcultures took a new twist in 2018 with the Lega dominating Northern Italy and the M5S dominating the South. The drivers of their support, however, differ. Based on individual-level post-electoral data, Vassallo and Shin (2018) show that for Lega voters priorities are immigration, the criticism of Europe and the need for a strong leader. For the M5S voters instead the priority is redistribution. The two parties' constituencies only converged on a similar anti-elitist attitude and mistrust for the political establishment.

Much less attention has so far been devoted to the impact that growing inequality and worsening socio-economic conditions have on electoral behaviour. Between 1994 and 2018 labour incomes (before taxes and transfers) have decreased in real terms for all income groups, except for the richest 10%, who in 2018 had the same real incomes as in 1994. Losses in real incomes are smaller for the middle classes, and larger for low income Italians, reaching 25% for the poorest 10% of employees. The share of part-time workers among private sector employees rose from 14 to 25% of all workers. After the 2008 crisis the inequalities in household incomes and wealth increased and social distress became stronger. In this work, we suggest in fact that impoverishment, precarisation and inequality are likely to play a major role in affecting voting behaviour.

A study on inequality and elections in Italy's regions (Bloise et al., 2020) has focused on voting for mainstream parties (the centre-right and centre-left parties considered together) as opposed to the 'protest' choice of abstaining, voting for the Lega, and voting for the M5S. In particular, higher abstention was shown to be associated with greater overall income inequality, a more polarised income structure, a high presence of part-time jobs and a high unemployment. The rise of consensus for the Lega was linked to the downward pressure on the income of the middle classes, lower average levels of household wealth and precarisation of work. The consensus for the Five Star Movement increases with widening poverty, the impoverishment of lower income groups and the rise of precarious employment. All of these factors contributed to a lower consensus for mainstream parties, which remained strong only in regions where average household wealth was higher. These results suggested that in Italy each 'protest' choice – abstention, vote for the Lega and vote for the M5S – was driven by specific economic factors, relevant for different social groups in different regions, something very far from a general 'populist wave' (Bloise et al. 2020).

In this article we complement previous research by addressing the impact that inequality and socio-economic factors have on voting for the centre-left and centre-right coalitions that have alternated in government, adding a specific focus on the Lega, that had a variable and at times ambivalent positions within the centre-right.<sup>2</sup> We carry out separate investigations for the years before and after 2008, in order to identify the specific impact of worsening economic conditions. We investigate the centre-left and centre-right coalitions in order to identify the persistence of their traditional differences - rooted in different ideologies, social base and regional political cultures, some shared positions in their austerity policies notwithstanding (Pianta, 2012). The separate consideration of voting for the Lega allows us to identify similarities with centre-right voting and changes introduced after 2009 by the extreme-right political trajectory of the Lega.

### **3. Data and descriptive statistics**

We analyse the association between share of votes and socio-economic variables in Italy's regions over the period 1994-2018, using the database developed at Scuola Normale Superiore (SNS) described in the Appendix, integrating data on election outcomes, incomes, wealth and socio-economic characteristics. Our SNS electoral database provides a systematization of official voting

data recorded by the Italian Ministry of Interior for seven rounds of national elections (1994, 1996, 2001, 2006, 2008, 2013, 2018). We consider four political variables: the share of voters for the centre-left coalition, including the Democratic Party (in 2008, 2013, and 2018) and its predecessors (the Democratic Party of the Left in 1994 and 1996, and Democrats of the Left in 2001 and 2006), and its left-wing and centrist governing partners; the share of voters for the centre-right coalition, including Silvio Berlusconi's Forza Italia (running as Popolo della Libertà in 2008 and 2013), its allies on the right (such as Fratelli d'Italia and its predecessors) and on the centrist side (such as UDC and its predecessors), and the Lega (formerly Lega Nord). The centre-right vote is then split between the Lega and for the aggregate of other parties.

With regards to socioeconomic characteristics, yearly gross earnings of workers are taken from the Italian National Social Security Institute (INPS) administrative archives, providing data on about 1/15 of Italian employees working in the private sector (Longitudinal Sample INPS – Losai). Data on household net wealth, on inequality of equivalised disposable income, on the employment rate and the share of tertiary graduate residents are calculated using the Bank of Italy's Survey on Household and Wealth (SHIW) microdata, based on a representative sample of Italian households.<sup>3</sup>

Data are investigated over the whole sample and for two separate periods: 1994-2007 and 2008-2018. While a major turning point comes with the 2013 elections, we have carefully considered the periodization, finding that in 2008 significant novelties can be identified. Considering the national vote, for the Centre-Left the 1994-2006 period is marked by a steady growth, ending with the highest share of votes ever obtained, 47% in 2006. In 2008 there is already a significant fall to 37%, opening a phase of steady decline in 2013 and 2018. Vote for the Lega fell from 1994 to 2006, and 2008 marks the first significant increase in electoral consensus, further strengthened in 2018.

#### **Table 1 here**

Table 1 presents the mean and the standard deviation of the variables included in our analysis. In the second period, the shares of votes of the two main political coalitions, centre-right (C-R) and centre-left (C-L), have considerably decreased (data are averages of the votes obtained in the regions in all the elections held). With regards to economic variables, over the two periods there is an increase in inequality among workers (the P90/P50 and P50/P10 ratios on gross incomes), and in the share of part-time workers. Mean earnings of employees fall slightly, while mean household wealth increases.<sup>4</sup>

A few key relationships that emerge from these variables are highlighted in the following figures, where units of observations are Italy's regions in each of the election years, split in the two periods we consider, before and after the 2008 crisis.

In Figure 1 the share of votes for centre-left is shown to be associated to mean household wealth; wealth is greater in regions with larger metropolitan areas and in Northern and Central Italy, where centre-left voting tends to be higher. There is moreover a downward shift of the distribution from the first to the second period, resulting from the loss of votes of the centre-left.

#### **Figure 1, Figure 2 here**

In Figure 2 votes for the centre-left are related to the share of part-time private sector employees, and a major change emerges. In the first period, when part-time workers were below 20% in all regions, a positive association emerges, with the centre-left obtaining a larger consensus where non-standard work was more widespread, a heritage of the role of the Left as a supporter of workers' rights. In the second period, when part-time workers are above 15% in all regions, the relation turns negative. The

precarisation of employment – resulting also from policy changes introduced by centre-left governments – appears to be associated to the the collapse of centre-left voting after 2008.

**Figure 3, Figure 4 here**

Moving now to the key factors associated to vote for the centre-right, we first consider (see Figure 3) the electoral support for the centre-right without Lega and its link with the share of part-time workers. A clear negative relationship emerges over both periods, with a shift to the bottom and to the right in the second period, when part-timers greatly increase and consensus falls. The centre-right without Lega is ‘punished’ where precarisation is greater. We also considered the share of university graduates, finding a clear negative association with Centre-Right votes.

Finally, the vote for the Lega is examined in Figure 4 with its association with the P50/P10 ratio. Consensus is higher in regions where the median gross earnings of employees are closer to the earnings of the poorest 10% (mainly part-time workers with low incomes). The impoverishment of the middle class, whose incomes become relatively closer to those of the poor, appears as a key driver of Lega voting, with a shift upward and to the right from the first to the second period, reflecting the growing consensus for Lega. Another relevant association is between the share of Lega votes and mean gross earnings of employees, reflecting its strength in the higher-income regions of Northern Italy. When voting for the entire centre-right coalition is considered, both factors remains relevant as they are key drivers of different components of the centre-right alliance.

**4. The empirical strategy**

As a next step, we go more in depth in the analysis of the association between share of votes and the socio-economic variables described in section 3 by estimating the following equation:

$$y_{rt} = \alpha_r + \beta S_{rt-1} + \tau Z_{rt-1} + \rho T + \varepsilon_{rt} \quad (1),$$

where the outcome variable  $y_{rt}$  is the share of voters - who voted for the centre-left, the centre-right, and the two components of the latter - observed in region  $r$  and year of election  $t$ .

On the right-hand side of equation (1), we observe all socioeconomic variables the year before that of election, given that all elections have taken place in the first five months of the year. Specifically,  $S_{rt-1}$  is the vector of economic variables listed in Table 1; they include the P90/P50 and P50/P10 ratios on gross earnings to capture inequality among employees; the Gini coefficient on disposable income as a measure of overall income inequality; the Gini coefficient on net wealth to capture differences in assets; the log mean net wealth; the log mean of gross earnings; the share of employees with a part-time contract used as a proxy of precarious jobs; the employment rate. Then,  $Z_{rt-1}$  controls for the share of the population with a tertiary degree,  $\alpha_i$  are the regional fixed effects to control for structural characteristics of regions which do not vary over time, and  $T$  is the period dummy which takes the value of 1 for elections occurred after 2007. Equation (1) is first estimated on the full sample and then is estimated separately on the two periods: 1994-2007 and 2008-2018. Results of ordinary least squares estimations are shown in Table 2 and discussed in the next section. One limitation of using least squares to estimate equation (1) is the potential high degree of collinearity among regressors included in the vector  $S_{rt-1}$ . In our empirical context, this is a relevant issue especially when we divide the data in the two period subgroups. Moreover, most inequality-related regressors have little variation over time and are likely to be correlated to regional dummies. When the degree of multicollinearity is high and the number of observations is low with respect to the number of regressors, there is possibility of obtaining unprecisely estimated coefficients (i.e. with very high standard errors) which are often not statistically different from zero.

A possible way to deal with multicollinearity issues and reduce the variance of estimates is by adopting regularization methods such as LASSO (Least absolute shrinkage and selection operator), which has been recently used on applied studies on electoral outcomes (Levi and Patriarca, 2020) or, in alternative, the ‘elastic net’ estimator. In order to select relevant regressors and mitigate the variance of the model, LASSO and ‘elastic net’ methods add some penalization parameters to the OLS estimator which shrink the coefficients of explanatory variables and set those of irrelevant regressors to zero (Hastie et al., 2009). We re-estimate the association between the shares of votes and socioeconomic factors using the ‘elastic net’ estimator, which is more appropriate than LASSO to deal with a large number of highly correlated variables in small samples (Zou and Hastie, 2005). The main features of the ‘elastic net’ estimator are described in Appendix A. Results are shown in Table 3 and discussed in the next section. The combination of these two methods strengthens the robustness of our results.

## 5. Results

The regression results for the centre-left and centre-right are shown in Table 2, using OLS regressions, and in Table 3, using the ‘elastic net’ method.<sup>1</sup>

*Voting for the centre-left.* In Table 2, considering the whole sample 1994-2018, the share of votes for the centre-left is significantly associated to regions’ mean wealth and to the employment rate, with a negative impact of the share of part-time employees. Centre-left support is greater in richer and economically more active regions, and is lower where poorer part-time workers are more present. The latter relationship however shows a remarkable change of the sign of coefficients when we consider separately the first and second periods. As already noted in Figure 2 above, in the first period regions with greater precarisation voted more for the centre-left, while the opposite happened in the second period. In the post-crisis period vote for the centre-left appears to be associated to higher overall inequalities; it is higher in regions with greater wealth disparities, where the rich are more distant from median employee income and where median income is closer to the earnings of the poor. Table 3, with results obtained from the ‘elastic net’ estimates, confirms these evidences. Looking at the full sample, the share of votes for the centre-left is positively associated to regions’ mean wealth and to the employment rate, while it is negatively correlated to the share of part-time workers. In addition, the shares of votes for the centre-left appears to be negatively associated with all measures of income distance and inequality in disposable income and wealth, as well as with levels of employee earnings; this reflects the high voting in Central Italian regions where overall inequality is lower. It is remarkable that the separate estimates for the two periods considered show a clear reversal in the relevance of several drivers of centre-left support. Confirming previous results, we find a shift from a positive to a negative impact of part-time workers (as well as for the share of graduates), and from a negative to a positive impact of wealth inequality within regions.

Summing up the evidence, consensus for the centre-left in Italy’s regions appears to rely on two main drivers. First, there are its social roots among workers, shown by the links with high employment rates, lower levels of labour earnings and lower inequality in disposable incomes. Second, there are the increasing links to greater economic privilege – shown by the regions’ average wealth and, in the

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<sup>1</sup> In the work for this article, we have also tested our model using the share of electors instead of the share of actual voters for our four political variables and results do not change significantly; the share of electors is the dependent variable used by Bloise et al. (2021).

post-2008 period, by the relevance of higher wealth inequalities, higher earning distance between the rich and the median and the reversal of support from poor part-time workers.

**Table 2, Table 3 here**

*Voting for the centre-right.* In Table 2, for the whole sample, the share of votes for the centre-right is mainly associated to lower P50/P10 ratios, reflecting median incomes closer to the earnings of the poorest, and to lower shares of part-time workers. Both links become stronger in the post-2008 period; a lower distance of rich employees from median earnings and lower average incomes are also relevant. Results from Table 3 confirm these findings, showing, in addition, that centre-right voting tends to be higher in regions with lower average wealth and lower employment rates.

In short, the centre-right appears to draw its support on the one hand from the impoverished middle income groups – relevant mainly in Northern and Central regions – and on the other hand from Southern regions characterised by lower employment rates; part-time workers are always negatively associated to centre-right support.

The developments in the centre-right coalition, however, combine two radically different types of processes; the declining consensus of traditional conservative parties – Forza Italia and Fratelli d'Italia – on the one hand, and on the other hand the increasing influence of the Lega, with its 'anti-élite' turn of recent years leading to rapid growth in electoral support. We have investigated separately these two components<sup>2</sup>. On the one hand, voting for the centre-right without Lega reflects the traditional strength of conservative parties in Southern regions, where incomes and university education are lower, alongside the lack of support in areas where younger voters with precarious jobs are concentrated. On the other hand, voting for the Lega is associated to lower P50/P10 ratios, to higher shares of part-time workers, a lower distance between the rich and median earnings and lower average wealth, with higher employee earnings.

Summarizing our findings, we find strong differences between the drivers of electoral support for the centre-left, the centre-right and the Lega in particular. First, the centre-left has moved away from poorer workers and closer to wealthier voters. After the 2008 crisis the coalition lost the support it had from poorer part-time employees and from tertiary graduate residents – reversing the previous positive association – and strengthened instead its links to indicators of economic privilege such as higher average wealth, greater wealth inequality, larger distance between the richer and the median earnings of employees.

Second, the centre-right coalition combines two components with contrasting characteristics; the factors associated to Lega's support are almost a mirror image of those relevant for traditional conservative forces; the Lega alone is benefitting from support from the impoverished middle class, precarious youth, regions with lower average wealth and less distance between richer and median employees.

Third, major changes are identified between the two periods. As the centre-left was losing part of its social base, since 2008 the Lega has run elections in most regions, overcoming its previously limited regional appeal and has transformed itself. Both the share of part-time workers and tertiary graduate residents were then negatively associated to Lega voting in the first period, and turn out with a positive association in later years.

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<sup>2</sup> Regressions for the vote for the Lega and for the centre-right without Lega have been carried out separately using the same methodology. Results are available upon request.

## 6. Conclusions

This article has explored the associations between inequality, socio-economic factors and voting for the centre-left, the centre-right and the two components of the latter - the Lega and traditional conservative forces - from the start of Italy's 'Second Republic' in 1994 to the present. Major changes have been identified between the first (1994-2007) period, and the post-2008 years, characterised by a prolonged recession, widespread impoverishment and political turmoil. Four main results emerge from our work, identifying key factors affecting the evolution of voting in Italy's regions.

*Inequality matters.* First we show that inequality in income and wealth and structural economic conditions in Italy's regions play an important role in explaining election results. This is in line with results from other countries (Han, 2016; Algan et al., 2017; Piketty, 2019). Several political factors – ideology, cultures, leadership, social mobilisations, policy agendas – clearly play a key role in election outcomes, but the impact of inequality and economic distress is also relevant.

*The long recession changed voting patterns.* Second, we show that the 2008 crisis and the prolonged recession that followed has been a key driver of Italy's political re-alignment, with the dramatic decline of the centre-left and of the more established centre-right parties, and the rise of anti-élite voting for the Lega and the Five Star Movement. The rejection of the centre-left and centre-right coalitions, which took turns in governing the country in the last 25 years, is also rooted in their policies, which have often converged in protecting the 'economics of privilege' (Pianta, 2012). In the case of the Five Star Movement previous work (Bloise et al. 2020) showed that the key drivers of voting are income poverty and the share of part-time workers. Major shifts in the socio-economic base of parties are documented for the centre-left and the Lega in particular. After 2008 the centre-left has shown closer associations to indicators of economic privilege, such as wealth levels and degree of inequality, losing consensus in regions where part-time, low-paid precarious work had become more widespread. While before 2008 the Lega had a socio-economic profile similar to the one of the centre-right coalition, including the relevance of the support from impoverished middle classes, in the last decade the consensus for Lega has expanded in regions where there is a concentration of part-time workers, university educated residents and where economic privilege is lower. As it happened in several countries besides Italy, the Great Recession has indeed contributed to the crisis of the social democratic party family in Europe, with specific developments in Southern Europe (Bremer 2018).

*Social and regional characteristics have persistent effects.* Third, our results are complementary to those on the role of class and other cleavages (Oesch and Rennwald, 2018) in affecting the social base of political parties, and on the regional dimension of Italian electoral behaviour (Ceccarini and Newell 2019; Chiaramonte and De Sio 2019). We find the persistence of some long term drivers of voting, rooted in social and regional divides, alongside the changes pointed out above. In particular, voting for the centre-left maintains some of its social roots among workers, as indicated by a strong association with high employment rates, lower levels of labour earnings and lower inequality in disposable incomes. Its regional base in Central Italian regions and in regions with large metropolitan areas emerges from the association with high average wealth. Voting for the centre-right shows its class base through its consistent high level in regions in which there is higher impoverishment of the middle classes (the P50/P10 ratio) and a low share of part-time workers. Its territorial base, with large support in Southern regions, is documented by the relevance of associations with lower employment rates, higher income disparities and lower average wealth. Voting for the Lega reveals the persistence of its roots in some Northern regions through the association with higher average incomes and high inequalities.

*Party positions matter.* Fourth, our results allow us to reflect on the ways in which party strategies affects their voters' behaviour. Especially on the center-left, as research has pointed out, the decline of voting, especially of their traditional class-bases, is especially visible when the programmatic differences on socio-economic politics and policies are blurred (Oesch 2008; Jansen et al. 2013). In fact, the capacity of the center-left to maintain at least in part the working class vote is considered as most relevant facing the potential competition of the radical populist right. While in countries with a successful radical left the low-skilled electorate can be kept in the progressive front (Ramiro 2016), in countries like Italy that part of the electorate more easily moves to the right.

In sum, Italy's electoral turmoil is the result of two decades of slow growth and recession, increasing inequality and worsening socio-economic conditions, factors deserving adequate attention in the explanations of political change. Our findings document the diversity of the effects that inequality and socio-economic variables have on electoral behaviour in Italian regions. We have documented the specificity of relationships and their evolution after the 2008 crisis. Different drivers of the decline in votes for the centre-left and centre-right coalitions have been pointed out, together with the novel factors associated to the rise in consensus for the Lega. While some studies have argued about the presence of a general 'populist' wave rooted in economic distress (Kriesi, 2014; Guiso et al., 2017), we find the sources of support for the Lega to be specific to its socio-economic and regional base, and starkly different from those of the other forces of the centre-right coalition. In our previous study – that also addressed non-voting and support for the Five Star Movement – the drivers of each of these three anti-élite electoral choices were found to be different (Bloise et al. 2020).

Alongside political, ideological and cultural factors, the effects that a more polarised, impoverished and unequal society has on electoral behaviour emerge as crucial factors for understanding Italy's recent – and future - political upheavals.

### **Disclosure statement**

The authors have no relevant financial or non-financial competing interests.

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**Table 1. Descriptive statistics**

	Full Sample		1994-2007		2008-2018	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
<i>Share of votes:</i>						
Centre-Left	0.38	0.11	0.42	0.10	0.31	0.09
Centre-Right	0.44	0.10	0.48	0.09	0.39	0.09
Centre-Right without Lega	0.38	0.11	0.44	0.07	0.31	0.12
Lega	0.08	0.08	0.07	0.07	0.09	0.09
Observations (Observations for Lega)	119 (88)		68 (44)		51 (44)	
<i>Socioeconomic variables:</i>						
P90/P50 on gross earnings	2.01	0.17	1.96	0.14	2.06	0.19
P50/P10 on gross earnings	5.98	1.04	5.65	0.94	6.42	1.00
Gini on disposable household income	0.29	0.04	0.30	0.03	0.29	0.04
Gini on household wealth	0.56	0.05	0.56	0.05	0.56	0.05
Log mean household wealth	12.39	0.33	12.35	0.33	12.44	0.33
Log mean gross earnings	9.93	0.13	9.95	0.11	9.90	0.14
Share of part-time workers	0.16	0.09	0.10	0.05	0.25	0.06
Share of tertiary graduates	0.08	0.03	0.06	0.02	0.10	0.03
Employment rate	0.58	0.10	0.55	0.09	0.61	0.10
Observations	119		68		51	

*Sources:* LoSai, SHIW, and SNS.

**Table 2: Regressions of the shares of votes of the centre-left and centre-right**  
 OLS estimates on the full sample 1994-2018 and on the periods 1994-2007 and 2008-2018

	Centre Left			Centre Right		
	Full Sample	1994-2007	2008-2018	Full Sample	1994-2007	2008-2018
P90/P50 on gross earnings	-0.019 [0.016]	0.031 [0.027]	0.055** [0.023]	-0.028** [0.013]	-0.018 [0.025]	0.029 [0.053]
P50/P10 on gross earnings	-0.014 [0.012]	0.005 [0.022]	-0.033*** [0.004]	-0.029** [0.011]	-0.041 [0.024]	-0.036*** [0.011]
Gini on disposable income	-0.014 [0.009]	-0.002 [0.015]	-0.005 [0.006]	-0.002 [0.007]	0.000 [0.013]	-0.011 [0.011]
Gini on wealth	-0.005 [0.015]	-0.020 [0.014]	0.011*** [0.002]	-0.006 [0.005]	0.008 [0.012]	-0.012* [0.006]
Log mean wealth	0.044*** [0.013]	0.018 [0.015]	-0.001 [0.011]	-0.002 [0.008]	-0.024 [0.015]	-0.016 [0.018]
Log mean gross earnings	-0.052 [0.034]	0.036 [0.027]	0.009 [0.033]	-0.036** [0.017]	0.005 [0.053]	0.070 [0.067]
Share of part-time workers	-0.035* [0.020]	0.109*** [0.026]	-0.118*** [0.019]	-0.072*** [0.011]	-0.032 [0.034]	-0.118*** [0.033]
Share of tertiary graduates	0.012 [0.015]	0.005 [0.017]	-0.003 [0.009]	-0.007 [0.010]	-0.013 [0.016]	0.010 [0.017]
Employment rate	0.054** [0.021]	-0.044 [0.030]	0.023* [0.012]	0.001 [0.014]	-0.001 [0.027]	-0.001 [0.014]
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Period dummy	Yes	No	No	Yes	No	No
Observations	119	68	51	119	68	51
R-squared	0.815	0.883	0.981	0.860	0.854	0.942

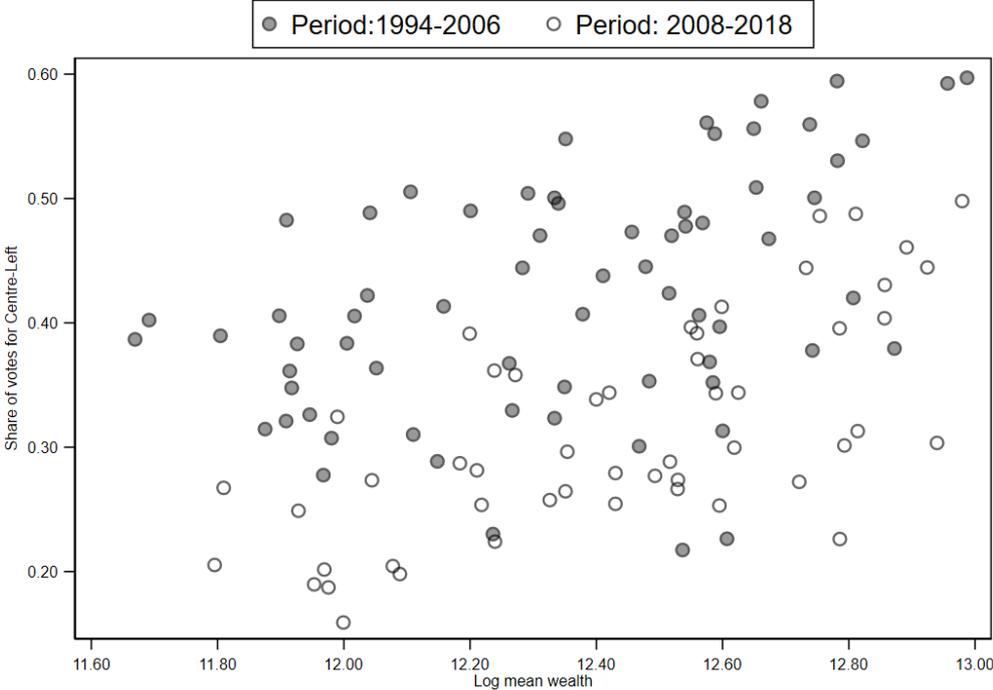
*Notes:* Standard errors (clustered at the regional level) in brackets.

**Table 3: ‘Elastic net’ regressions of the shares of votes of the centre-left and centre-right**  
 Estimates on the full sample 1994-2018 and on the periods 1994-2007 and 2008-2018

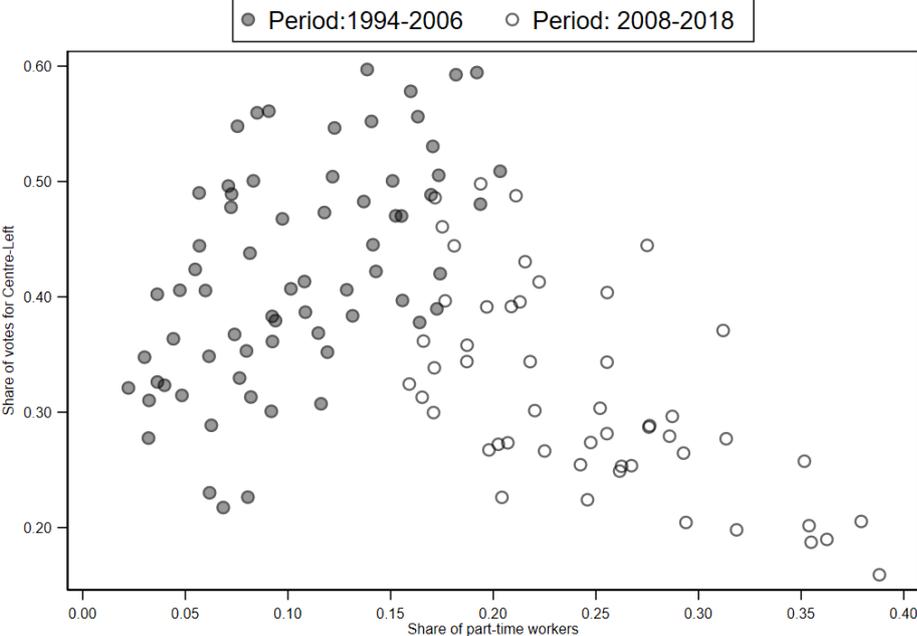
	Centre Left			Centre Right		
	Full Sample	1994-2007	2008-2018	Full Sample	1994-2007	2008-2018
P90/P50 on gross earnings	-0.009	0.002	0.000	-0.024	-0.009	0.008
P50/P10 on gross earnings	-0.009	0.011	-0.027	-0.026	-0.027	-0.035
Gini on disposable income	-0.012	-0.007	-0.012	-0.002	0.004	0.000
Gini on wealth	-0.010	-0.015	0.005	-0.007	0.007	-0.007
Log mean wealth	0.037	0.014	0.026	0.001	-0.016	-0.033
Log mean gross earnings	-0.024	-0.010	-0.005	-0.015	0.014	0.000
Share of part-time workers	-0.021	0.038	-0.070	-0.059	-0.023	-0.115
Share of tertiary graduates	0.003	0.014	-0.009	-0.011	-0.012	0.000
Employment rate	0.028	0.008	0.021	-0.003	-0.009	-0.005
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Period dummy	Yes	No	No	Yes	No	No
Observations	119	68	51	119	68	51

*Notes:* coefficients equal to 0.000 are set to zero by the ‘elastic net’ method.

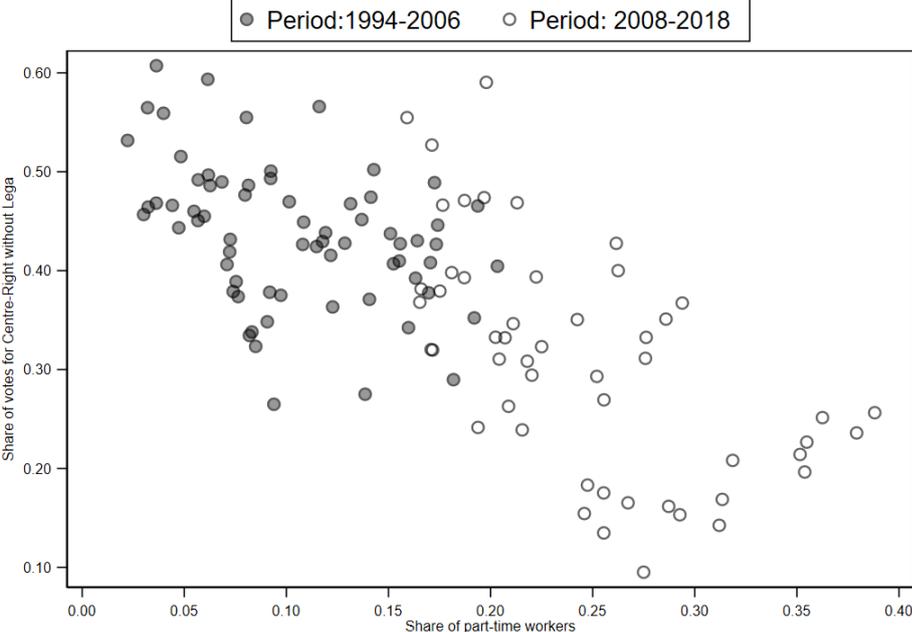
**Figure 1. Centre-left vote and mean household wealth**



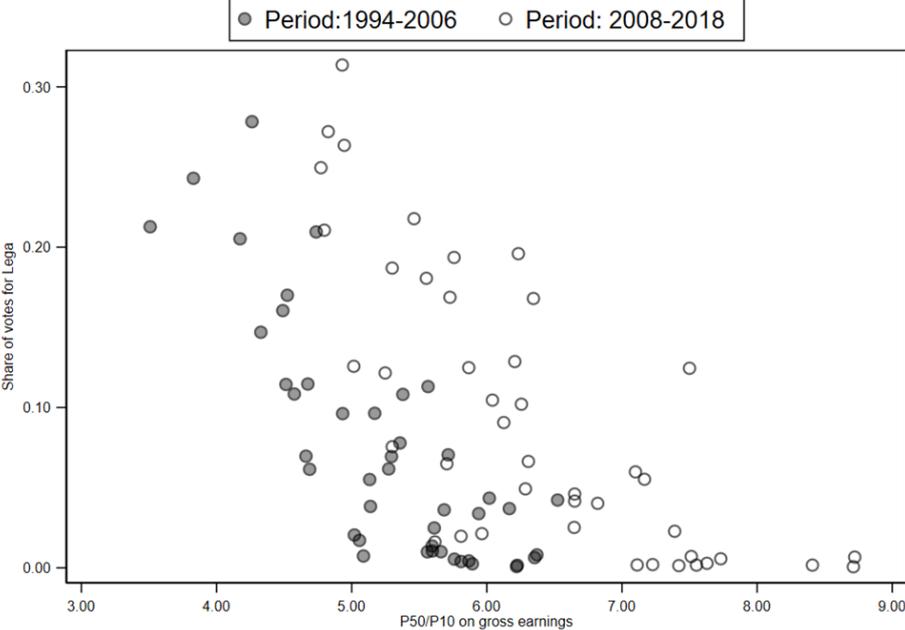
**Figure 2. Centre-left vote and share of part-time employees**



**Figure 3. Centre-right without Lega vote and share of part-time employees**



**Figure 4. Lega vote and P50/P10 ratio**



## **Appendix A. The electoral database of the Scuola Normale Superiore**

In order to identify in a systematic way voting trends in Italian regions, we have built the SNS voting database described in Section 3 above. Here we provide the full details on the definition of the key variables we considered for each general election in the period under investigation: votes for the Centre-Left parties; votes for the Centre-Right parties; votes for the Centre-Right without the Lega; votes for the Lega. ‘Centre-Left’ and ‘Centre-Right’ coalitions include all parties belonging to a broad notion of ‘political-ideological bloc’ competing for government responsibilities; the forming of coalitions was driven by the nature of Italy’s electoral system after 1993.

Our database also includes electoral data for ‘non-voters’ and for the Movimento 5 Stelle, which are not considered in this article. Parties which did not obtain seats in Parliament are excluded from the database in order to ensure comparability among coalitions associated to government majorities in Parliament.

The units of observation are the regions; in order to reduce the variance that may come from very small regions, Abruzzo and Molise on the one hand, and Basilicata and Calabria on the other hand, have been merged, while Valle d’Aosta has been excluded due to lack of data. In all, we have 17 regional observations for each of the seven political elections in the period 1994-2018.

### ***Centre-Left***

Votes for Centre-Left parties are the share of voters that voted for the following parties:

Democratic Party (in 2008, 2013, 2018) and its predecessors, namely Partito Democratico della Sinistra (in 1994 and 1996), Democratici di Sinistra (in 2001), and Uniti nell’Ulivo (in 2006; this included Democratici di Sinistra, La Margherita, and Movimento dei Repubblicani Europei). Radical Left parties, Green parties and Minor Centre-Left and Centrist parties are included when in alliance with the Centre-Left coalition and when they obtained seats in Parliament.

### ***Centre-Right***

Votes for Centre-Right parties are the share of voters that casted their vote for the following parties: Forza Italia (in 1994, 1996, 2001, 2006, 2018) and Popolo della Libertà (the merger between Forza Italia and Alleanza Nazionale in 2008 and 2013); Alleanza Nazionale (in 1994, 1996, 2001, 2006); Lega Nord (in 1994, 1996, 2001, 2006, 2008); Lega (in 2013, 2018); Fiamma Tricolore (in 2001); Fratelli d’Italia (in 2013 and 2018). Minor Centre-Right and Extreme Right parties are included when in alliance with the Centre-Left coalition and when they obtained seats in Parliament.

*Votes for Centre-Right without Lega* is a variable that considers the share of voters that casted their vote for the ‘Centre-Right parties’ except for the Lega.

*Votes for the Lega* are the share of electors that cast their vote for the Lega Nord and Lega.

Details on the SNS electoral database are provided in the Working Paper by Bloise et al. (2021) *The electoral consequences of inequality in Italy, 1994-2018*

## Appendix B. The ‘elastic net’ estimator

The ‘elastic net’ estimator combines features of other regularization methods, i.e. the least absolute shrinkage and selection operator (LASSO) and ridge regression, to deal with highly correlated variables (Zou and Hastie, 2005). Elastic net can be estimated according to the following expression:

$$\min \left\{ \sum_{r=1}^n (y_{rt} - \beta X_{rt})^2 + \lambda \left[ \alpha \sum_{j=1}^k |\beta_j| + (1 - \alpha) \sum_{j=1}^k \beta_j^2 \right] \right\} \quad (A1),$$

where, all previously described explanatory variables are now included in the  $k$ -dimensional vector  $X_{rt}$  in Equation (1).

Elastic net adds to the OLS estimator two penalization parameters  $\lambda$  and  $\alpha$  which, if greater than zero, have the potential ability to shrink some of the  $K$  coefficients included in the vector  $X_{rt}$  towards zero and set the coefficients of irrelevant regressors exactly to zero in order to reduce multicollinearity and overfitting. On the contrary, when  $\lambda = 0$  and  $\alpha = 0$ , elastic net collapses to the simple OLS case (i.e. the first term of Equation A1), such that the coefficients of all explanatory variables are estimated without any shrinkage. It is noteworthy that elastic net collapses to ridge regression, when  $\lambda > 0$  and  $\alpha = 0$ , and to LASSO when  $\alpha = 1$ .

Elastic net can be exploited for variable selection when the number of observations is very small with respect to the number of explanatory variables and outperforms LASSO when the collinearity between regressors is potentially high (Zou and Hastie, 2005).

Before estimating the coefficients, elastic net needs to be calibrated in order to select an “optimal”  $\lambda - \alpha$  pair which minimize the out-of-sample mean squared error (MSE) of the model. The calibration of elastic net and other regularization methods is usually obtained through  $K$ -fold cross-validation. In our case we use 4-fold cross-validation. Specifically, we randomly divide our data in 4 equally-sized subgroups (folds) such that 3/4 of the observations are iteratively used to estimate the coefficients and the remaining fold is exploited to predict the outcome variable. The optimal  $\lambda - \alpha$  combination is the one which minimize the cross-validation MSE defined as the mean MSE computed across the 4 folds which are not exploited to estimate the coefficients. Once the “optimal”  $\lambda - \alpha$  pair is selected, the coefficients are estimated on the full sample.

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<sup>1</sup> A study of non-voting in a large Northern Italy city has shown that abstention is higher among low income voters and that income inequality and turnout inequality may reinforce each other (Schafer et al. 2001). Cantoni and Pons (2020) find that interaction with candidates does not increase turnout. Other studies at municipality level on economic conditions and voting include Ardeni (2020) and Levi and Patriarca (2020).

<sup>2</sup> The Lega has been part of centre-right coalitions, although with an often unpredictable role; in 1995 the withdrawal of support of the Lega caused the end of the centre-right coalition supporting the first Berlusconi government. Overall, the Lega has had government responsibility for a total of nine years over the 1994-2018 period: 1994-1995; 2001-2005; 2008-2011, all with Silvio Berlusconi as prime minister.

<sup>3</sup> The Bank of Italy survey is carried out every two years; we use a cubic spline interpolation to impute values for the years in which the survey is not conducted. Net wealth is calculated by summing up all real and financial assets minus liabilities of household members. Disposable

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income includes labour and capital revenue flows, net of taxes, and all public transfers; income has been equivalised using the OECD equivalence scale which assigns a value of 1.0 to the first household member aged 14 years and over; a value of 0.7 to each additional household member aged 14 years and over; value of 0.5 to each child who is under 14 years old.

<sup>4</sup> P90 is the level of income above which we find the richest 10% of employees; P50 is the median; P10 is the level of income below which we find the poorest 10%.