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Inequality Trends in a Slow-Growing Economy: Italy 1990-2020

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Abstract
This paper presents stylized facts on labor supply and income inequality of individuals aged 25-55 drawn from the 1989-2020 Survey of Household Income and Wealth (SHIW) conducted by the Bank of Italy. Over the sample period earnings inequality of the working age population has increased considerably, less when considering households' disposable income. The increase in inequality is confirmed when using administrative data on employees. The evidence suggests that the labor market reforms of the last three decades are the most plausible explanation of the increased earnings inequality. Comparison between earnings and disposable income suggests an important role of the government and of the household in reducing inequalities.

Keywords: inequality, mobility, survey data, administrative data.

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1. Introduction

The last thirty years have witnessed dramatic changes in the Italian economy. Population aging and falling fertility have been accompanied by a sequence of labor market reforms that have increased labor flexibility, financial reforms have liberalized credit markets, and a sequence of pension reforms have increased the retirement age and reduced retirement benefits for future generations. One of the major aims of these reforms was to raise labor market participation, which is one of the lowest in the European area. There have also been dramatic changes to fiscal and monetary policies. In the nineties a period of rising national debt ended with a debt stabilization and convergence to the Maastricht criteria, and in 1999 responsibility for monetary policy was delegated to the European Central Bank, ending an era of sustained inflation.

The new millennium witnessed several distinct shocks: (1) a technological shock induced by the ICT revolution, affecting skill mismatch in the labor market and inducing a reallocation of capital and labor across firms, sectors and countries; (2) a severe economic crisis following the collapse of the financial system in 2008; (3) the 2011 sovereign debt crisis, due to the high public debt accumulated in previous decades; (4) climate change, and the need to rethink production methods (especially in energy-intensive sectors), consumption patterns and urban housing provision; (5) a severe health shock and the social distancing measures induced by the Covid-19 pandemic in 2020-21; and (6) the war between Russia and Ukraine which is likely to impact European countries for many years to come. Each of these shocks was to some extent "new" and non-predictable, impacted differently individuals and households, produced new inequalities, and put severe stress both in the short-term (depending on their income, occupation, family structure and wealth buffer), and in the long run, affecting labor supply and investment in education. These new inequalities overlapped with older, structural ones characterizing the Italian economy: the South-North divide, gender differences, and intergenerational and intragenerational divides. In short, the economic environment in which Italian households choose whether to work, how much to work, where to work and how much to consume and save is quite different from the environment of only ten or twenty years ago.

This paper summarizes stylized facts on labor supply, earnings and income inequality for the working age population drawn from the Survey of Household Income and Wealth (SHIW), a representative survey of the Italian population conducted by the Bank of Italy for several decades,

drawing also from existing work using administrative data, and updating the analysis of Jappelli and Pistaferri (2010a) to the last decade.

In comparative perspective, Italy is an interesting case because, among the OECD countries, it ranks high in terms of income inequality placing the country as one of the most unequal among developed countries. Figure 1 shows this ranking for one of the available measures of income inequality (the Gini index of disposable income) in OECD countries using the LIS database and 2016 as reference year. Data are standardized, taking the Italian value as reference (0.336). The figure shows that Italy ranks in inequality only below the US and Spain. Germany, France and most other European countries feature Gini indices of 10 to 20% lower than Italy. Using cross-country administrative data on earnings, Guvenen et al. (2022) show that Italy is also one of the European countries that experienced an upward trend in inequality in the last three decades.[1]

The paper is organized as follows. Section 2 describes the macroeconomic context in Italy for the period under analysis. As discussed in Section 3, to capture stylized facts about labor supply, earnings and disposable income in the paper we rely mostly on the Survey of Household Income and Wealth (SHIW). The survey lends itself to the construction of relatively long time series of income and inequality measures from 1989 to 2020. Section 4 presents data on the characteristics and dynamics of the labor force. Section 5 compares trends in earnings inequality from different data sources, and with trends of inequality in disposable income. We also compare the main trends with data drawn from the INPS administrative dataset. Previous research discussing possible explanations for the rise of income inequality suggests that income inequality in Italy grew considerably in the 1990s, stayed at this higher level until 2015, and further increased in the pandemic year. The most likely explanation for the increase in income inequality is the increase in labor market flexibility due to the sequence of labor market reforms of the last three decades. As shown in Section 6, Italy features not only high inequality, but also low mobility, due to a

[1] Brandolini (1999) provides the first comprehensive analysis of income inequality in Italy and its historical trends (1947-1995), using several datasets: early surveys conducted by the Doxa Institute in 1947-48, the Bank of Italy SHIW, the Euro-Panel, and the Italian Central Statistical Office. The evidence suggests a slow decline in income inequality – as measured by the Gini index – from the early 1970s to the end of the 1980s, and increasing inequality in the nineties. Brandolini (2023) shows that inequality trends in Italy differ according to different data sources, variable and sample definitions.

combination of inequality of opportunities and low intergenerational mobility. Section 7 summarizes the evidence.

2. The macroeconomic background

Ending a period of sustained growth in the eighties, Italy suffered three sharp recessions during our sample period, spanning 1989-2020, in addition to milder economic fluctuations. As shown in Figure 2, the first of these episodes occurred in 1992-93, with consumption falling in real terms for the first time since the end of WWII. After a long period of milder fluctuations, a second episode occurred in 2008-2011 due to the combined effect of the financial crisis and the sovereign debt crisis, with GDP falling by over 5% in 2008 and (after a recovery) by about 3% in 2012. The last episode is the 2020 health crisis, with a GDP fall of 10%. Figure 2 plots the growth rate of GDP from 1989 to 2020, showing that throughout the 1990s and in the new millennium the Italian economy is characterized by slow or even stagnant growth. During the period studied the unemployment rate increased steadily (reaching a 12% peak in 1997), and then followed large swings, declining to 6% in 2007, increasing to almost 14% in 2014, and then declining again at the current values of about 9%.

Over the same period Italy has undergone a rapid demographic transition, with accelerated aging of the population due in part to an increase in life expectancy, and in part to a dramatic fall in the fertility rate (from 2.5 children per woman in 1965 to 1.3 in 1990), paralleled by an increase in female labor force participation. The demographic transition has affected the structure of the population, inducing dramatic changes in family size and composition, and size of the new cohorts entering the labor market. The decline is largely accounted by a decline in the share of couples with children. In direct contrast, the proportion of single households quadruples, from 2.5% in 1980 to 10% in 2020. As a result of these trends, average household size declined substantially, from 3.9 in 1980 to only 3 in 2020: therefore, relatively younger cohorts appear to have smaller families than older ones, though the share of working household members rose from 0.55 in 1989 to 0.69 in 2020.

The most important institutional change affecting earnings and income dynamics was a series of labor market reforms, increasing labor market flexibility.[2] Indeed, the nineties reverted policies of wage compression and reduction of inequalities of the previous two decades towards policies associated with widening income disparities and greater wage instability. In the post-war period, an especially in the seventies, labor markets were tightly regulated, and wage indexation granted the same absolute wage increase to all employees in response to price changes.[3] Labor market reforms started with abolition of the indexation system in 1992, then followed by a wave of reforms aimed at increasing the degree of flexibility of the labor market. Starting in 1997 with the so-called "Treu reform", and continuing with 2003 with the "Biagi reform", employment protection on temporary work was reduced, increasing the maximum number of repeated renewals of a temporary contract with the same employer, and increasing the variety of contracts (Boeri and Garibaldi 2007). These two-tier reforms were then followed by the "Jobs Act" enacted in 2015, reducing firing costs of open-ended contracts (Daruich et al., 2022). The sequence of reforms produced a significant increase in employment, accompanied by stagnant real wages, since new employment opportunities were created in sectors with low productivity growth (Checchi, 2012).

3. Data

An important source of microeconomic data on Italy is the Bank of Italy SHIW, which collects detailed information on demographics, labor supply, income, consumption and wealth, distinguishing between real and financial wealth.[4] The availability in the same survey of data on income, consumption and wealth (as well as a panel component) is what makes the SHIW a unique reference for macroeconomic researchers interested in income, consumption and wealth inequality, and their changes over time. The SHIW is also harmonized with similar surveys in other euro-area

[2] Another important institutional change was also the sequence of pension reforms starting in 1992, aimed at reducing the imbalance in the social security system induced by the progressive aging of the population. There was also a process of banking reform and financial liberalization culminating in accession to the euro area in 1999.

[3] Manacorda (2004) argues that the indexation mechanism induced wage compression and reduction in wage inequality. Erickson and Ichino (1995) advance a similar explanation for the decline in wage inequality in Italy between the late 1970s and late 1980s.

[4] The full dataset is publicly available (with documentation in English) at the Bank of Italy's website, see http://www.bancaditalia.it/statistiche/indcamp/bilfait/dismicro.

countries, within the ECB sponsored Household Finance and Consumption Network (HFCN), allowing international comparisons.

We use data from the 1989-2020 SHIW, because data on earnings are available only starting in 1989. The SHIW runs every two years, with the exceptions of 1998 (a 3-year gap) and 2020 (a four-year gap due to the Covid-19 crisis). The SHIW is a representative sample of the Italian resident population. The sample design is consistent with that used by the Labor Force Survey conducted by ISTAT (the Italian national statistical institute).[5] Data are collected through personal interviews in the first months of the calendar year, thus flow earnings and disposable income refer to the previous fiscal year, which in Italy coincides with the calendar year; wealth and debt variables are end-of-period values. Questions concerning the whole household are answered by the head of the family or by the person most knowledgeable about the family finances; questions on individual incomes are answered by each member, wherever possible. The unit of observation is the family, which is defined to include all persons living in the same dwelling who are related by blood, marriage or adoption. Individuals selected as "partners or other common-law relationships" are also treated as families.

We choose to use the SHIW rather than alternative datasets with detailed data on hours worked and earnings, but less information on the characteristics of the household and of the income of other household members. Furthermore, the SHIW has consistent definitions of variables spanning over 30 years of data. In comparison, the research lab created by INPS (the Italian social security agency) offers complete and reliable administrative information on earnings, but has no information on household composition and education, and no link with earnings of other members of the household. Furthermore, INPS data exclude the self-employed and public employees, which represent over one third of Italian employment (Hoffman et al. 2022).[6] Even the labour force survey

5 Sampling is carried out in two stages: the first consists of the selection of municipalities, the second the selection of households. Municipalities are categorized into 51 strata, defined by 17 regions and 3 classes of population size (over 40,000, 20,000-40,000, less than 20,000). All municipalities in the first group are included; those in the second and third groups are randomly selected with a probability proportional to their population size. In the second stage households are randomly selected from registry office records.

6 INPS data used in Hoffman et al. 2022 cover the period 1985-2016. Statistics come from a 6.6% sample of the INPS universe based on workers born on 24 randomly selected birth dates. Public sector jobs, as well as self-employment, are not in the INPS archives. These account for 16% and 20% of total employment respectively.

conducted by ISTAT (the national statistical office) does not contain information on consumption and wealth, nor on earnings from the other cohabiting members of the household.

In constructing the sample, we define the employment rate as the fraction of population that is employed according to the self-reported employment status (rather than the having zero or minimal earnings) which includes self-employment. Nominal earnings are converted into real terms in calendar year 2015, using the CPI deflator. Hours of work are defined as the "usual/ typical" paid hours worked per week, including paid overtime, and wages are individual real net hourly wages (weekly net employee earnings divided by weekly hours worked as defined above), excluding self-employed workers. Disposable household income is the sum of three main components: net labor earnings, net public transfers (pensions and other forms of government benefits) and capital incomes, coming from real and financial assets. Household earnings and disposable income are normalized according to the modified OECD equivalence scale. Given the focus on labor supply and earnings, we exclude people younger than 25 or older than 55, selecting individuals that have completed education and are not yet retired. The sample includes 313,257 individuals interviewed in 16 waves, between 1989 and 2020.

Jappelli and Pistaferri (2010a) compare SHIW income data with the corresponding aggregate from National Accounts data, and conclude that the two sources are well aligned in terms of growth rates, while SHIW disposable income is considerably underestimated. SHIW slightly overestimates wages and salaries with respect to the National Accounts, while it underestimates self-employment income by 50%. Pensions fall short of the National Accounts figures by about a third. Interest on financial assets is seriously underestimated, while rents are roughly in line with the National Accounts figures. In comparing SHIW with national accounts, Brandolini et al. (2018) conclude that "The SHIW income definition is broadly comparable to that used for gross household disposable income in National Accounts, but there is less than complete alignment between the two sources, owing to methodological differences and the typical survey underestimation due to non-response and under-reporting biases. Without carrying out any adjustments to increase comparability, the SHIW income estimates are on average about two thirds of the National Accounts aggregates." (p.195).

4. Employment and education

Figure 3 plots the composition of the population from 1989 to 2020, distinguishing three education groups: individuals with less than high school education, high school graduates, and college graduates. The figure captures the overall increase in education of the last three decades. In the earlier part of the sample 60% of the Italian adult population had completed only middle school education, 30% completed high school and only 10% had a college degree or above. Over the last three decades, the fraction of the population with a college degree more than doubled (21.6%), while the fraction that completed high school increased to about 40%. Still, the share of college graduates is well below the standard of other OECD countries.

Figure 4 plots employment rates of the 25-55 age group separately for males and females. Between 1989 and 2020 the employment rate of males fluctuates around 85%, while for females participation has increased considerably, from 44% in 1989 to 64% in 2020, but still well below males' employment rates. Figure 5 considers also the youngest and older segments of the population (age groups here are extended from 20 to 70) and plots employment rates by age, highlighting two other features of the Italian labor market: the relatively low participation rate of the young and of the oldest segment of the population. On average, over the entire sample period, the employment rates of the young (20-25) are about 50%, dropping considerably after age 60, owing to the generous pension eligibility requirement that applied to older cohorts. In the last decade, due to the gradual retirement of cohorts affected by the pension reforms of the 1990s, participation increases considerably also after age 60. Employment rates are also heterogeneous across the country, with employment rates that are in the order of 10 percentage points higher in the North than in the South for males, and over 20% higher for females. Education is also strongly associated with employment opportunities, for both men and women. Employment rates of college graduates are about 20% higher than for those with lower education levels. Splitting the data by education and gender confirms that employment rates are higher for men than for women at each education level, but the difference narrows down across the education distribution (it is lower for those with a college degree). In short, heterogeneity in employment rates reflect gender, age, education and geographic differences.

Figure 6 shows that the proportion of people reporting being part-time employed is much higher for females, and has increased considerably: over the sample period, it increases by about 7

percentage points for males and by 25 points for females. These trends are explained by the series of labor market reforms described in Section 2, which eased entry to the labor market of groups with low labor force attachment and precarious jobs. It is worth reminding that almost two thirds of female part-time is involuntary.[7]

5. Earnings and income inequality

Since individual earnings have stagnated in the last three decades, household earnings have increased only modestly over the same period. The overall change of the GINI index of net earnings of employees and self-employed aged 25 to 55 is remarkable, given that it was 0.25 in the early nineties and is now 0.32, an increase of almost 7 Gini points (Figure 7).

Some frequently used measures of labor market premia are the gender premium (the ratio of the average male and female wages), the education premium (ratio of college graduate average wage to non-graduate wage), the experience premium (ratio of average wage received by males aged 45-55 to males aged 25-35), and the regional premium (the ratio between the average wage received in some regions relative to others). Looking at figure 8, SHIW data indicate that the gender premium does not display a clear-cut trend over the sample period, with the average premium ranging between 3 and 6 percent in most years, except the most recent one (14% in 2020). The large increase in the gender premium in 2020 shows that the health crisis has had a largest impact on women, where part-time employment and more precarious jobs are more prevalent that for man.

The education (college) premium is about 60 percent along the sample, declining between 2000 and 2010, and increasing again in the most recent decade. One could speculate that the increased supply of college graduates offsets the increase in demand, explaining the constant education premium observable in the data. Finally, there is an increase in the experience premium and of the regional premium throughout the sample. In interpreting these trends, one should consider that each of these dynamics might reflect different compositional factors, and correlations with other variables.

[7] Until 2020 ISTAT surveyed the nature of the part-time, distinguishing between voluntary and involuntary, and underemployment (see http://dati.istat.it/Index.aspx?QueryId=56084).

Another interesting statistic is the annualized growth rate of wages between 1989 and 2020 by wage percentiles reported in Figure 9. The figure shows the percentage change in median wage in the same percentile of both years. In other words, some people might have changed percentile of the wage distribution over time (for example, in 1989 one could be in the 50th percentile and in 2020 in the 60th), but Figure 9 takes the median wage in the same percentile of the two years and compute the percent difference. The figure shows that the bottom half of the distribution has suffered a constant decline, while the top of the distribution experienced a modest growth of less than 0.5% per year, a result also confirmed by Biasi and Checchi (2022) in their analysis with INPS data.[8]

Rising inequality may be caused by an increase in income differences persisting over time, or by greater income instability. An example of persistent variations is when the difference between the earnings of a college graduate and a high school graduate widens throughout their career. An example of transitory variations is one in which the income of everyone is less stable, for example because it alternates periods of work and periods of unemployment. Jappelli and Pistaferri (2010a) show that much of the increase in income variability, and therefore inequality, is due to greater income instability. They estimate a flexible income process given by a permanent and a transitory component, and conclude that the three-fold increase of the transitory component is related to labor market reforms that increased the degree of instability of earnings and incomes.[9]

However, income inequality is a cumulative process that starts from the cradle.[10] Del Boca and Rosina (2009) argue that compared to other European countries, the inequalities between men and women in Italy are greater, and the injustices in the relationships between the generations are more significant. Territorial disparities have also recently widened. One of the structural problems of the country is a large inequality in the access to childcare facilities, particularly in the South, coupled with regional variations in education attainment and the quality of education, and the associated probability of dropping out from school. Italy is also the country with the largest fraction

8 Brandolini et al (2018) point out that only this dynamics is mostly due to the 1992 recession, which impacted differently the two tails of the distribution, while subsequent shocks were associated to a generalized reduction of all income (see their Figure 8.7, p. 201)

9 Rosati (2003) comes to similar conclusions exploiting the joint dynamics of income and consumption in the SHIW.

10 See Saraceno (2022) and the other contributions published in the same issue of the journal "Il Mulino".

of youth in NEET (neither in employment nor in education and training) condition: 23.1% in 2021, against a EU27 average of 13.1.[11] As a consequence, it comes not as a surprise finding that many young workers receive non-standard labour offers and are more likely to be working poor: the rate of in-work poverty is 12.3% in Italy against a European average of 9.6% (Raitano et al., 2019). In-work poverty combines with differences in citizenship condition and migration background, leading to geographical segregation within cities. This explains why significant redistributive interventions, like the introduction in 2019 of income guarantees for the poor (so-called *reddito di cittadinanza* or citizens' income), may have limited impact in attenuating inequalities.

It is also useful to compare inequality trends in earnings with studies drawing from different data sources and periods. Figure 10 plots the GINI index of gross earnings of private employees from 1989 to 2016 using INPS administrative data (rather than net earnings of all employees and self-employed). Data are taken from the Global Repository of Income Dynamics (GRID), an open-access international database that provides micro statistics on income inequality and income dynamics at the individual level (Guvenen et al., 2022).[12] The Italian data of the GRID project cover 6.6% sample of the Italian population based on 24 randomly selected birth dates. Public sector jobs, as well as self-employment, are not included. These account for 16% and 20% of total employment respectively. Hoffmann et al. (2022), in summarizing the evidence for Italy, suggest that in the last three decades earnings inequality and earnings volatility increased for both men and women, and the "*the wave of labor market reforms implemented since the late 1990s is the most likely explanation for both trends. The dramatic rise in part-time and fixed-term employment increases inequality in earnings through a dramatic change in the dispersion of annual hours worked across jobs*."[13]

While Hoffman et al. (2022) include only private employees in their analysis, the 2022 INPS Annual Report includes all private employees for the 2005-2020 period. Figure 11 shows that when considering the entire population of employees (including wage earners in agriculture

11 The source for the NEET figures is Eurostat, and data are available on the website: https://ec.europa.eu/eurostat/databrowser/view/EDAT_LFSE_20$DV_1101/default/table ?lang=en.

12 All statistics in the database have been computed from administrative records data on earnings histories from each country and harmonized for comparability.

13 Briskar et al. (2022), also using INPS data, suggest that the increase in inequality does not have a distinct geographic pattern.

and caregivers), the Gini index increases from 0.40 to 0.46 during the pandemic. Microdata for public employees are now available, and if one adds them to the sample the Gini index goes from 0.42 in 2014 to 0.44 in 2020. The INPS Report also shows that if one excludes individuals working less than 4 weeks per year and the lowest 0.5 percentile, the Gini index drops by only 0.02. When one excludes wage earners in agriculture, public employees and caregivers, the Gini index still averages 0.40 in a sample of 14.3 million private sector employees, in line with the total sample estimates.

Earnings inequality does not mechanically translate into inequalities in disposable income, since many households include more than one income recipient, and since other income components are included in the definition of disposable income (income from real and financial assets and government transfers, including pensions). SHIW provides income data for every individual in the household, allowing a measure of household-level disposable income as the sum of household-members earnings, transfers, pensions, and income from capital. For comparison with earnings inequality, Figure 12 plots the Gini index of disposable income for the age group 25-55.[14] The figure highlights two important facts. First, inequality in disposable income is of the same order of magnitude than net earnings inequality. Second, between 1989 and 2020 there has been an increase in disposable income inequality of 6 Gini points (from 0.28 in 1989 to 0.34 in 2020), in large part associated with the 1992-93 recession.[15] Finally, the pandemic year signals an increase in inequality, as we already observed for the dynamics of earnings inequality.

6. Mobility and inequality

Italy features not only comparatively high inequality, but also low intragenerational mobility. The rank-rank slope, or rank-rank persistence coefficient, measures the strength of the correlation between a persons' position in the initial income distribution (year *t*), and her position in the

[14] Similar evidence is provided using an equivalized measure of disposable income, using the OECD equivalence scale. The scale is defined as E=1+0.5×(no. of children)+0.7×(no. of adult members-1). A child is any household member aged 16 or under.

[15] Our graph partly differs from Figure 8.6 in Brandolini et al (2018) because focusing on the working age population reduces the equalizing effect of pensions paid to retired household members. Furthermore, our sample captures the increase in inequality after the financial and sovereign debt crisis, while their sample ends in 2014.

distribution $t+n$ periods ahead. Figure 13 plots the rank-rank correlation of disposable income in the long run (ten years apart). The 45 line indicates perfect immobility, while a horizontal line would indicate that the quantile at time t does not predict the quantile t+10 years later.[16] This is just one of the many ways to show lack of mobility.[17]

The limited intragenerational mobility goes hands in hands with low intergenerational mobility. Checchi et al. (1999) documented the degree of persistence in educational attainment, while Acciari et al. (2022) estimate intergenerational income mobility in Italy using administrative data from tax returns. Their estimates of mobility are higher than prior work using survey data and indirect methods. In particular, the rank-rank slope of parent-child income is 0.22, compared to 0.18 in Denmark and 0.34 in the United States. However, their sample considers children in their early stage of career.

When measuring inequality of opportunities (namely the share of inequality accounted by circumstances that don't change over time, like gender, age, parental background, place of birth), Bussolo et al. (2023) find a reduction of sic measure of inequalities at the beginning of the 2000s, which is reverted at the end of the first decade. Overall, Italy does not exhibit significant improvements over time: the value of inequality of opportunities is the same at the start and at the end of the period. A suggested interpretation is that the educational system and the labor market are working in opposite directions: educational opportunities have widened (in association to a reduced "value" of education), thus contributing to reducing inequalities. Conversely, possibly due to the reduced signaling value of education, employers put more weight on family background while hiring among potential applicants.

16 In the short run (two-year interval) the slope is 0.77, and in the long run the slope is still 0.62.

17 Subioli and Raitano (2022) produce similar graphs using SILC 2014-2017, reporting that mobility falls for younger cohorts.

7. Summary

We review trends in inequality in Italy, one of the most unequal countries among the OECD. Over the last three decades, Italy experienced four recessions originated from rather different shocks: debt stabilization following the Maastricht treaty, the financial crisis, the sovereign debt crisis, and the pandemic. The aftermath of each recession was followed by limited recoveries, producing an overall period of stagnant growth. This reflected into absent productivity growth followed by stagnant real wages.

Over the period, the country experienced increased labour market participation, due to increased flexibility in labor market regulation, combined with fragmentation of working hours. The recessions that occurred in first decades of the millennium were embedded in a geographical divide, which has not been reduced over the period of analysis. Since the overall labour demand did not increase, the fragmentation of work opportunities increased the share of working poors.

Despite income immobility, a significant redistribution occurred within the labour income share. The increased school participation pushed an increasing labor market participation, especially for the female component, even though a gender gap of 20 percentage points in the employment rates remains at the end of the sample period. The increase in participation was accompanied by an increase of part-time jobs, either working fewer hours over the week or working fewer months over a year.

As recorded by data from the Bank of Italy biannual SHIW, net earnings inequality of the working age population grew from a Gini index of 0.25 in 1989 to 0.32 in 2020. A rising trend is also evident in the dynamics of the Gini index of disposable incomes of working households (from 0.28 to 0.34), though this is attenuated in the entire population due to the role played by pensions. Analysis of gross earnings of the entire population of employees from administrative INPS data record similar trends, but clearly at higher levels (the Gini index increases from 0.40 in 2005 to 0.46 in 2020). Group analysis by gender, education or geographical divides does not suggest clear-cut trends along any of these dimensions, except a generalized upward turn during the recent pandemic years.

When decomposing the income dynamics by income position, one sees that in the last three decades the bottom half of the distribution experienced a significant decline in real earnings, while the top half of the distribution experienced a modest growth of less than 0.5% per year. The

widening polarization of earnings is consistent with limited infra-generational mobility, as recorded by the rank-rank correlation observed among the panel component of the SHIW. Research using administrative and survey data show that much of the increase in income inequality and volatility is due to the wave of labor market reforms implemented since the late 1990s. Overall, the high and rising inequality of earnings and income observed in Italy appears as a structural phenomenon, which is likely to persist for the next decade, unless stronger redistributive policies are undertaken and/or GDP growth resumes at significant rates.

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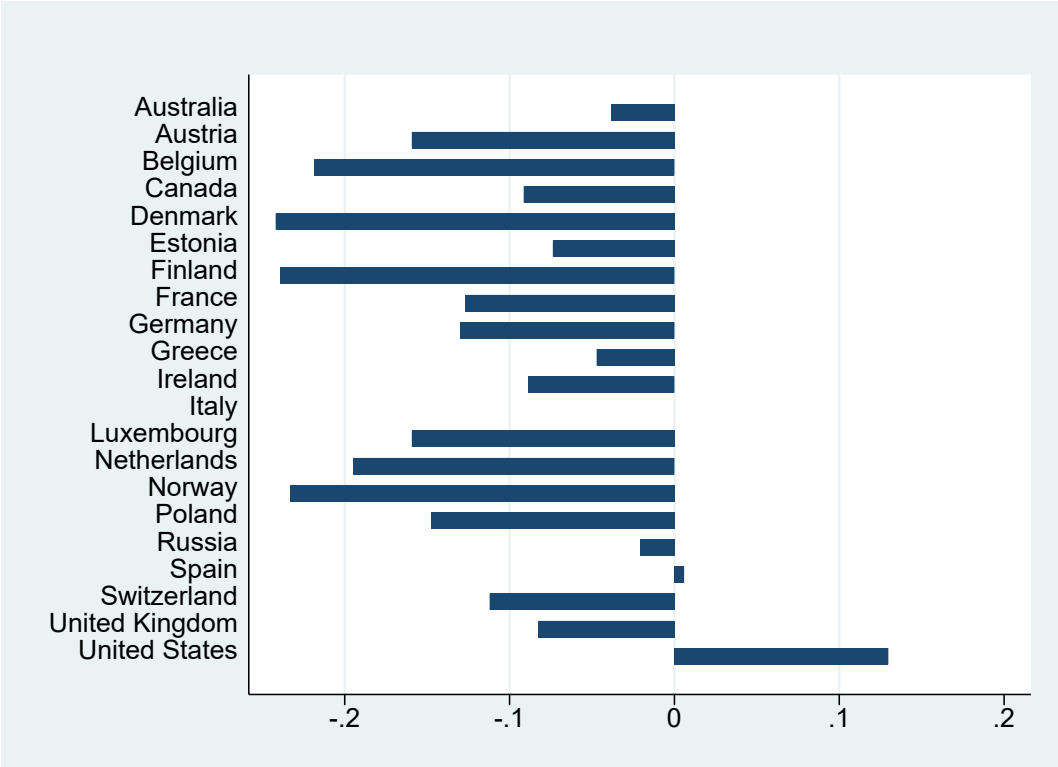
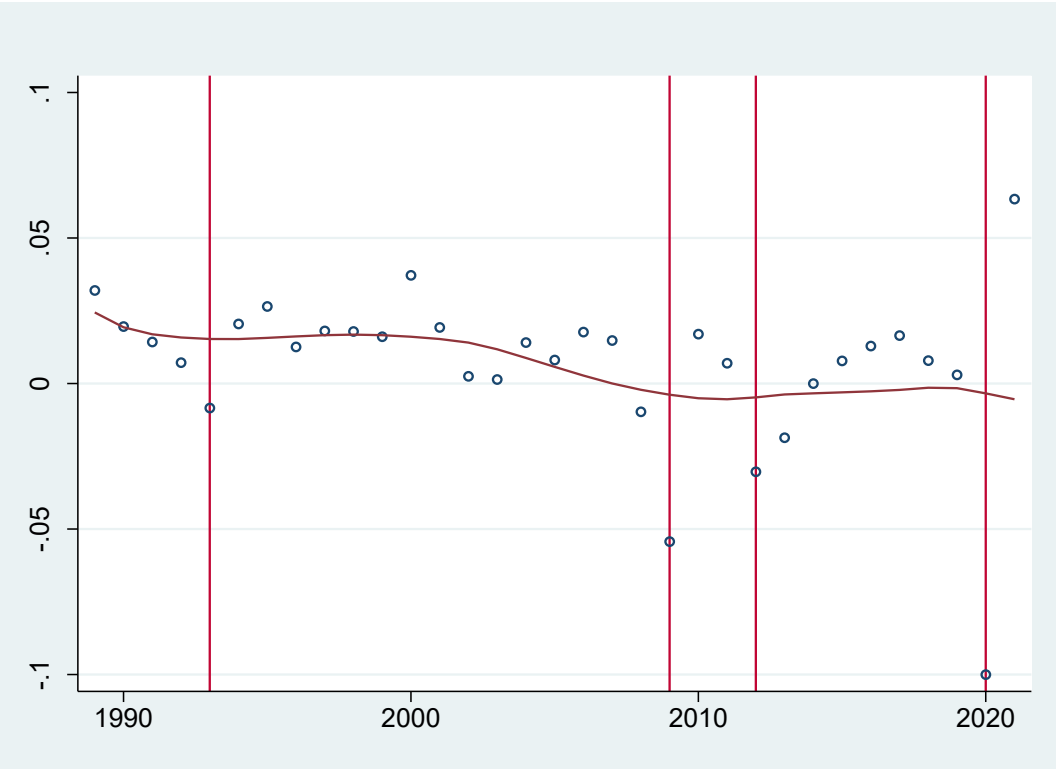
Figure 1
International comparison of income inequality



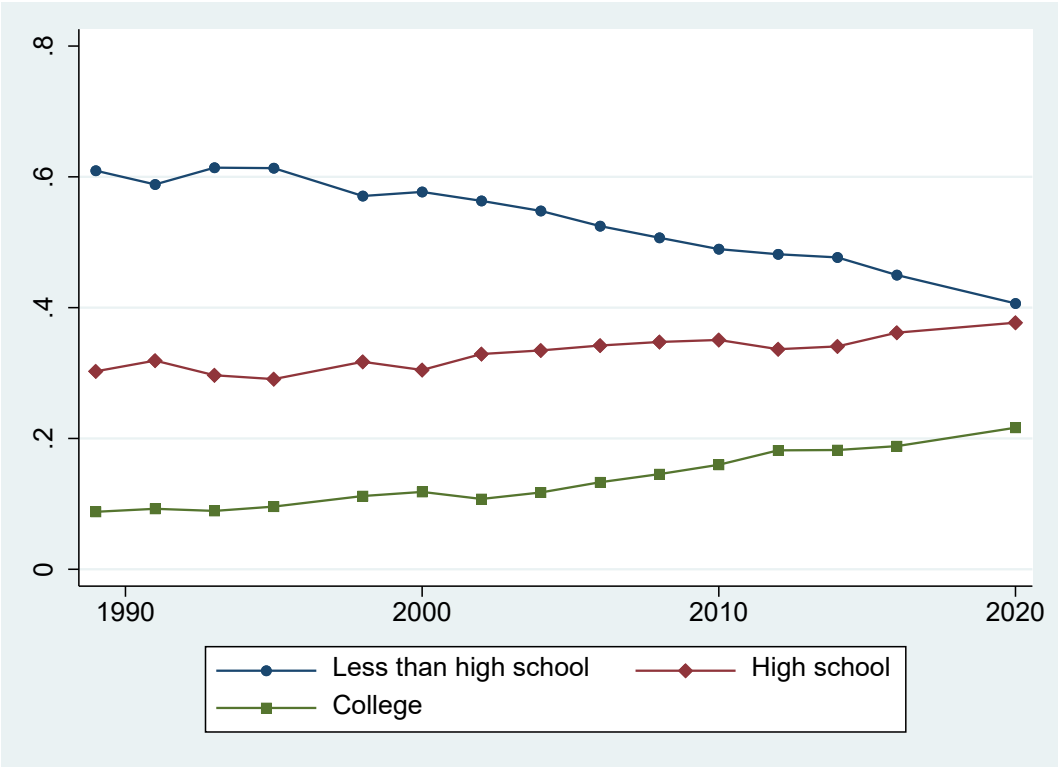
Note. The figure plots the Gini index of disposable household income, adjusted for household size. Values refer to 2016 and are plotted as deviations from the Italian value (0.339 in 2016). Source: Luxembourg Income Study, www.lisdatacenter.org/data-access/dart/

Figure 2
GDP growth



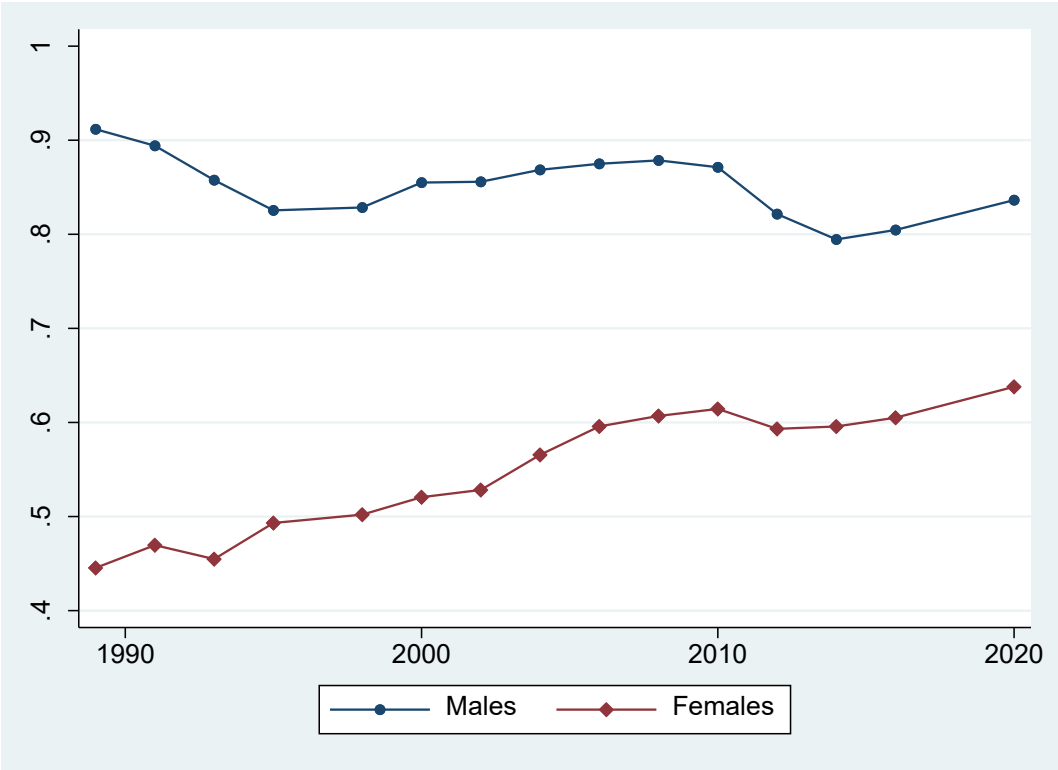
Note. The figure plots actual GDP growth from 1989 to 2021 in Italy, and smoothed means of the same series. Source: ISTAT, National Accounts.

Figure 3
Educational attainment



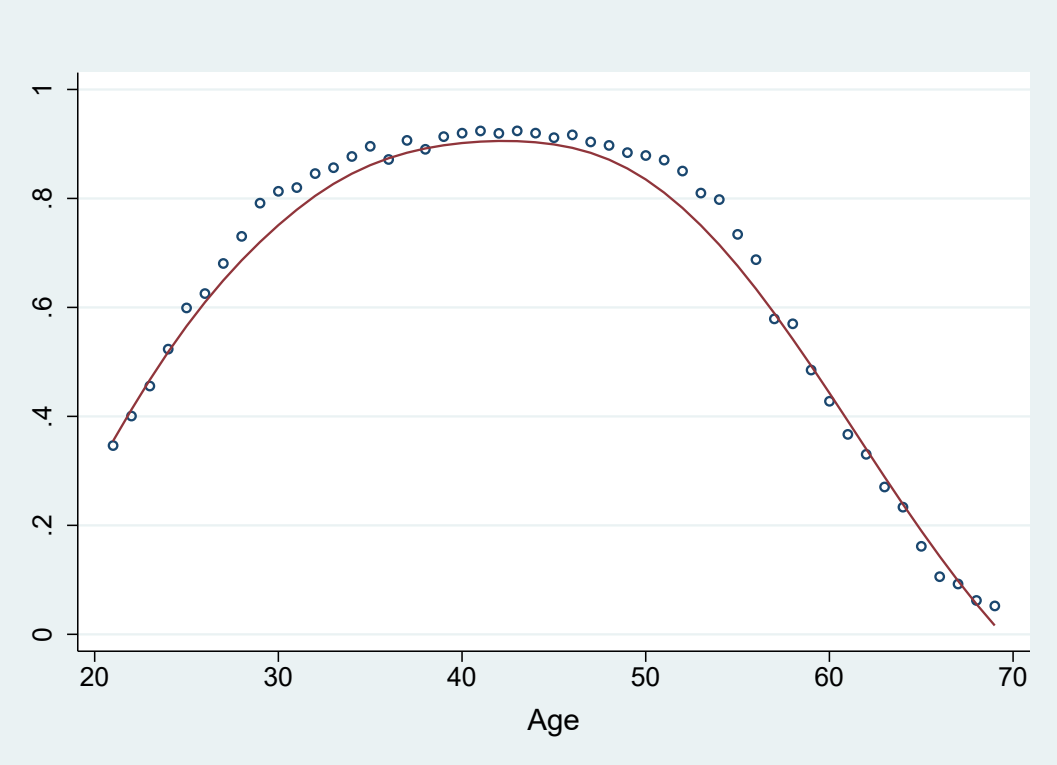
Note: The figure plots the educational attainment of the population of individuals aged 25-55. Source: 1989-2020 SHIW.

Figure 4
Employment rates



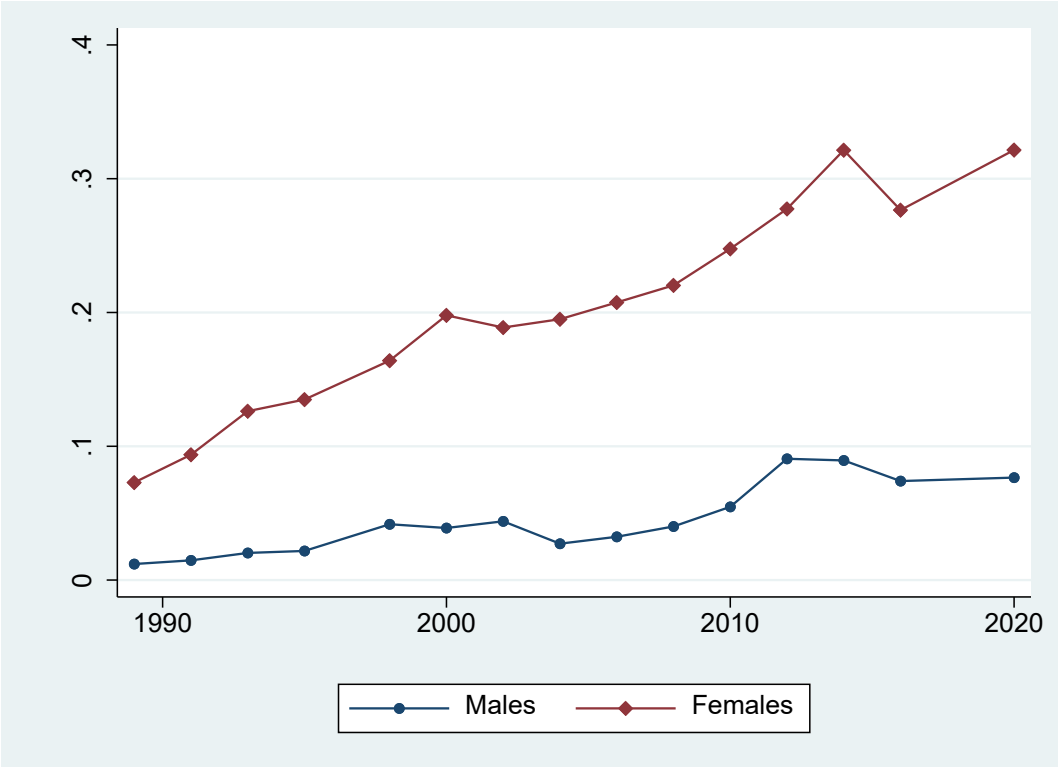
Note: Note: The figure plots the employment rate of the population of individuals aged 25-55. Source: 1989-2020 SHIW.

Figure 5
Employment rates, by age



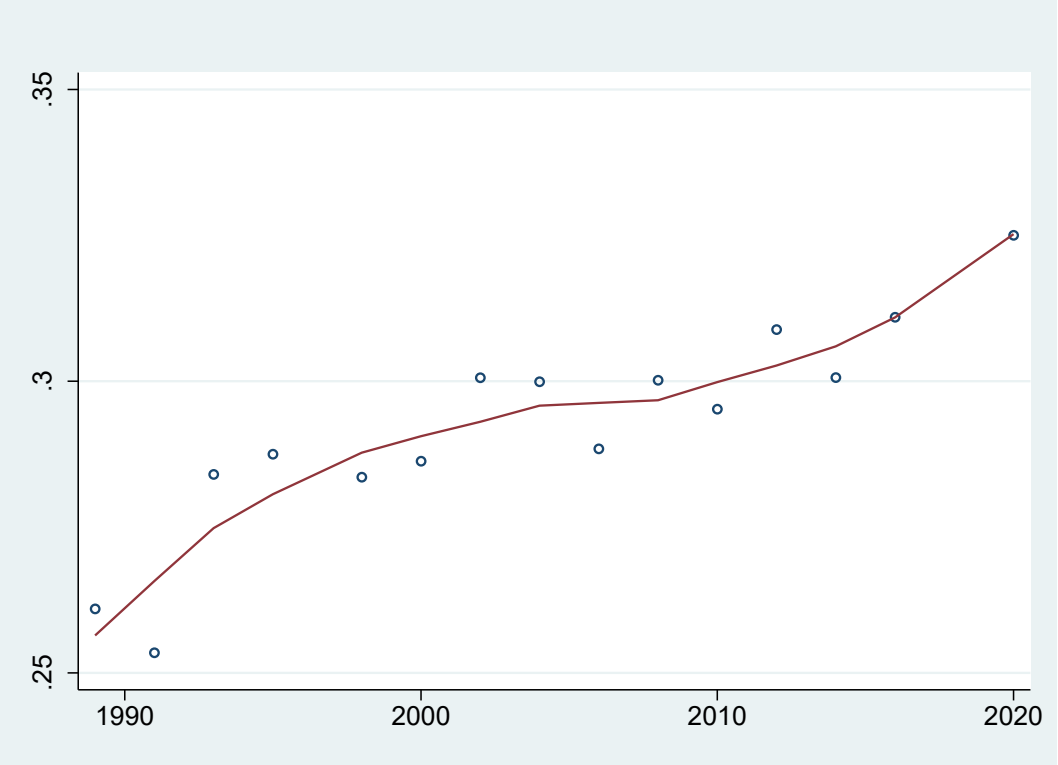
Note: Note: The figure plots the employment rate of the population of individuals from age 20 to age 70. Source: 1989-2020 SHIW.

Figure 6
Part-time employment



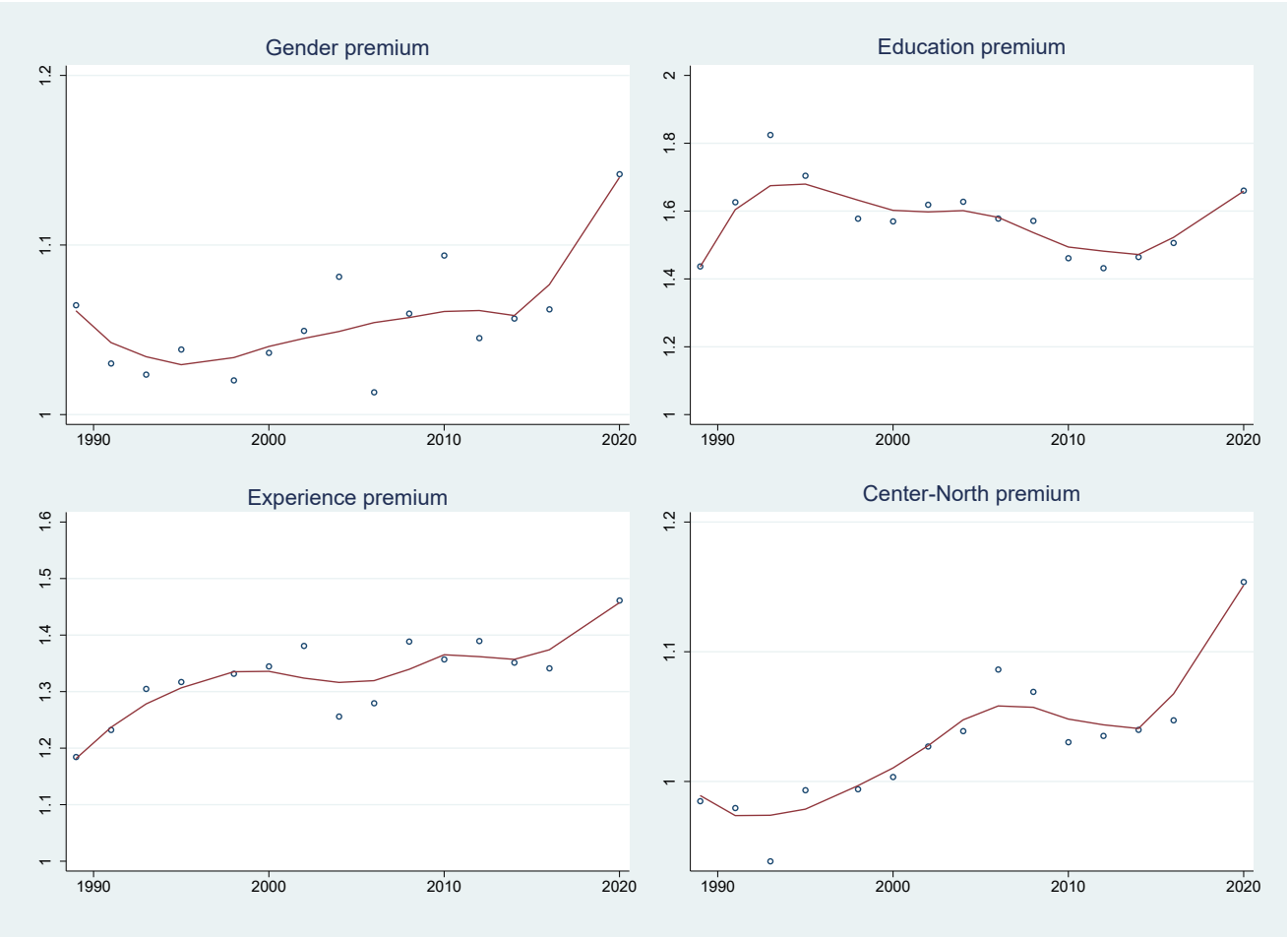
Note: The figure plots the fraction of part-time workers in the population of individuals from age 25 to age 55. Source: 1989-2020 SHIW.

Figure 7
Gini index of net earnings



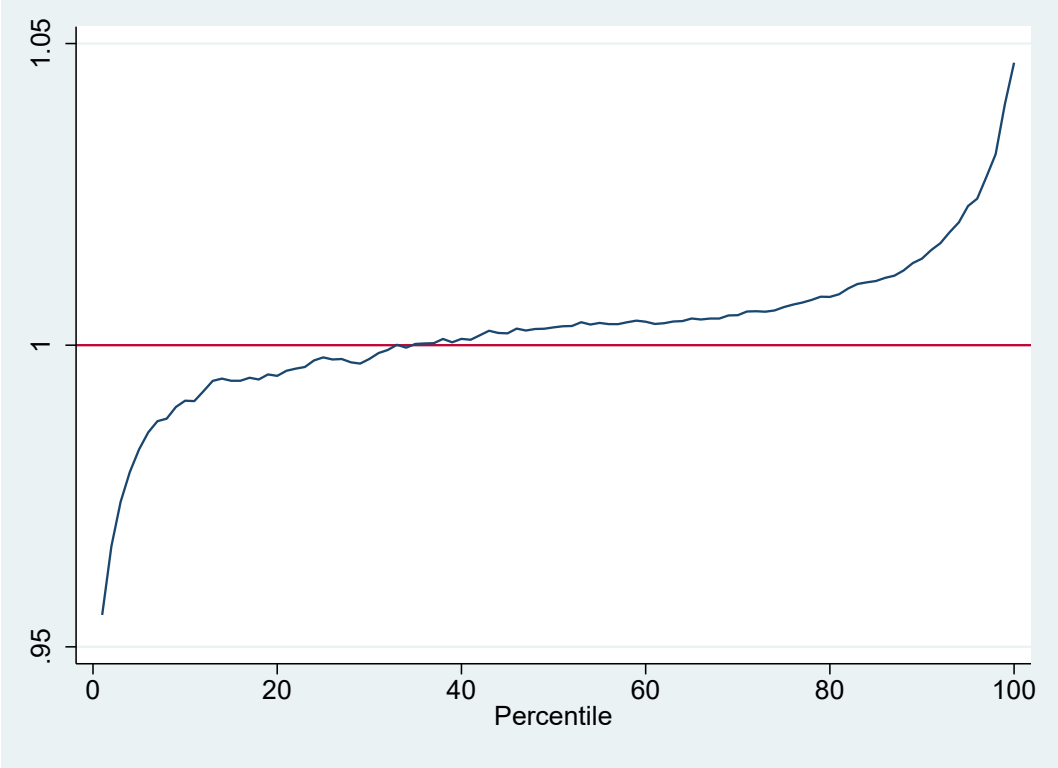
Note: The figure plots the Gini index of earnings net of taxes, and smoothed means of the same series. The sample includes private and public employees in the 25-55 age groups. Source: 1989-2020 SHIW.

Figure 8
Gender, education, experience and geographical premia



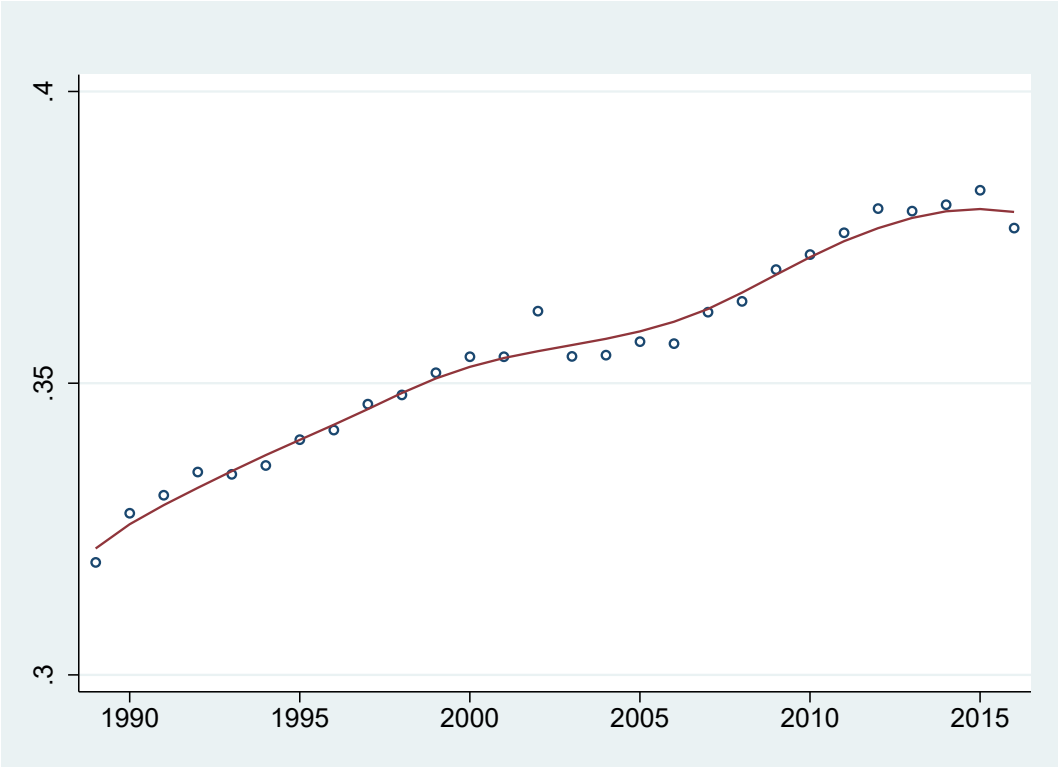
Note. The figure plots the gender premium (the ratio of the average male and female wages), the education premium (ratio of college graduate average wage to non-graduate wage), the experience premium (ratio of average wage received by males aged 45-55 to males aged 25-35), and the regional premium (the ratio between the average wage received in some regions relative to others). The sample includes working individuals aged 25-55. Source: 1989-2020 SHIW.

Figure 9
Growth incidence curve (1989-2020)



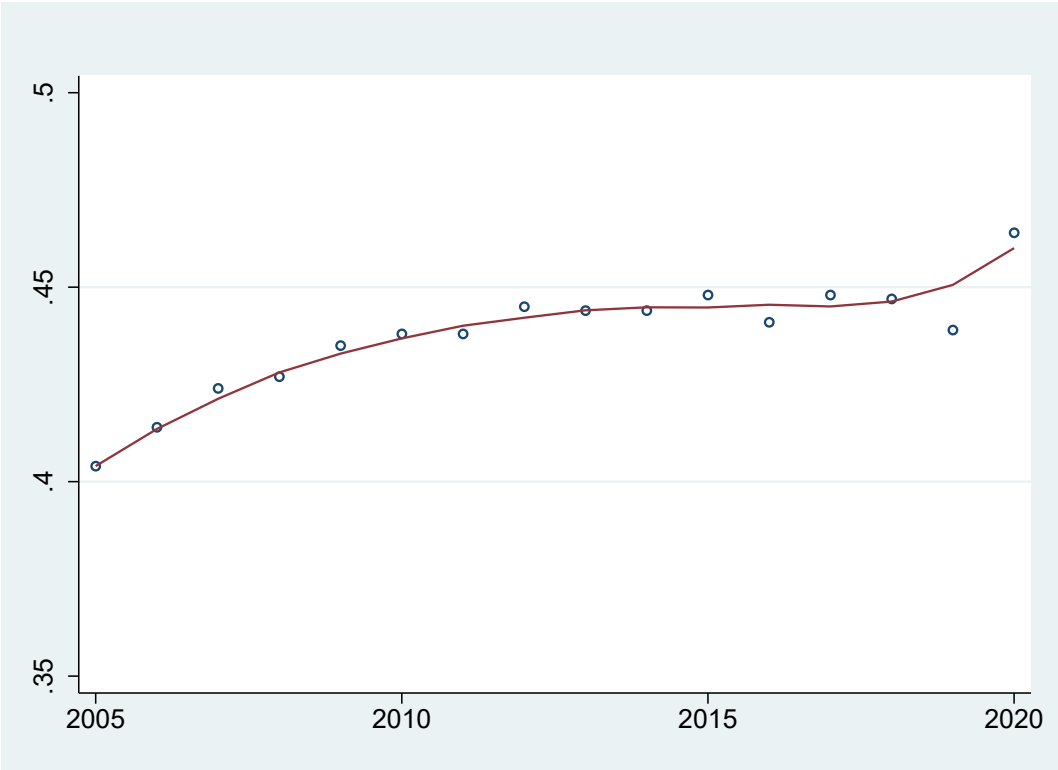
Note. The figure plots the ratio of between earnings percentiles in 1989 and percentiles in 2020.
Source: 1989 and 2020 SHIW.

Figure 10
Gini index of earnings, GRID project



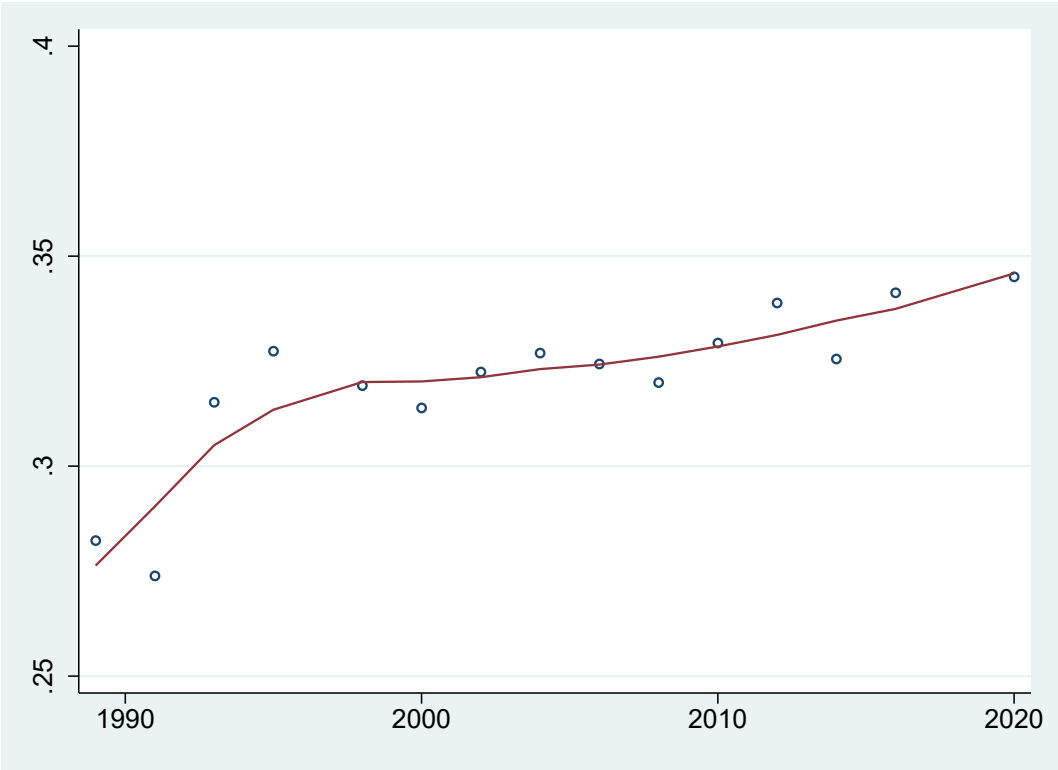
Note: The figure plots the Gini index of earnings gross of taxes from 1989 to 2016. The sample is drawn from INPS administrative data and includes working individuals aged 25-55. Data are drawn from the GRID project, ttps://www.grid-database.org.

Figure 11
Gini index of earnings, INPS data



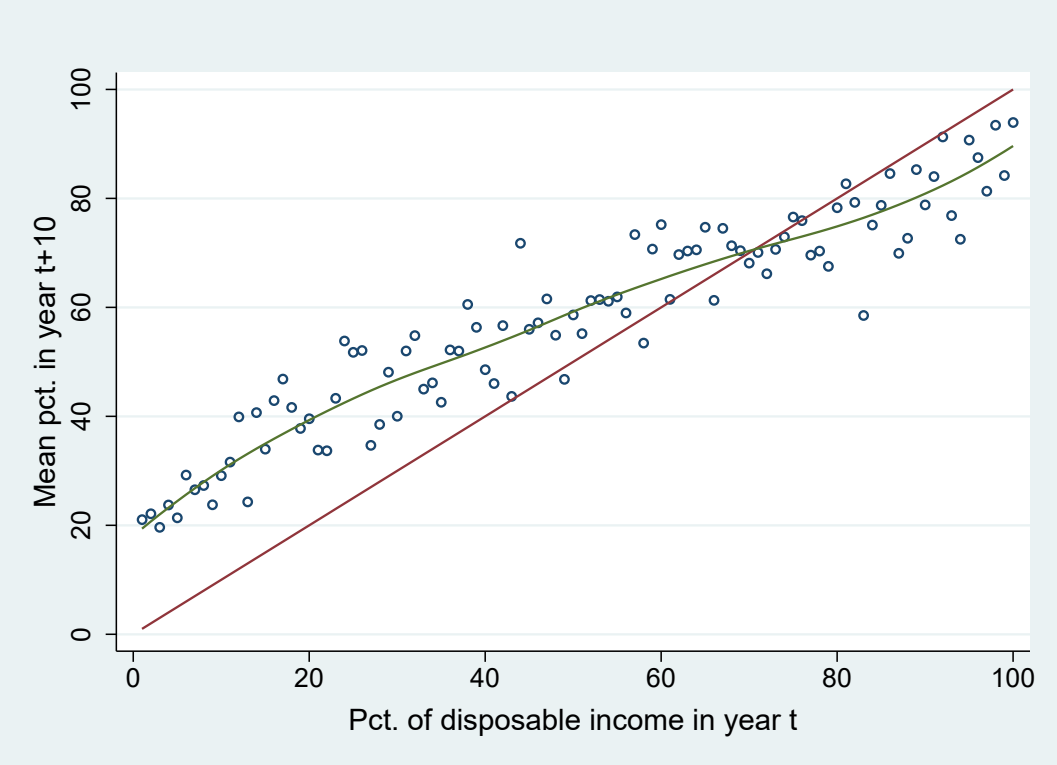
Note. The figure plots the GINI index of the gross earnings of private employees (including agricultural salaried and caregivers/cleaners) from 2005 to 2020 using the INPS administrative data. Source: INPS 2022 Annual Report.

Figure 12
Gini index of disposable income



Note. The sample includes households with heads in the 25-55 age group. The Gini index is based on disposable income. Source: 1989-2020 SHIW.

Figure 13
Mobility of disposable income



Note. The figure plots the rank-rank slope measuring the association between the rank in the disposable income distribution in period t, and the rank of the mean disposable income in year t+10. The sample use SHIW panel data from 1989 to 2020, with the requirement that households must be interviewed for at least ten consecutive years (since the survey is biannual, this requires at least 5 interviews).