

## Labor market inequalities across Italian demographic groups: a focus on the youth and the long- term unemployed

Policy Brief 01



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# Labor market inequalities across Italian demographic groups: a focus on the youth and the long-term unemployed

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## Policy Brief

### Introduction

*Italy has gone through several years of economic recession that have left profound wounds to its economy. The unemployment rate has increased markedly since the last crisis and reached double digits in 2012, with little improvement since then. The situation is however very different across demographic groups and across regions. Young individuals, the less educated and individuals living in Southern Italy have markedly adverse labor market outcomes. The recent financial crisis has aggravated those disparities.*

*In this policy brief, we start by characterizing the disadvantage of particular groups in terms of labor market outcomes focusing on the period 2012-2015. The phenomenon is complex and we look at various measures, as unemployment statistics alone may not fully capture the problem. In particular, we also focus on discouraged individuals or those who are in involuntary part time work, and show that they amount to a substantial fraction of the working age population.<sup>1</sup>*

*Next, we look at how the last financial crisis has affected the labor market status of particular groups. The crisis hit particularly hard the socio-economic groups that were at a disadvantage before the crisis, including the young – and among them the 20-30 age group, the less skilled and those living in the Southern parts of Italy. One notable exception is the gender disparity in labor market outcomes that decreased during that period.*

*Finally, we investigate how labor market disadvantage has evolved over a longer period, consisting of the last two decades. Over that period, there has been a decrease in inequality across socio-economic groups, mostly before the last crisis, which points to a longer run convergence, albeit a slow one.*

*The results highlight the need for policies to target specifically the unemployment and non-employment of younger individuals, rather than focusing on other age groups. In Italy, pre-retirement workers still have much lower unemployment rates and suffer less from long spells of unemployment. One particularly fruitful target is the 20-30 year old group, who suffer disproportionately from unemployment, but tend also to drop out of the labor force altogether. When in work, this group is also more likely to face involuntary part-time work. Addressing geographical disparities is also a long-standing issue.*

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<sup>1</sup> In a full report to be released after the conference we dig deeper into other dimensions of labor market inequality in Italy. In particular, we study extensively participation decisions by demographics, including the reasons stated for being out of the labor force. We also explore alternative and broader measures of labor underutilization than official unemployment. Finally, we study the duality of the Italian labor market by describing the distribution of different types of contracts by demographics.

## The current situation: a country of sharp inequalities

In order to understand the reality and the complexity of the Italian labor market, we rely on extensive micro data from the Labor Force Survey obtained from ISTAT, the Italian Statistical Institute. We look at the various demographic groups (men and women, the young and prime-age individuals, for instance) and determine their labor market performance along several dimensions using a number of indicators. The goal is to identify the main inequalities and disparities in the country across different categories. We focus on the period from the third quarter of 2012 to the second quarter of 2015, which includes the latest figures that are available. We refer the reader to the appendix for a more complete description of the data.

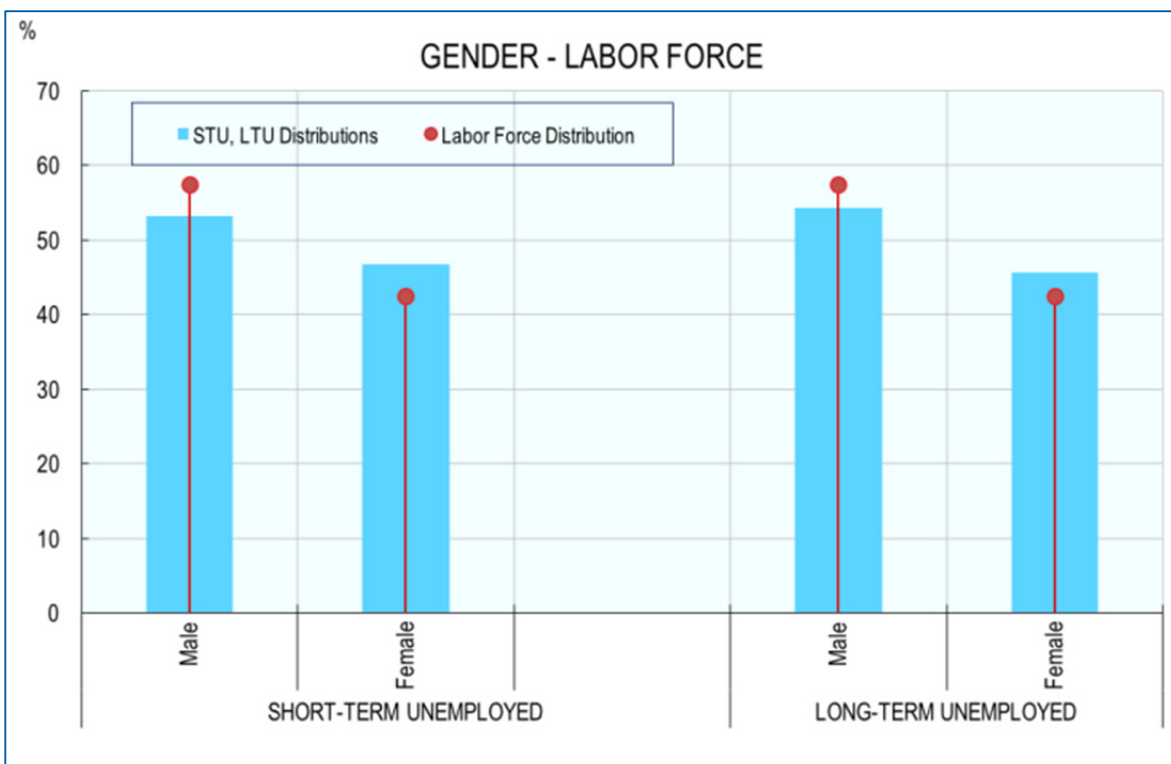
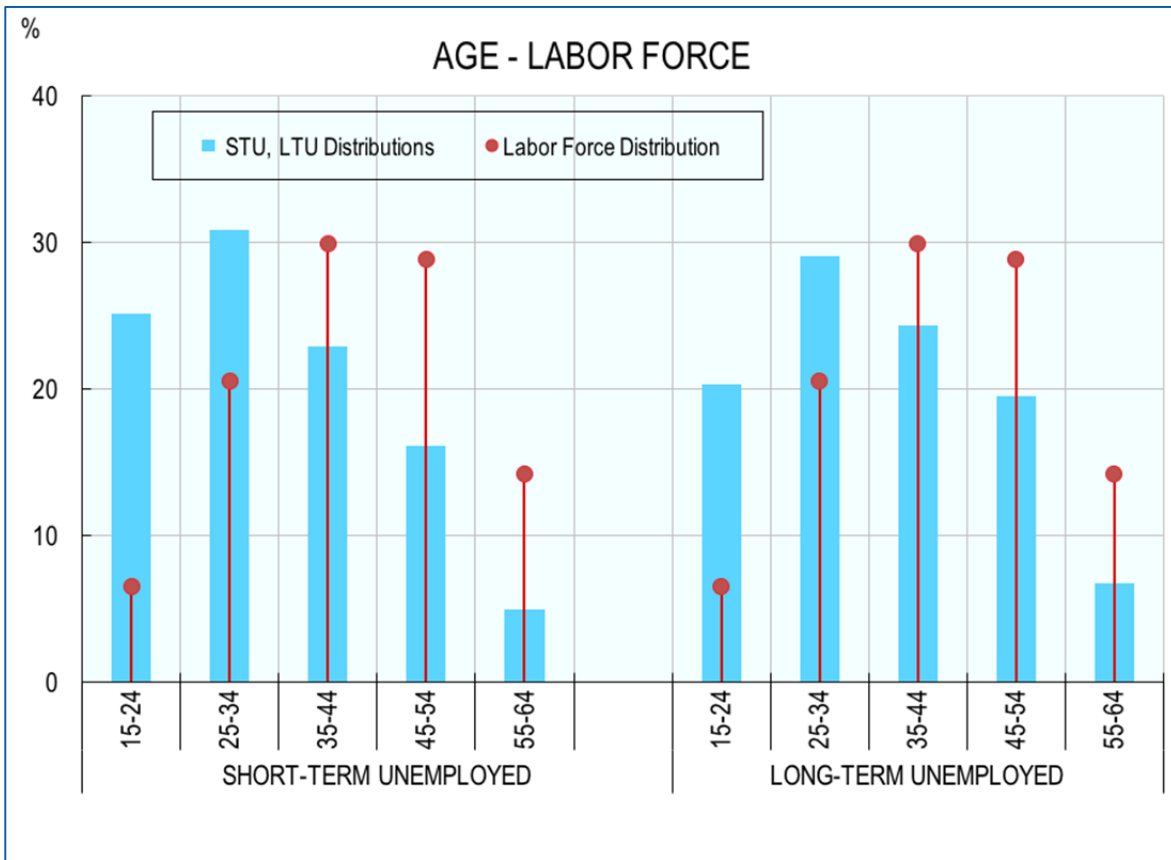
We first compute the average distributions of unemployed individuals by demographic group, distinguishing between short-term and long-term unemployment. In terms of demographics, we look at the distributions by age, gender, geographical area and education level. In order to assess the degree of inequality across demographic groups, we compare the distributions of both the short-term unemployed and the long-term unemployed to a reference distribution: the labor force distribution. In the absence of inequalities across demographic groups, the distributions should coincide. Take age for example. If young individuals represent a certain share of the labor force, but a larger share of the short-term unemployed, then it means that the youth are over-represented among the short-term unemployed.

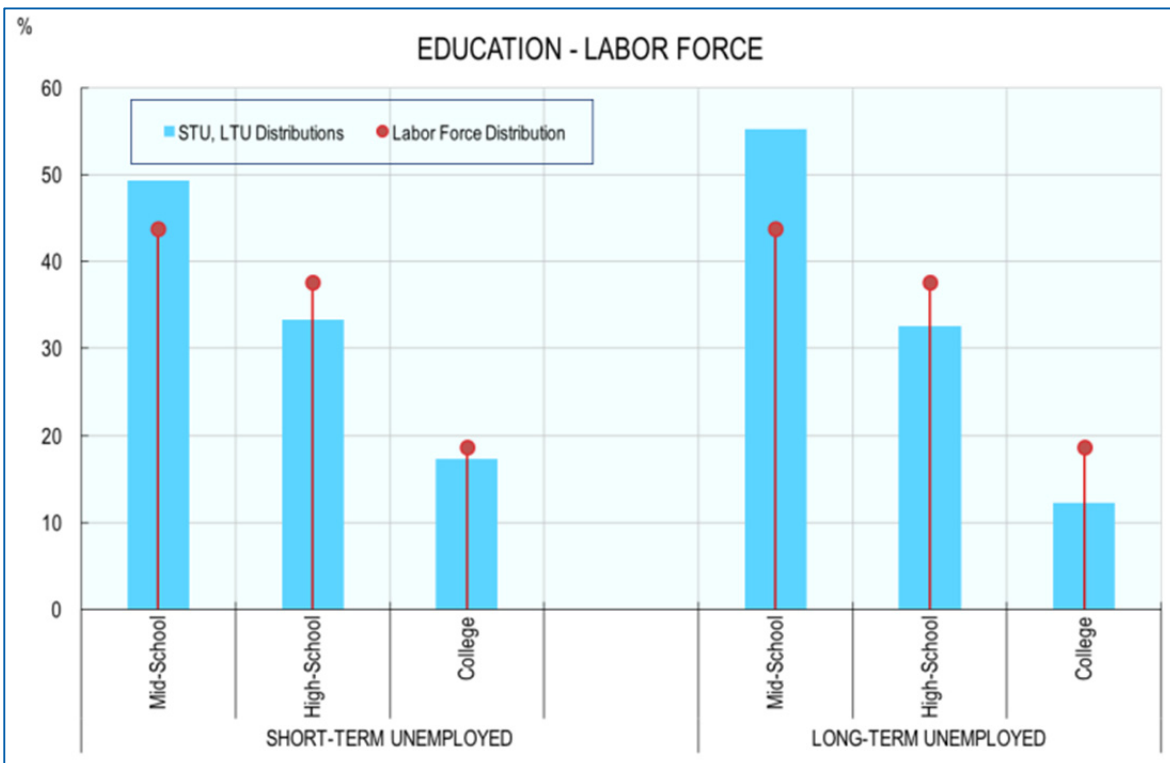
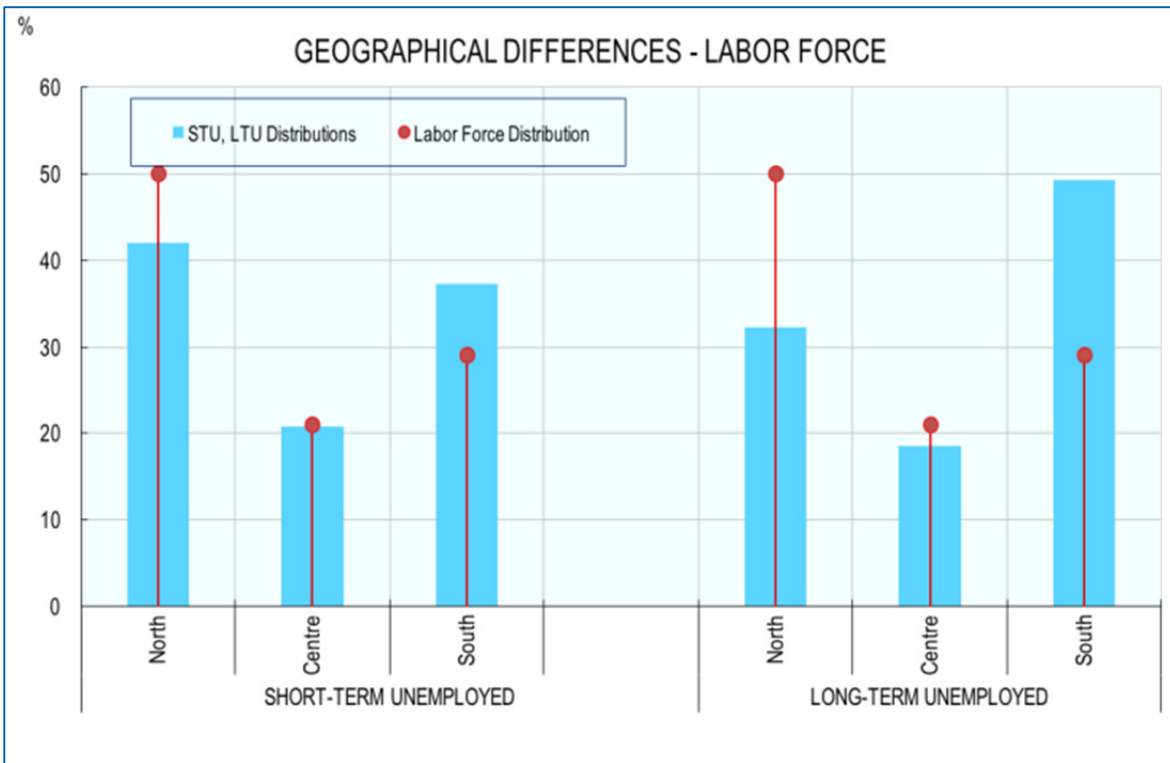
Figure 1 presents the results. It plots the distributions of the short-term unemployed and

the long-term unemployed (denoted by blue bars) against the labor force distribution (denoted by red vertical lines) by age, gender, macro area and education.

In the first plot, we consider five age groups: 15-24, 25-34, 35-44, 45-54 and 55-64. The figure clearly shows that the youth are over-represented among the unemployed. While young individuals aged 15-24 only represent 6.5 percent of the labor force, they represent a striking 25.2 percent of the short-term unemployed and an even more striking 20.3 percent of the long-term unemployed. There may be good reasons why the youth have higher short-term unemployment rates than older age groups. Typically the youth have just entered the labor force and are thus still searching for their “true call” in the labor market. In a well-functioning labor market, in order to find their most suitable match, young individuals may go through a sequence of spells in short-term employment interspersed with spells of short-term unemployment. Another reason could be a difference in the composition of the labor force by age. For the youth, individuals with high ability would typically not be part of the labor force but in education, leading to adverse selection into the unemployed group at that age. However, it is difficult to rationalize the magnitude of the incidence of short-term unemployment among the youth simply due to search frictions or adverse selection. What is even more troubling is that so many young individuals experience periods of unemployment lasting more than six months, i.e., they experience long-term unemployment.

Figure 1. Distributions of short-term unemployment and long-term unemployment by demographic groups, averages 2012-2015





Long-term unemployment is likely to have disruptive consequences for these young individuals, and more so for those negatively selected. The literature has extensively documented that the long-term unemployed have a higher probability of suffering from mental health and low self-esteem, as well as

social isolation and disruption of family ties. Further, the long-term unemployed tend to have lower re-employment rates after accounting for observable characteristics and, conditional on finding a job, lower re-employment wages. Long-term unemployment among the youth may signal that Italy has a

problem in the school-to-work transition. The labor market is unwilling to absorb young individuals who have just completed their education - perhaps because of a skill mismatch between the abilities required by the employers and those learnt at school.

The second plot on the top focuses on gender. It shows that the distributions of unemployment are only slightly unbalanced against women, relative to the labor force distribution. In fact, gender inequalities mostly emerge in labor market participation rather than in labor market outcomes conditional on participation.

The third plot, on the other hand, reveals sharp inequalities across Italian geographical areas. From a geographical perspective, we look at three macro-areas: North, Centre, and South (which includes the Islands). In general, the situation worsens as we move from the northern to the southern regions, with the South representing a larger share of the short-term unemployed relative to their share in the labor force. While 29 percent of the Italian labor force lives in the South, the South accounts for about 37.2 percent of the short-term unemployed.

The distribution of long-term unemployment in those southern regions reveals an even more worrisome situation. The South's share of long-term unemployed is 49.3 percent against a share of the labor force of only, as we said, 29 percent. This is a clear sign of the relative malfunctioning of the labor market in the South.

Finally, in the last plot, we consider three education levels: those who completed middle school at best, those who completed high school, and those who have a college degree or more. The figure indicates lower incidence of unemployment at higher levels of education. In fact, individuals who have obtained at most a middle school qualification are disproportionately represented among the unemployed: they represent 49.4 percent of the short-term unemployed and 55.2 percent

of the long-term unemployed, but only 43.8 percent of the labor force. Their share of the long-term unemployed is more than 10 percentage points higher than their share of the labor force. At the opposite end of the spectrum, having a college degree reduces the incidence and especially the duration of unemployment: individuals with a college degree account for 18.7 percent of the labor force, for 17.3 percent of the short-term unemployed, but only for 12.3 percent of the long term unemployed.

The unemployment rate receives much policy and media attention, but paints an incomplete picture of the functioning of labor markets. One can also define several other categories of individuals who are facing various problems on the labor market. The first category includes discouraged workers, who want a job but have not searched for one because they perceive that they have no chance. Discouraged workers are a subset of the broader category of marginally attached workers, who would accept an occupation if one was offered, but do not actively search for one (for a variety of reasons, including adverse job prospects). The third category we consider are involuntary part-time workers, who would have preferred a full-time job but could not find one. The final category we consider is peculiar to the Italian case and concerns individuals who receive "Cassa Integrazione Guadagni (CIG)". CIG is an Italian institution aimed at providing support to firms facing temporarily adverse economic conditions. It relieves those firms of the cost of an unutilized workforce by contributing a payment to workers who are temporarily laid-off or on reduced hours. Despite the temporary nature of this institution, workers often receive payments for a long period, as CIG can be extended for up to three years. While workers receiving CIG are classified as employed in official statistics, as in principle they are waiting to return to their jobs, they remain attached to poorly performing firms and, eventually, often end up in unemployment.

**Figure 2 Broader measures of joblessness by age group, 2012-2015**

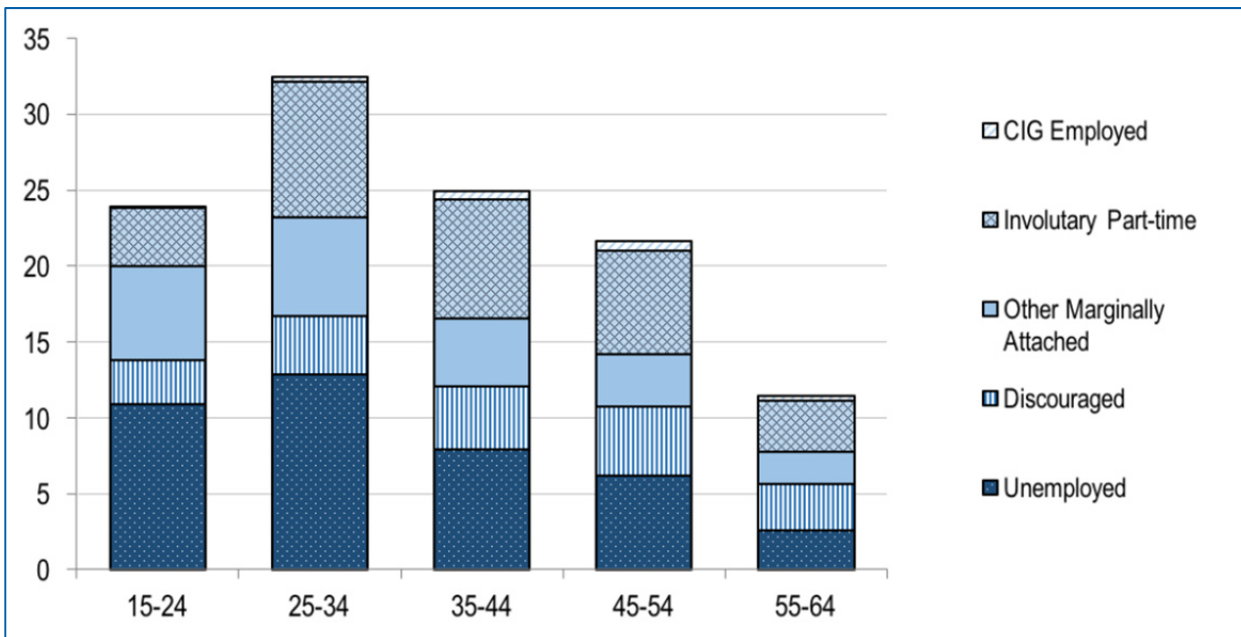


Figure 2 presents a frequency plot of those categories by age group. Unemployment often constitutes less than half of the more broadly defined group of individuals who face adverse labor market outcomes. Among the other categories, discouragement plays an important role especially for prime-age individuals. On the other hand involuntary part-time is particularly important for individuals aged 25 to 34, and represents almost 10 percent of the working-age population. The absolute incidence of part time for economic reasons tends to decline with age. A problematic school-to-work transition may explain the prominent role of involuntary part-time among the youth, as part-

time jobs may serve as stepping-stones to full-time jobs.

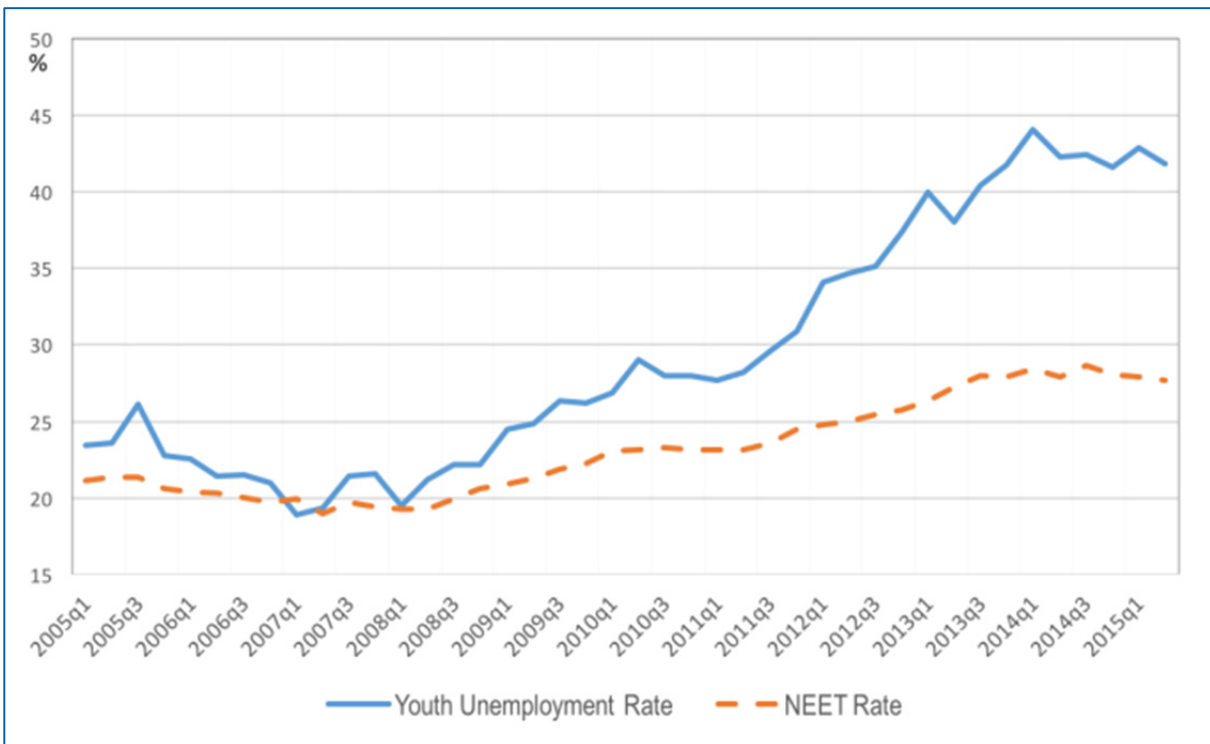
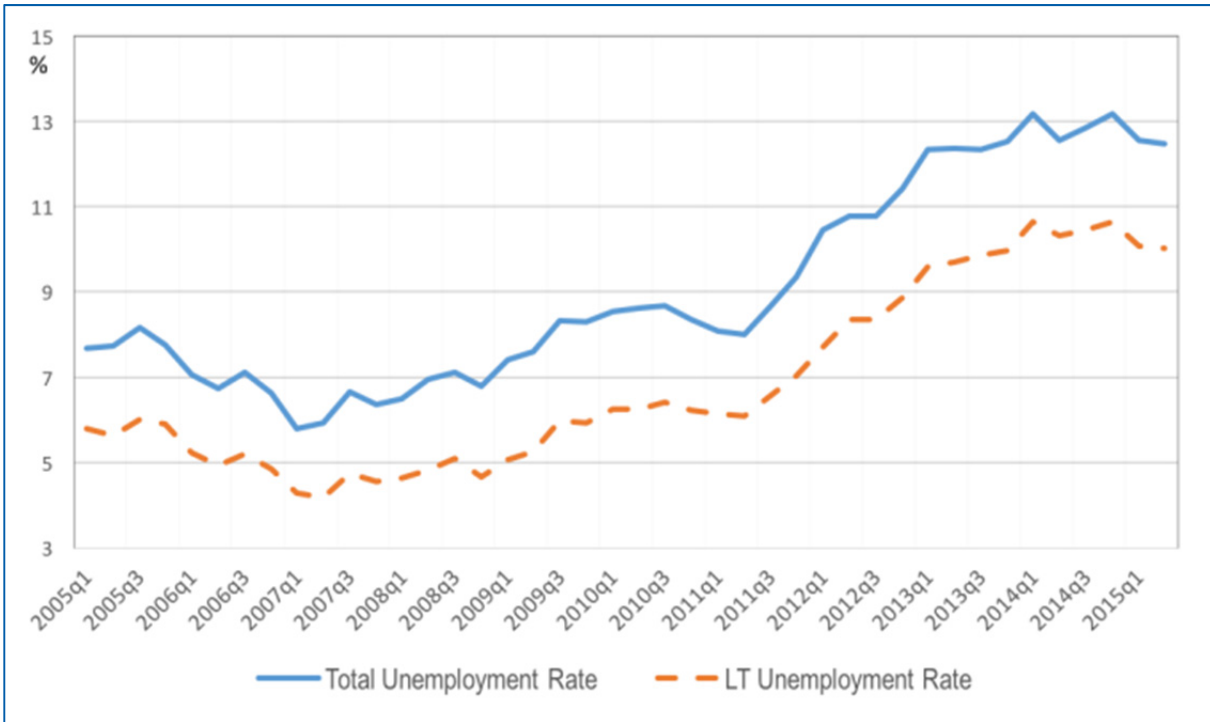
Summing up, the analysis reveals a critical situation for the youth whose high share among the long-term unemployed is alarming. This age category also fares worse for other measures of joblessness. It also reveals sharp inequalities in terms of labor force outcomes between the North and South and, to a minor extent, between less skilled and highly skilled individuals. Our next goal is to understand whether this is a result of increased inequalities during the crisis, or whether, on the contrary, the crisis has closed a pre-existent gap.

### The crisis: how things got worse

Figure 3 plots the unemployment rate in Italy from 2005 to 2015, together with three other indicators of joblessness. The first is the long-term unemployment rate. The second is the unemployment rate of youth aged 15 to 24. The third is the percentage of individuals aged 15 to 29 who are neither employed nor involved in education nor training, usually referred to as the NEET rate. The three additional indicators aim to capture the specific vulnerabilities of the long-term unemployed

and the youth. They address a broader array of vulnerabilities among young individuals, including early school leaving and discouragement. Because the young belonging to the NEET category are neither improving their future employability through human capital accumulation in education nor gaining experience on the job, they are particularly at risk of both labor market and social exclusion.

Figure 3. Unemployment, long-term unemployment, youth unemployment and NEET rates, 2005-2015



The first plot of the figure shows that both the unemployment rate and the long-term unemployment rate more than doubled from the start of the financial crisis in 2007 until 2015. The unemployment rate increased from 5.8 percent to 12.5 percent, while the long-

term unemployment rate increased from 4.3 percent to 10 percent. Both rates experienced a mild decline in 2010, until the sovereign debt crisis hit and took them back to their rising trajectory. At the same time, over the entire period, long-term unemployment numbers are



alarmingly close to the unemployment numbers, indicating that a significant share of the unemployed experience long durations of joblessness. The second plot reveals that the youth unemployment rate increased from an already elevated 19 percent at the onset of the crisis to a peak of almost 43 percent in 2015. The NEET rate also increased significantly over the crisis years, from about 20 percent to almost 30 percent.

Figure 4 reports the evolution over time of the unemployment rate by demographics. The first plot focuses on age<sup>2</sup>.

As we noted, the increase in youth unemployment is dramatic: from 19 percent in the first quarter of 2007 to 42.9 percent in the first quarter of 2015. It is true, however, that those in the labor force are only a small subset of the individuals aged 15 to 24, as most of them are still enrolled in school. This is why focusing on the NEET rate is important. It is still the case, though, that the youth unemployment rate has more than doubled in only eight years and does not seem to be recovering despite recent improvements in the Italian economy. It would be interesting to know the extent to which the increase in the youth unemployment rate is the result of a larger inflow from employment, via higher layoff rates, or the result of larger inflow from outside of the labor force. This would require further analysis and different data. The figure also reveals that during the recessionary years the unemployment gap between the young and prime-age workers has increased, from about 14 percentage points to 31 percentage points. Similarly, over the crisis, the gap between the less skilled and the highly skilled has widened, rising from 1.8 to 4.8 percentage points. The crisis has also exacerbated regional disparities. The gap in the unemployment rates between the North and the South has risen from 7.3 percentage points to 11.2 percentage points. Indeed, the unemployment rate in the South increased by as much as 9.2 percentage

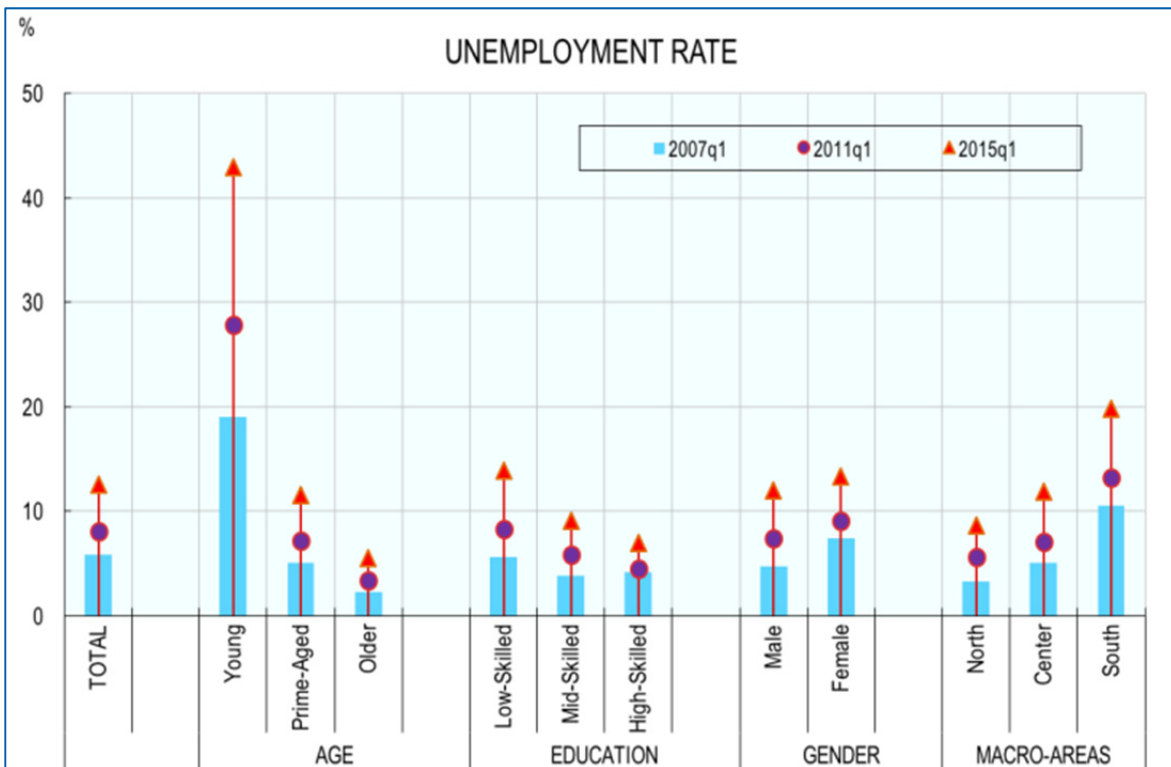
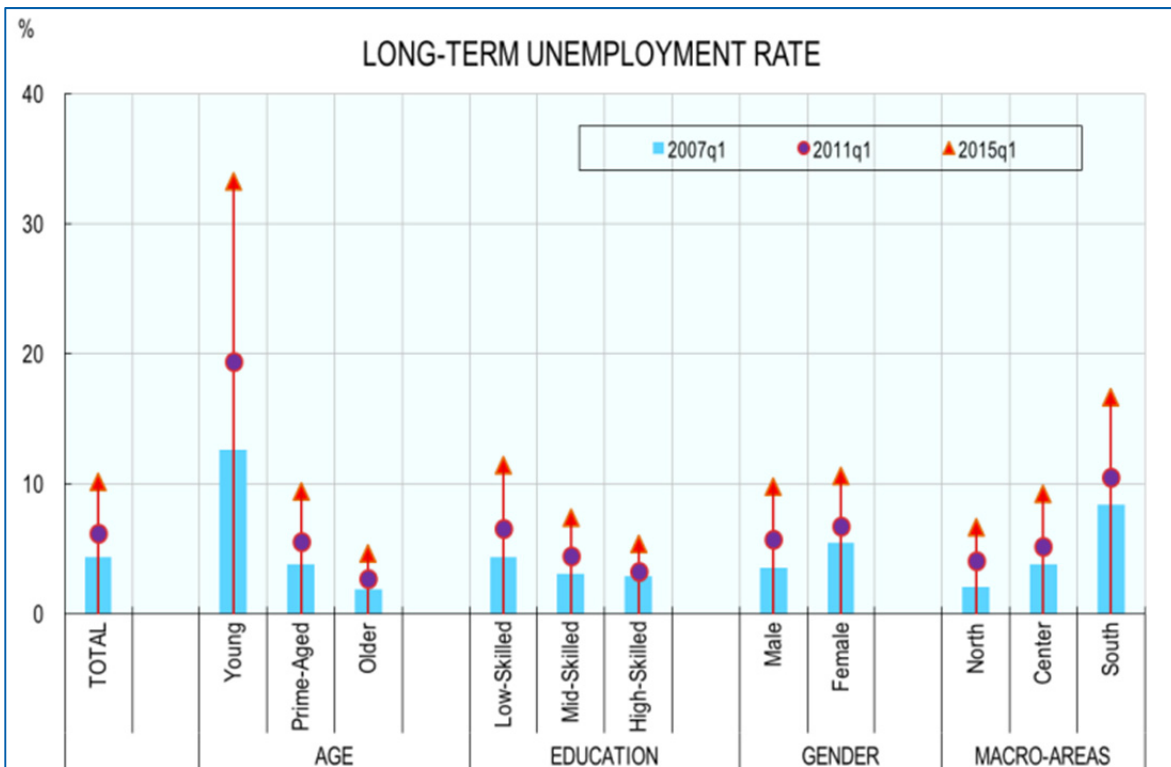
points, a clear sign that the latest downturn has severely affected that region. Interestingly, the gender gap has decreased: the male unemployment rate has almost caught up with the female unemployment rate, 12 percent versus 13.3 percent in 2015, starting from a gap of around 3 percentage points in 2007. Gender appears to be the only dimension experiencing a reduction in inequality during the crisis. One possible explanation is that the global financial crisis has produced a “male recession” since it has hit more severely “male sectors” such as housing and construction.

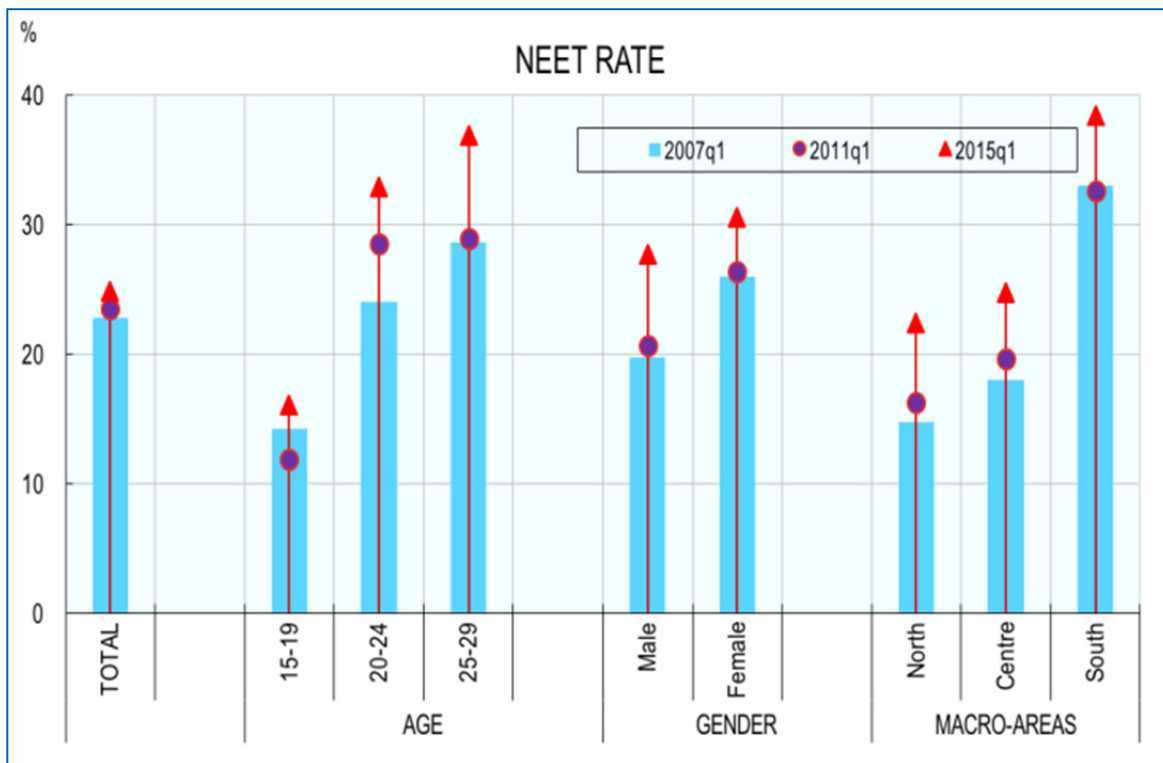
In Figure 4 a cursory look at the first and second panels together reveals a long-term unemployment situation that mirrors qualitatively that of unemployment. From a qualitative point of view, both the distribution across demographics in 2007 and the evolution from 2007 to 2015 are in fact very similar for the two rates. The youth, the less skilled, those living in the South and, to a lesser extent, women, had higher long-term unemployment rates in 2007 and the gap compared to the most advantaged categories generally increased by 2015. The gap increased for the youth compared to prime-age individuals - from 8.7 percentage points to 23.8 percentage points - with the youth long-term unemployment rate peaking at 33.2 percent in the first quarter of 2015. It increased for the less skilled relative to the highly skilled - from 1.4 percentage points in 2007 to 6 percentage points in 2015 - with the long-term unemployment rate of the less skilled individuals reaching 11.4 percent at the end of our sample period. Similarly, long-term unemployment in the South increased more than in the North - by 16.7 percentage points and 6.7 percentage points, respectively. The only exception was the gender gap that has narrowed during the crisis, with the unemployment gap decreasing from 2 percentage points in 2007 to 0.9 percentage points in 2015.

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<sup>2</sup> In the figure, young individuals are 15-24 years old; prime-age individuals are 25-54 years old; and older are 55-64 years old.

Figure 4. Unemployment, long-term unemployment and NEET rates by demographic groups, 2007-2015





The third plot, at the bottom of Figure 4, concentrates on the NEET rate<sup>3</sup>. The figure shows that the categories that started as most disadvantaged in 2007 remained so in 2015. These are individuals living in the South, in the 25 to 29 age group, and females. We note, though, that the highest increases were experienced by individuals aged 20 to 24 (plus 8.9 percentage points versus 8.3 percentage points of individuals aged 25 to 29), males (plus 8 percentage points versus 4.6 percentage points for females) and those living in the North (plus 7.6 percentage points versus 5.4 percentage points in the South).

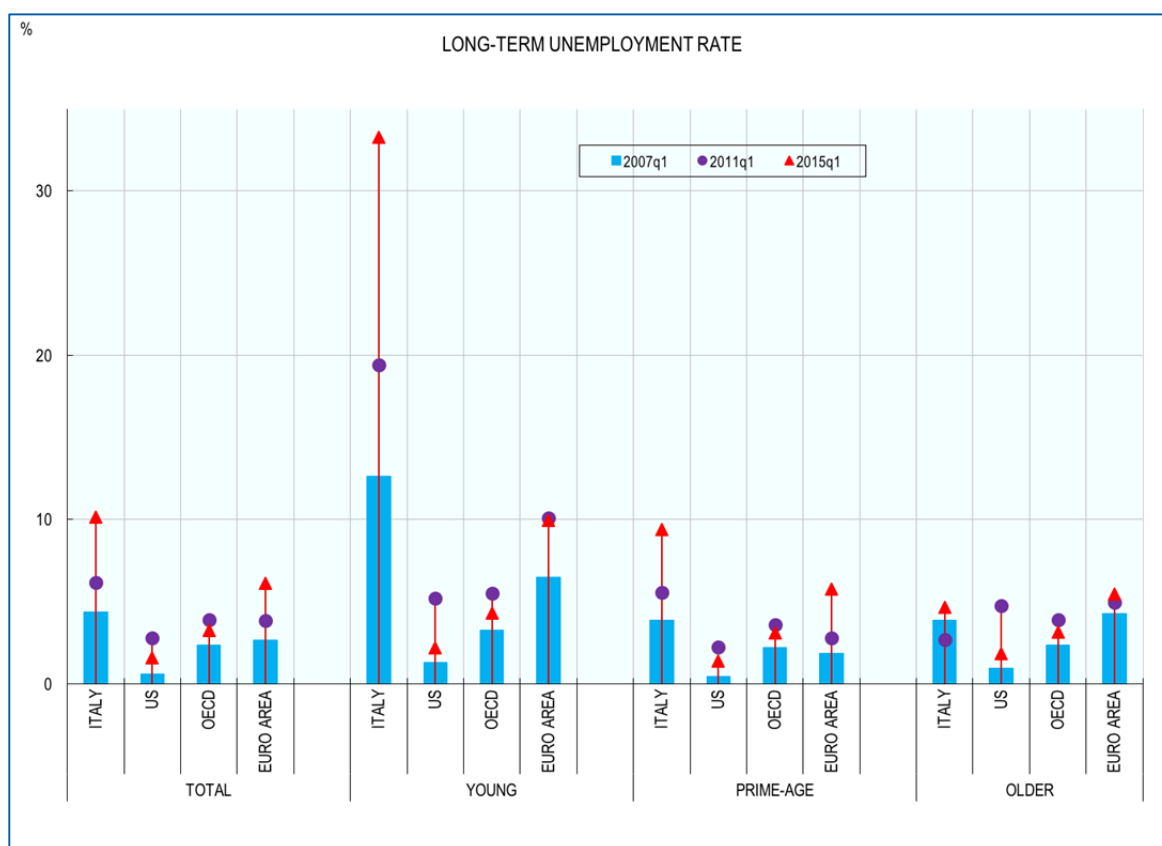
Of particular interest is the NEET rate by gender. In principle, we would expect a higher NEET rate for females than for males since women, possibly also young women, are more likely to remain out of the labor force for

reasons related to family and house care. This is what we observe in 2007: a considerably higher NEET rate for women than for men. What is less obvious to rationalize is that during the crisis the NEET gender gap has been closing. This may be due to the closing unemployment gap discussed earlier. The greater increase in unemployment for males compared to females may be behind the higher increase in the NEET rate for men than for women.

Finally, Figure 5 compares Italy to the US, to the Euro area average, and to the OECD average according to the distribution of the long-term unemployment rate by age. The comparison between the Italian case and the international context is very informative. Four key results emerge.

<sup>3</sup> To compute the NEET, we focus on the youth aged 15 to 29 and define 3 age classes: 15-19, 20-24 and 25-29. We do not look at the NEET rate by education as many of the individuals in this age group will not have completed their education.

Figure 5. Long-term unemployment rate by age groups, 2007-2015, cross-country comparison



First, significantly higher long-term unemployment rates in Italy than in other countries across all age categories precede the crisis, as they were already present in 2007. At the start of the financial crisis, the overall long-term unemployment rate was 4.3 percent in Italy, 2.6 percent in the Euro area, 2.3 percent in the OECD countries and 0.6 percent in the US. Second, during the crisis, Italy has experienced an increase in long-term unemployment across the entire age distribution that has been considerably greater than in other countries. It peaked at 9.6 percent in Italy, compared to 4.6 percent in the Euro Area, and even less in the US and the OECD. Moreover, while in Italy long-term unemployment continued on a steep rising trend over the entire period, both the OECD and Euro Area countries experienced on average a stabilization of the rate from 2011 to 2015, and the US even experienced a reversal of the trend. Third, at the onset of the crisis, long-term unemployment in Italy appears to

have been significantly more unevenly distributed across ages, and higher among the youth, than in other countries. While all countries have a higher incidence of long-term unemployment among the youth, which may be due in part to a negatively selected sample among 15 to 24 year olds who are typically in school at that age, the much higher disparities across age categories that we observe in Italy point to more structural factors. Finally, the increase in long-term unemployment was also much more unequally distributed among age groups in Italy than in other countries. That is, the crisis has worsened disparities across age categories more in Italy than in other countries. In Italy, the gap between the long-term unemployment rates of the young and prime-age individuals rose from 8.7 percentage points in 2007 to 21.2 percentage points in 2015. In the US, it increased from 0.8 percentage points to 1.5. In the OECD it remained stable and Euro Area it increased by only 0.5 percentage points. In summary, we

have shown that the recent prolonged economic downturn has exacerbated disparities in labor market outcomes across

demographic groups along several dimensions.

## The long-term: inequality as a long-lasting condition

In this section, we study the long-term evolution and underlying causes of inequality in labor market outcomes. Specifically, we ask how inequality has evolved across demographic groups from 1993 to 2015 and what demographic characteristics are most relevant in explaining it. As a measure of labor market outcomes, we focus on the likelihood of being unemployed. As a measure of inequality, as we explain below, we pick the gap between the most advantaged and the most disadvantaged category. Previous sections have highlighted that certain demographic groups are at a great disadvantage when it comes to unemployment. For example, individuals who live in the South, individuals who have obtained at most a middle school diploma and especially younger individuals are disproportionately represented among the unemployed, relative to other groups. We have also highlighted that during the crisis inequalities have increased between the most and the least disadvantaged groups. However, what the previous analysis cannot tell us is the separate contribution of each demographic characteristic to adverse labor market outcomes. To be clear, the higher incidence of unemployment in the South could be caused by a purely regional factor or, alternatively, due to those regions being disproportionately populated by young or less skilled individuals, who exhibit higher unemployment probabilities because of their age or education level.

To estimate the contribution to unemployment inequality of each demographic characteristic, controlling for all other characteristics, we proceed as follows. Based on our previous analysis, we identify the most disadvantaged profile, as well as the most advantaged one, in terms of unemployment incidence. It is easy to

determine that the most advantaged type is that of a male, aged 40 to 44 years old, living in the North and holding a college degree. On the other hand, the most disadvantaged category is that of a woman, aged 20 to 24 years old, living in the South and in the Islands, and holding at most a middle school qualification. We then take the most advantaged type as the reference category and estimate how each separate demographic characteristic contributes to determining the higher probability of being unemployed for the most disadvantaged category, holding all other characteristics constant.

For example, starting from the reference category – male, 40-44 years old, living in the North, and highly skilled – we assess the role of gender by estimating how being a woman changes the probability of being unemployed, keeping everything else constant. That is, we estimate the difference in the probability of unemployment for a woman, 40-44 years old, living in the North, and highly skilled, relative to the reference category. Proceeding analogously for all other demographic characteristics – age, education and geographical location – we can decompose the gap in the probability of being unemployed between the most and the least advantaged category into the different demographic factors. We do this for each year starting from 1993. The analysis allows us to establish whether inequality – measured here by the gap in the probability of being unemployed between the most and least advantaged group – has increased or decreased over time and what factors are behind its long-term dynamics, starting from 1993.

Specifically, we run, year by year, the following linear probability model:

$$\begin{aligned}
unem_i = & \alpha + \beta_1 female_i + \beta_2 age20_{24}_i + \dots \\
& + \beta_9 age60_{64}_i + \beta_{10} center_i \\
& + \beta_{11} south_i + \beta_{12} midschool_i \\
& + \beta_{13} highschool_i + \varepsilon_i
\end{aligned}$$

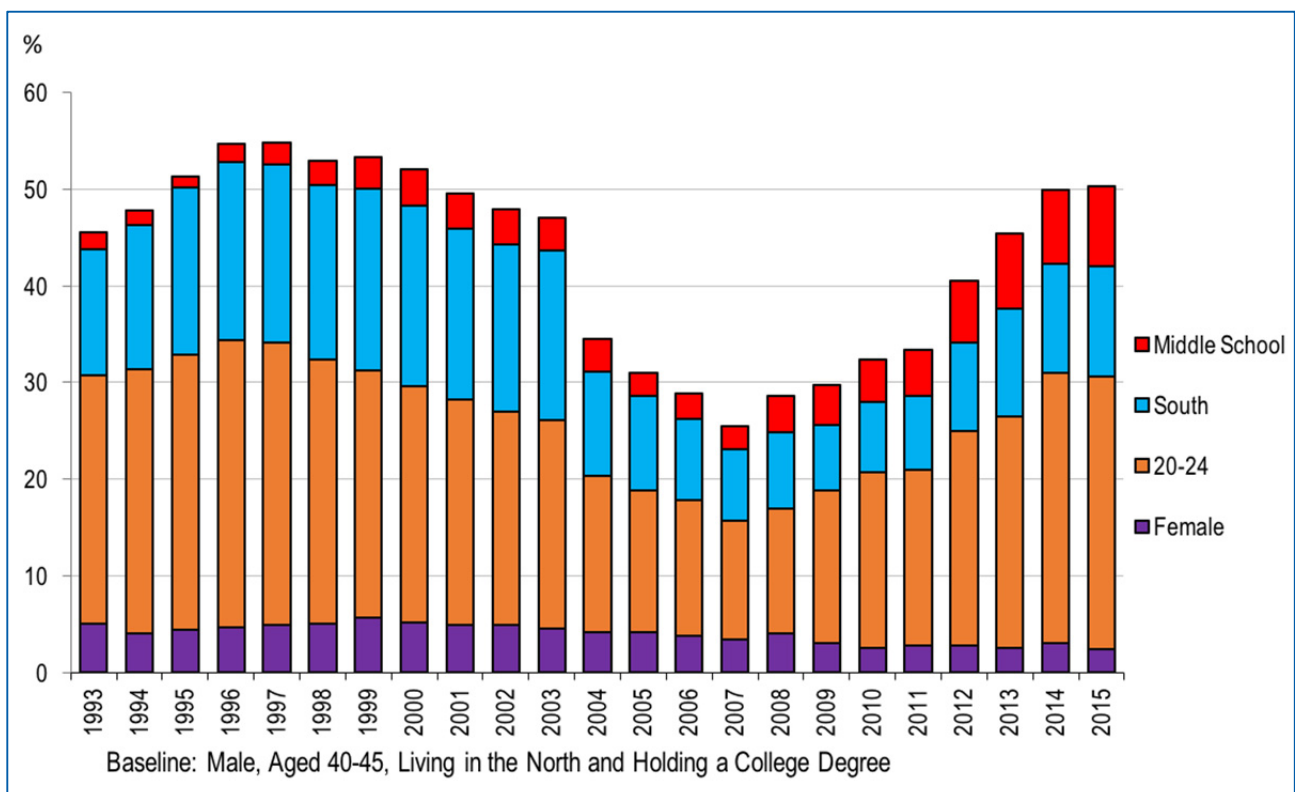
where  $unem_i$  is a dummy variable equal to 1 if individual  $i$  is unemployed and 0 otherwise, and where the explanatory variables are dummies taking the value of 1 if individual  $i$  belongs to the indicated demographic group and 0 otherwise. What is the interpretation of the regression coefficients? Each  $\beta$ -coefficient represents how a demographic characteristic changes the probability of being unemployed relative to the reference individual.

Figure 6 presents the results. Each column plots the probability gap between the most and least advantaged category – that is the additional unemployment probability of a woman, aged 20 to 24 years old, living in the South and holding a middle-school degree with respect to our reference category – in each year, from 1993 to 2015. The gap is

decomposed into the separate contributions of gender, age, and geographical and educational factors.

When interpreting the results, however, we need to account for the fact that the Italian Labor Force Survey went through a major redesign, both in terms of sampling method and questionnaire configuration, in 2004. For this reason, the 1993-2003 series and the 2004-2015 series are not exactly comparable. Even though the figure reveals continuity in the trends, the unusual gap observed between years 2003 and 2004 is likely to be due to the redesign. We thus compute averages separately for the two periods, but still discuss trends overall. The analysis finds that the probability of being unemployed is significantly higher for the most disadvantaged group relative to the reference group. The probability gap is on average 50.7 percentage points in the first sub-period and 35.8 percentage points in the second period.

**Figure 6. From the most to the least advantaged: gap in the likelihood of being unemployed, 1993-2015**



A common feature of the two time intervals is that age, that is, belonging to the 20-24 age category, has always given the greatest contribution to the extra likelihood of being unemployed. On average it accounts for 25.9 percentage points of the gap in 1993-2003 and 18.7 percentage points in 2004-2015. In both periods, it contributes to the unemployment probability gap at least 9 percentage points more than any other category. The second most important contributing factor is living in the South. On average, it contributes 17.3 percentage points in years 1993 to 2003. It is followed by being a female, which contributes 4.87 percentage points, and then by being less skilled, which contributes a final 2.6 percentage points. From 2004 to 2015 the second most relevant factor continues to be the South, accounting for 9.1 percentage points, while the third one is middle school, 4.8 percentage points, and lastly gender, 3.2 percentage points. Hence, the high unemployment rate in the South cannot be explained only by low educational achievements, nor by differences in the age structure.

Moving from the analysis of averages to the analysis of the longer-term trends, we observe that the gap between the most advantaged and most disadvantaged category decreased from 1997 to the inception of the crisis, while it started to increase and at a relatively high rate after 2007. This increase is mainly due to age, geographical and education factors, while for gender the relative disadvantage kept decreasing. We therefore identify a general increase in the unemployment probability gap caused by the three factors. When

decomposing the total probability gap we see however that the three factors do not increase evenly during the crisis, and that their relative weight in the total changes. Even though they all rise in absolute value, age and middle school gain relevance with respect to the South. In 2007 age accounts for 48.4 percent of the gap, while in 2015 it accounts for more than half: about 56 percent. Similarly, the education factor explains 9.4 percent of the gap in 2007 and 16.4 percent in 2015. The South starts out in 2007 with a relative weight of 28.9 percent, but decreases to 22 percent in 2015. Finally, gender goes from explaining 13 percent of the gap in 2007 to representing only 4 percent of it in 2015.

The overall picture is that of a country that has been characterized historically by divergent performances among its demographic groups. During the last decade of the 20th century, the situation was quite stable: a less skilled female, aged 20-24 and living in the South – what we have defined to be the type of individual at greatest disadvantage – had a probability of being unemployed around 50 percentage points higher than that of a highly skilled male, in his prime and living in the North – our most advantaged individual. Bearing in mind that caution is needed when comparing numbers from the two different surveys, one can notice that the situation notably improved in the early 2000s: the overall additional probability for the most disadvantaged individual kept on decreasing until 2007 when it reached 25.4 percentage points. With the crisis, however, inequalities grew steeply again, peaking in 2015 at 50.3 percentage points, that is, 25 percentage points more than in 2007.

## Key facts

- Inequalities in terms of employment outcomes are largely present across age groups, different regions and education groups, and to a minor extent across gender. Young people, Southern regions and less educated individuals suffer more from spells of unemployment, both short-term and long-term, than other individuals do. The most alarming data is the high share of long-term unemployment among young individuals and among individuals living in the South.
- The unemployment rate is an important indicator of problems relating to the labor market, but it severely understates those problems as many individuals are discouraged from looking for work or face involuntary part-time work, especially among young people.
- The crisis enlarged disparities between the most disadvantaged demographic groups and the other groups. Individuals living in the South, young and less educated individuals saw their situation disproportionately aggravated compared to other categories. The only exception was gender, as the crisis reduced inequality between males and females. Overall, older individuals emerge as the most advantaged age group, at least in term of employment

outcomes. This is true when looking at their current state, the effect that the crisis had on their labor market performance and their longer-term situation.

- The high incidence of long-term unemployment affecting disproportionately the youth, is peculiar to the Italian labor market, compared to other OECD and Euro area countries. The sharp increase in both the overall and youth long-term unemployment rates caused by the crisis are also specific to Italy.

These findings call for policies that specifically target young individuals, and among them those aged 20 to 30, who have dropped out of the labor force or are experiencing long spells of unemployment. Among the youth, unemployment is not the only problem as involuntary part-time or discouragement are also important features. The focus that Italian policymakers have recently placed on older groups of workers may be in part misplaced. Addressing regional disparities in labor market outcomes is a long-standing issue and - without doubt - a difficult one. The fact that over the long-run some of those disparities tend to decrease offers some hope that well designed policies could accelerate this trend and eventually overcome medium term shocks such as the last economic crisis in 2007.



## Appendix: The Data

Throughout our analysis, we relied on the Italian Labor Force Survey (“Rilevazione Continua sulle Forze di Lavoro” - RCFL in brief), collected by the Italian Statistics Institute (ISTAT). The aim of this survey is to “obtain information about working status, job searching and general attitudes towards the labor market of Italian working-age population (ISTAT. Nota Metodologica dell’Indagine)”. The Italian RCFL is a large survey representative of the Italian population. Each quarterly cross-sectional dataset contains around 150.000-155.000 individuals. The survey adopts a rotational sampling design, whereby the sample units – the households to which each individual belongs – are included for 2 consecutive quarters, excluded in the following 2 and re-included for 2 more quarters. The data is available from the first quarter of 1993 to the second quarter of 2015.

We define long-term unemployment as a spell of more than 6 months, which is consistent with the US definition of long-term unemployment, but distinct from the one used by the OECD. We disaggregate the analysis by demographic characteristics. We base the age classification on the “constructed variables” in

the last section of the Labor Force Questionnaire. Specifically, we use the CLETAD and CLETAQ variables to create age classes of either 10-year or 5-year lengths. To define our macro-areas, we divide the national territory in 3 regions: North, Centre, and South that includes the Islands. We construct 3 educational categories: individuals who obtained at most a middle-school degree, upper secondary degree and at least a college degree. Finally, we exploit the structure of the questionnaire to build aggregates of interest, such as the NEET rate.

To outline the current “profile” of the Italian labor force by demographics, we average quarterly data from the third quarter of 2012 to the second quarter of 2015, the most recent quarter available. We thus use around 1.800.000 recent observations to develop a static comparison across demographic groups. To study the effects of the crisis years, we use data from the first quarter of 2007 – the year that the financial crisis started – to the second quarter of 2015 – the latest quarter available. To develop the longer-term analysis, we use all of the data available, starting from 1993 until 2015.