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Even more discouraged? The NEET generation at the age of COVID-19

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ABSTRACT

The Not in Education, Employment or Training (NEET) status is a long-standing problem that occupies a priority role in the European policy agenda, even more during the post-COVID-19 outbreak. This paper investigates whether and how the COVID-19 pandemic and the quality of institutions affect the probability of being NEET in Italy. In treating the 15–34 unemployed and inactive cohort jointly, our hypothesis is that the COVID-19 exposure has increased the risk of being NEET during the second quarter of 2020 whereas the quality of institutions could mitigate it. Estimates on a unique dataset obtained by merging the Italian Labor Force Survey with the Institutional Quality Index dataset, confirms it. In addition, in dealing the 15–24 and 25–34 cohorts separately, our results show that individuals in the older age group are the most affected. Finally, “good deeds” implemented by institutions, such as active policies conducted at regional level, are a further educational investment that could protect from becoming NEET.

KEYWORDS

NEET; COVID-19 pandemic; quality institutions; youth unemployment

JEL CLASSIFICATION

E24; I20; J18

I. Introduction

A key role in European policy agenda is lowering youth unemployment by effectively engaging as many of Europe's young people in the world of work. This topic is chiefly relevant as the unemployment rate amongst young individuals is persistently growing over time, although unevenly between countries. Similarly, the proportion of youth Not in Employment, Education or Training (hereafter NEET) confirms this trend, as in the age-group 15–29 the average rate is 14.5%, with 10.2% of Germany and 26% of Italy, the worst performance in Europe (OECD 2022). Young people classified as NEET face significant barriers to entering the labour market due to their lack of skill acquisition for potential employment opportunities.

As if the situation for NEET individuals was not challenging enough, the economic crisis induced by the COVID-19 pandemic has worsened this risk exacerbating the plight of young people labour market opportunities. Indeed, measures put in place to prevent the spread of COVID-19¹ posed unprecedented disruptions for youth with the shift to virtual learning, loss of employment opportunities and the

decline of mental health and wellbeing leading to a growth of the unemployment rate of individuals aged 15–24 years old as well as the share of NEET (Apunyo et al. 2022; European Commission 2020; Lambovska, Sardinha, and Belas 2021).

This scenario inevitably generates in young people, but not only, insecurity and uncertainty about the future, resulting in the creation of a climate of distrust and resignation (Rosina 2013). In contexts where public welfare and institutions are unable to stem the negative effects of an economic crisis, the risk and concerns regarding social exclusion experienced by youth are further heightened. Therefore, the quality of institutions can influence the number of NEETs within a society: better institutions provide broader and higher-quality educational and training prospects, thereby diminishing the likelihood of individuals becoming NEETs (Karyda and Jenkins 2018).

Although the body of literature on NEET status has considerably increased in the last years, the evidence gathered remains fragmented and lacks systematic analysis, as the investigations have been coming from different perspectives. Moreover, to

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¹For a description of the timeline of policy measures and mobility restrictions introduced after Covid-19, see Appendix A.

our knowledge, no studies seem to have thoroughly examined the role played by both the COVID-19 pandemic and the institutions, despite their significant importance.

The goal of this paper is to offer a contribution to fill this gap, specifically focusing on the unique aspects of the Italian context. Italy is experiencing one of the highest and continuously increasing NEET rates and is, simultaneously, one of the most impacted countries within the EU by the shock of the COVID-19 pandemic (Aina et al. 2023; Avagianou, Kizos, and Gialis 2022; OECD 2022). The primary contribution of this paper is empirical, as it endeavours to provide novel insights into the NEET phenomenon by answering the following research questions. First, does COVID-19 pandemic and institutional quality influence the probability of being NEET? Second, which age group is the more at risk of becoming NEETs? Distinguishing between class-age groups (15–24 vs 25–34) is indeed essential to provide meaningful policy recommendations. Given the complexity of the issue, this study is not exhaustive but rather explorative. It aims to raise the awareness of the *multifaceted* nature of risk factors of ending up NEETs.

To explore these matters, we employ a Probit model, which provides a robust method for analysing our dependent variable, namely the probability of being NEET. This analysis spans the period from 2019 to 2020 (excluding the third and fourth quarters)² and incorporates controls for other individual and regional characteristics. In doing so, we use a unique dataset relying on the merging of two sample surveys: the Italian Labour Force Survey (hereafter LFS) set up by ISTAT, and the dataset constructed by Nifo and Vecchione (2014) providing the Institutional Quality Index (IQI), hereafter which serves as an indicator measuring the comprehensive institutional quality across each Italian region. Our results show that the risk of being NEET has significantly increased during the pandemic outbreak, in particular this likelihood increases overall of about 1.7 p.p. though individuals in the 25–34 age group are the most affected

during the pandemic. A good quality of institution, as measured by the IQI is negatively associated with NEET status (−3.8 p.p. for the total sample), particularly for individuals in the 25–34 age group, underlying that an environment characterized by a greater degree of public spirit generates positive externalities to young people, helping them to enter the labour market. Robustness checks related to a more restrictive definition of NEET along with a new variable to control for the pandemic confirm our main results.

The paper proceeds as follows. **Section II** presents a literature review; **Section III** describes the policy measures adopted to help NEET during the pandemic. **Section IV** describes the database, the methodology, and provides descriptive analysis. The last sections present and discuss the main results (**Section V**), and the robustness checks (**Section VI**). **Section VII** concludes with some policy implications.

II. Literature review

The NEET concept addresses a wide range of vulnerabilities amongst youth, including concerns about unemployment, early school leaving, and labour market discouragement. As suggested by Lodigiani and Santagati (2017), NEETs represent a paradigmatic case of «blocked transition», and a very heterogeneous group (Alfieri et al. 2015), and it is properly the large heterogeneity of this category that makes it difficult to identify the appropriate interventions for NEET activation and re-employment (both social and occupational), especially among the more vulnerable and discouraged (Quintano, Mazzocchi, and Rocca 2018).

Following the Eurostat and ILO definition, NEETs are young people (15–29 years old) who are not employed and not involved in further education or training (i.e. ILO 2015).³ Current literature frequently simplifies the measurement of NEETs to unemployed and inactive non-students. These conditions affecting young people require great attention, particularly as youths grapple with the repercussions of economic crises,

²Unlike the 2008 financial crisis, which was structural and primarily economic, the COVID-19 is external and has permeated all aspects of life. As a result, it is plausible to consider the latter impact as predominantly short-term (Rahmani and Groot 2023).

³Generally, young people are those from 15 to 24 years of age; sometimes, the upper bound is extended depending on the country and the transition patterns to adulthood.

especially in industrial economies, as well as global emergencies like the recent COVID-19 pandemic.

From a theoretical point of view, Russell et al. (2011) suggest that the NEET status arises from the interplay of individual factors, circumstances (as defined by Roemer 1998), and the social context. This includes relations within a culture or community, as well as interactions with broader social systems that extend over time and space (Carspecken 1996). Identifying the risk factors associated with NEET status is crucial for developing effective strategies to ensure that young people are productively engaged and do not become disengaged from education or employment (Abayasekara and Gunasekara 2019). However, due to the lack of consensus regarding the most influential factors in predicting NEET status, research has shown a dearth of consistent hypotheses on NEET causes, making it nearly impossible to develop a cohesive theory or paradigm. While some studies have endeavoured to create prediction models by including several parameters (Jongbloed and Giret 2022; Ruesga-Benito, González-Laxe, and Picatoste 2018), they have not yet succeeded in developing comprehensive models.

From an empirical perspective, many studies have examined the micro or macro-determinants of NEET (e.g. Amendola 2022; Malo et al. 2023), focusing also on the role of the economic crisis. Quintano et al. (2018), for example, highlights that, during the Great Recession, the share of NEETs increased mainly among the less educated, as well as among young with poor parental background. According to gender, men resulted more penalized by the recession, while with reference to the territorial districts, young people living in the south suffered the higher increases. In a European perspective, Caroleo et al. (2020) show cross-sectional differences between states by estimating the determinants of being NEET before and after the Great Recession. Their findings highlight that both problematic school-to-work transition and long-term unemployment have a crucial role in explaining the risk of being NEET. The first problem mainly affects young people between 19 and 24 years of age, while the second one affects those between the ages of 25 and 30. Malo et al. (2023), instead, explore short and long-term persistence in the NEET condition by gender in Greece, Italy,

Portugal, and Spain before and after the Great Recession. They show convergence in NEET rates by gender due to a worsening of the male NEET rate and no improvement among young females. Their results reveal that long-term persistence is smaller than short-term persistence and that the latter increased after the Great Recession, especially for male NEETs. De Luca et al (2019, 2020) analyse the evolution of the aggregate NEET rate. They show that, over the Great Recession, for Italy the intensification of the NEET rate follows a north – south regional divide, decreasing especially for female NEETs in the south of the country. Comparison of Italy and Spain is presented in De Luca et al. (2020), showing how early school leaving affects the NEET rates and finding that this relationship is clearer for Italy than for Spain.

To gain a more thorough understanding of the differences in the likelihood of being NEET, there exists a strand of research that has focused on analysing, alongside temporal aspects, the spatial dimension as well. Using both quantitative and qualitative methods, specifically semi-structured interviews, Avagianou et al. (2022a) examined the NEET phenomenon in Southern European countries during the Great Recession and the recovery period (2014–2018). The results indicate that gender, class, regional economic development and educational opportunities are some of the spatially-rooted socio-economic elements contributing to the uneven distribution of NEETs across different geographical contexts. In a similar vein, Kapitsinis et al. (2024) investigate the relationship between NEETs and regional resilience, as measured by resistance and recovery indices, across the Mediterranean region of the European Union. Their findings indicate common characteristics among regions with poor resilience in the youth labour market, such as underdeveloped areas with limited industrial infrastructure, informal practices, and path-dependence processes. These factors contribute to regionally-specific limitations that hinder substantial employment growth, particularly for young people.

Recent studies, instead, have estimated the impact of COVID-19 crisis on young workers (see, for instance, Adams-Prassl et al. 2020; Casarico and Lattanzio 2022). During the years of the pandemic, young people were the only ones to

experience a significant deterioration both in life satisfaction (Istat 2021) and in the labour market opportunities, with a prevalence of NEET status increasing even more than youth unemployment, which was itself also rising globally (Barford, Coutts, and Sahai 2021). For developed countries, Pastore (2023) suggests that the youth segment of the population was the most affected by COVID-19. There was an increase in the unemployment gap between young people and adults, especially in Italy, Spain, and Greece. For developing countries, Dhingra and Kondirolli (2023) found that youth unemployment in India was severely exacerbated by the pandemic. Nonetheless, this problem is a feature of many low- and middle-income countries, characterized by poor employment prospects, increased informality among the employed, and high unemployment, especially for young workers. All in all, Italy appears to suffer more than other countries from the effects of the pandemic due to its structural problems (Mussida and Sciulli 2018; Pastore 2020). The causes behind the poor performance for Italian young people are numerous and especially related to the Italian economic conditions along with the social context.

At the micro level, a recent comprehensive literature review has classified the primary risk factors associated with NEET status into eight distinct categories, namely: individual characteristics, education, employment, health, addiction, family dynamics, social influences, and environmental factors. This contribution suggests that especially education and family-related variables are accountable for becoming NEETs (see Rahmani and Groot 2023). At the macro level, the most significant factors are linked to high unemployment rates, to skills mismatch between education system and labour market, to rigidity and inefficiencies of the institutions to facilitate school-to-work transition (Pastore 2019; Pastore and Zimmermann 2019a, 2019b; Pastore, Quintano, and Rocca 2021). Overall, NEET find more difficult developing skills which are key to find further employment and are subject to discouragement if they have not been able to find a job in their first years on the labour market (subject more generally to a “scarring effect”). Others may not know how and where to look for jobs, or hold the belief that they are not fit, or have not encountered the job suitable for them

(Scarpetta, Sonnet, and Manfredi 2010). Furthermore, also demographics aspects may affect youth barriers and the NEET rate, mainly the presence of an illness and household effects, such as lower education of parents and single parenthood. As discussed by Alfieri et al. (2015), NEETs are at risk not only for exclusion from the labour market, which they struggle to enter, but also for compromised social well-being. Precarious employment prospects and school dropout can have severe negative consequences on relationships, limited or no social and political participation, poor physical and mental health and vice versa (Lee 2004; Maguire and Rennison 2005a; Robins and Rutter 1990).

The availability of employment, educational and training opportunities and the quality of health, welfare, housing, and other public services are influenced by policy decisions made at an international, national, as well as at local or regional levels (Russell, Simmons, and Thompson 2011). Nevertheless, little is known about how institutions influence the level of young people with a specific NEET status in a country. We presume that insufficient attention has been paid to the role of citizens' participation in social and public life, the quality of public service, the ability of government to promote and formulate effective regulatory interventions, and to the degree of corruption.

III. Active labour market programmes in response to COVID-19 for young people

In European countries, youth policies existed before the crisis and were integrated in the pre-existing European Youth Guarantee that continues to represent as the primary strategy for youth employment. While no new adjustments to the Youth Guarantee programme are anticipated, the enhanced Youth Guarantee programme now places special emphasis on profiling and career guidance, as well as expanding programmes aimed at improving the digital skills of young NEETs.

Amid concerns about the crisis's impact on young people's employment prospects, all EU countries adopted a Recommendation in October 2020 reaffirming their commitment to “ensure that all young people under 30 receive a good quality offer of employment, further

education, apprenticeship or traineeship within four months of becoming unemployed or leaving formal education". The reinforced Youth Guarantee extends the age limit of young people from 25 to 29 and by mandating targeted and individualized approaches for vulnerable groups. Given the scale of the Youth Guarantee scheme and its engagement of young people classified as NEETs, it also functions as an automatic economic stabilizer. The reinforced Youth Guarantee is forward-looking and aims to facilitate the development of young people's skills for a changing world of work, including skills needed for the green and digital transitions.

Several EU countries have updated or developed new youth strategies to align with the reinforced Youth Guarantee. In Italy, for example, measures have been implemented to support, adapt, or strengthen work-based learning opportunities for young people, which may include apprenticeships, informal learning at work, internships, and work placements. Existing schemes have been adjusted to enhance the financial incentives for employers to engage apprentices. Additionally, employers with fewer than 10 employees can now receive full reimbursement for apprenticeships leading to vocational qualifications at the upper secondary or post-secondary level. A hiring subsidy was already in place as part of the implementation of the Youth Guarantee; however, following COVID-19, the subsidy for employers was increased if they hire someone under 36 who is NEET on a permanent basis (OECD 2021a). Furthermore, in many European countries, job retention schemes – primarily short-time work schemes and wage subsidies – have been crucial in protecting jobs and livelihoods, thereby mitigating the impact of the COVID-19 crisis. Although job retention schemes were not specifically targeted at young workers, they were utilized more extensively for young people compared to other age groups. This trend likely reflects the high proportion of young people in severely affected sectors that heavily relied on these schemes. In Italy, over than 25% of young workers were enrolled in job retention schemes in the second quarter of 2020, which was more than

5% points higher than the rates for prime-age workers (OECD 2021b).

IV. Data, methodology, and descriptive statistics

Data

The NEET phenomenon is analysed in cross-sectional perspective using a unique dataset relying on the merging of two surveys. The first is the Italian LFS gathered by the Italian National Institute of Statistics (ISTAT). This is the official and largest survey conducted in Italy to monitor the quarterly dynamics of the labour market: each year, it collects information on almost 280,000 households in 1,246 Italian municipalities, for a total of 700,000 individuals. Since we are interested in estimating the effect of the COVID-19 pandemic, which we can assume to be short-term, on the risk of being NEET, we analyse six quarters: from the first quarter of 2019 to the second quarter of 2020. The second survey is the one constructed by Nifo and Vecchione (2014) that takes its cue from the World Governance Indicator (WGI) proposed by Kaufmann et al. (2010) and containing the IQI. We select this index because it appears as the most suitable proxy for assessing the efficiency of the regional governments, which are responsible for managing and implementing various public programmes designed to support young people and, notably NEETs. More in detail, the IQI is a composite indicator based on five dimensions concerning with the major quality characteristics of a national system: i) *voice and accountability*, ii) *government effectiveness*, iii) *regulatory quality*, iv) *rule of law*, v) *control and corruption*. The normalization, the attribution of weights, and the aggregation of sub-indexes lead to a single-value indicator for institutional quality. After computing the index for each Italian region, the two surveys are merged by using the regional codes.⁴

The analyses are based on quarterly cross-sectional data for the sample of young people from the age of 15 to the age of 34. The overall sample includes 144,354 individual observations over the period of 2019Q1–2020Q2, with 75,283

⁴For further details, see Nifo and Vecchione (2015).

and 69,071 observations for the age group 15–24 and 25–34, respectively.

V. Methodology

To address our two research questions, we perform a regression analysis on LFS data to estimate the two key predictors for being NEET. Specifically, we estimate a linear probability model in the form of Equation (1)⁵

$$\begin{aligned} \text{NEET}_{it} &= \alpha + \beta \text{COVID}_t + \gamma \text{IQI}_j + \delta X_{it} + \varepsilon_{it}, \\ t &= 2019\text{Q1}, \dots, 2020\text{Q2} \end{aligned} \quad (1)$$

where NEET_{it} is an indicator variable that takes the value of one if individual i is NEET and zero otherwise, COVID_t is our first key explanatory variable accounting for the COVID-19 pandemic. It is a dummy variable equal to 1 for $t = 2020\text{Q2}$ (i.e. the second quarter of 2020), that is the period during which the COVID-19 pandemic affected the Italian economy, and zero otherwise. IQI_j is our second key explanatory variable: a dummy equal to 1 if the value of IQI in region j in the previous period is above the 3rd quartile of the entire distribution. X_{it} represents the set of other control variables that can predict the NEET status. This vector includes both individual characteristics as well as a regional variable (the unemployment rate), and quarterly dummy variables. The final term of Equation (1), ε_{it} , is the typical random variability included in all regressions and it varies across individuals (i) and time (t).

The choice to use explanatory variables measured both at individual and more aggregate level (in our case regional) arises from the observation that, in examining the NEET phenomenon, it is crucial to consider the macro-structural characteristics and the broader economic context (see, i.e. Malo et al. 2023). Several researchers suggest that business fluctuations, institutional and economic variables play an important role for the labour market integration of youths (Bell and Blanchflower 2011; Eurofound 2012). Therefore,

the regional unemployment rate variable enables the capture of the structural characteristics of the local labour market, while the IQI measures the overall institutional quality for each Italian region. As for the other control variables, we include gender, macro area of residence,⁶ citizenship, educational attainment, age, household type, and dummy variables for past participation in training courses provided by regional agencies, as well as for the receipt of unemployment benefits. We categorize educational attainment into four groups⁷ no education, lower secondary or primary qualifications, upper secondary qualifications (including professional qualifications), and university degree (or higher). These distinctions are broad to capture the main trends as individuals progress through different levels of the education system (Holmes, Murphy, and Mayhew 2021). Additionally, we differentiate two age groups: individuals between 15 and 24 years old, and those between 25 and 34. Indeed, young people aged 15 to 34 form a heterogeneous group, as the relationships that the two age groups have with education and the labour market differ significantly. The reasons why young people are part of the NEET population therefore partly depends on their age group. Regarding to the household type variable, we exploit the LFS information by including the categories: single, couple with kids, couple without kids, mono-parental mother, and mono-parental father. Family status is, indeed, another factor that influences a young person's likelihood of being in a NEET status. Maguire (2018), and Rahmani and Groot (2023) have demonstrated that aspects such as large families living in rented housing and lone motherhood can affect the probability of being NEET.

For the definition of the dependent variable, we consider the standard NEET definition, which includes both inactive and unemployed individuals aged 15 to 34 years who are not participating in training or education.⁸ Following the approach of Quintano et al. (2018), we opt for this broader definition because it allows us to consider the challenges

⁵Following Holmes et al. (2021), we adopt a linear probability model over a non-linear model such as logit as the results are simpler to interpret.

⁶We include five dummy variables for macro-area of residence: i.e. north-west, north-east, centre, south (and islands).

⁷Educational dummy indicators refer to the highest successfully completed educational attainment of the individual according to the ISCED 97 classification.

⁸We exclude young people who self-identify as students, retired, permanently disabled and/or unfit to work, or engaged in compulsory military or community service.

associated with the transition from the educational system to workforce, which can be particularly prolonged in countries with high youth unemployment rates like Italy. For a better understanding of the magnitudes of the estimated effects, in [Section VI](#) we present the outcomes of the models in terms of the average marginal effects (hereafter AMEs). These latter indicate how many percentage points (p.p.) the considered variable will increase or decrease the probability of being NEET.

Descriptive analysis

[Table 1](#) reports the descriptive statistics of the dependent and explanatory variables (described in [Section V](#)).

In Italy, the share of NEET shows huge regional differences ([ISTAT 2019](#)). Thus, it is worth putting the investigation also at geographical level. [Figure 1](#) reports the share of NEET at the regional level for

the 2nd quarter of 2019 and 2020, respectively. We note that, in line with other studies ([Kapitsinis et al. 2024](#); [Ripamonti and Barberis 2021](#)), already before the COVID-19 shock, Southern regions are affected by the highest share of NEET individuals, with notable impacts observed in regions such as Campania, Molise, Apulia, Calabria and Sicily (left panel). In addition, from 2nd quarter of 2019 to 2nd quarter of 2020 the share of NEET increased in all Italian macro-areas, but particularly in the southern regions and in the north-east regions (right panel). [Figures 3 and 4](#), instead, report the evolution of the two components of the NEET stock that are unemployed youth and inactive ones, respectively.

From [Figures 2 and 3](#), we see that unemployment and inactivity rates are particularly high in the central and southern Italian regions (left panel). Notably, with the onset of COVID-19, we see a worsening, characterized by relatively higher unemployment rates, especially for the

Table 1. Descriptive statistics.

Variables	Mean	(I)		(II)		(III)	
		Std. Dev.		Std. Dev.	Mean	Std. Dev.	
NEET	.168	.374		.133	.340	.199	.399
Female	.487	.499		.480	.499	.493	.499
<i>Age</i>							
15–24	.474	.499		—	—	—	—
25–34	.525	.499		—	—	—	—
Foreigner	.121	.326		.085	.279	.153	.359
<i>Education</i>							
None	.014	.118		.010	.099	.018	.132
Lower secondary school	.354	.478		.502	.499	.220	.414
Upper secondary school	.460	.498		.437	.496	.481	.499
Graduate	.172	.377		.051	.220	.280	.449
<i>Household type</i>							
Single	.081	.273		.022	.145	.135	.342
Couple with child	.699	.458		.791	.407	.617	.486
Couple without child	.070	.254		.008	.088	.125	.331
Single father	.026	.157		.030	.171	.021	.143
Single mother	.124	.329		.149	.356	.102	.302
Regional training	.044	.206		.022	.147	.065	.246
Unemployment benefit	.013	.115		.006	.081	.020	.138
Institutional quality index	.580	.237		.581	.238	.580	.237
<i>Geographical area of residence</i>							
North-West	.252	.434		.253	.435	.252	.434
North-East	.184	.387		.186	.388	.182	.386
Center	.189	.391		.186	.389	.191	.393
South	.257	.437		.258	.438	.256	.436
Islands	.118	.322		.116	.321	.119	.323
Observations	144,354			75,283			69,071

(I) is the specification for the total sample; (II) is the specification for the age group 15–24; (III) is the specification for the age group 25–34.
Source: Authors' elaborations from 2019Q1–2020Q2 ISTAT-IQL dataset.

regions in the north-west of Italy, such as Piedmont and Liguria (right panel).

All in all, these figures suggest that the phenomenon of the NEET was relevant already before the COVID-19 and shows an important heterogeneity across the Italian regions. Finally, with reference to the IQI, the mean is equal to 0.58 in a range from 0 to 1. This proxy helps us to link social and civic capital to NEET share. We can underline how NEET individuals are affected by the degree of civic engagement, due to its role in fostering the formation and development of skills, values, norms and beliefs as well as in affecting the functioning of the school system (Milligan, Moretti, and Oreopoulos 2004). Figure 4 reports the distribution of the IQI in 2019Q2 and 2020Q2, highlighting considerable differences across regions, with north-east and centre reporting the greater values compared to the southern regions and islands. From this figure, it is noticeable that this distribution is negatively associated with the one of NEET status, confirming the positive role of civic capital in promoting school participation.

VI. Results and discussion

In this section, we present the results of the empirical strategy described in Section IV. Table 2 shows the AMEs of the probability of being NEET for the sample of youth aged from 15 to 34 examining both the short-term consequences of COVID-19 and the role of quality of institutions in Italy. Specifically, column (I) reports the estimates for the overall sample of youth, while columns (II) and (III) separately for the age groups 15–24 and 25–34, respectively.

The COVID-19 dummy, which captures the first quarter entirely exposed to the outbreak (2020Q2) suggests that the pandemic has clearly increased the overall probability of being NEET of about 1.7 p.p., worsening in line with what has been recorded in other countries, especially where the NEET rate was already pronounced, such as Greece (Avagianou, Kizos, and Gialis 2022). We note that the raise in the probability was significant only for the 25–34 age group (+2.2 p.p., column II). The AME for females highlights that they are more likely to be NEET (2.6 p.p.) (Contini, Filandri, and Pacelli 2019; Mussida and Sciulli 2018; Quintano, Mazzocchi, and Rocca 2018). Nevertheless, the

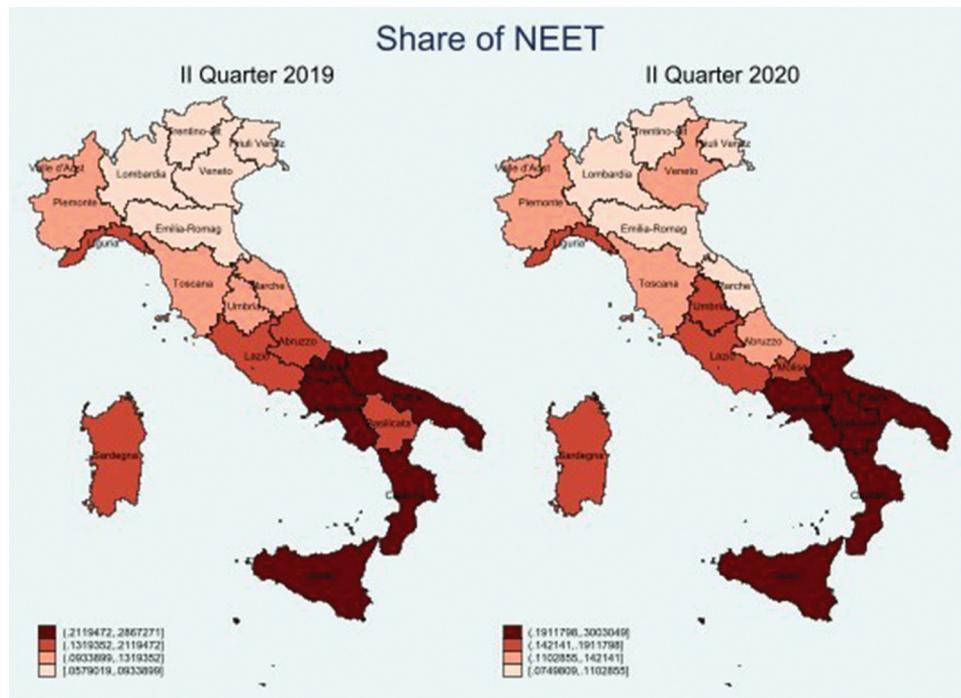


Figure 1. The share of NEET by region and year (II quarter of 2019 and 2020). Source: Authors' elaborations from 2019Q2 and 2020Q2 ISTAT data.

Table 2. Determinants of the risk of being NEET, AME.

	I	II	III
COVID-19	.017*** (.005)	.013 (.010)	.022*** (.005)
Institutional Quality Index	−.038*** (.006)	−.001 (.013)	−.037*** (.007)
Female	.026*** (.006)	.011* (.006)	.032*** (.003)
Age 2534	−.023*** (.006)	—	—
Foreigner	.020*** (.004)	.039*** (.009)	.014*** (.005)
<i>Education – base: Primary</i>			
Lower secondary school	.038*** (.010)	.071*** (.023)	.031*** (.011)
Upper secondary school	.002 (.010)	−.055* (.023)	−.016 (.011)
Graduate	−.019* (.011)	.024 (.026)	−.030*** (.011)
<i>Household type – base: Single</i>			
Couple with child	.057*** (.005)	.080*** (.015)	.047*** (.005)
Couple without child	−.015* (.007)	.002 (.028)	−.014* (.007)
Single father	.103*** (.010)	.098*** (.021)	.112*** (.011)
Single mother	.118*** (.006)	.136*** (.017)	.112*** (.006)
Training course in the past	.013* (.006)	.015 (.013)	.015* (.006)
Unemployment benefit	.427*** (.010)	.449*** (.025)	.404*** (.010)
Regional unemployment rate	0.005*** (0.000)	0.006*** (0.000)	0.008*** (0.000)
<i>Geographical area of residence- base: North-West</i>			
North-East	0.001 (0.004)	−0.002 (0.009)	0.006 (0.005)
Centre	0.035*** (0.005)	0.046*** (0.010)	0.025*** (0.005)
South	0.084*** (0.008)	0.120*** (0.016)	0.034*** (0.009)
Islands	0.104*** (0.009)	0.171*** (0.019)	0.028* (0.011)
Quarterly dummies	Yes	Yes	Yes
Observations	144,354	75,283	69,071

Reference category: 15–24 years old; single; no education. Standard errors in parentheses; *** $p<0.01$, ** $p<0.05$, * $p<0.1$. (I) is the specification for the total sample; (II) is the specification for the age group 15–24; (III) is the specification for the age group 25–34.

Source: Authors' elaborations from 2019Q1-2020Q2 ISTAT-IQI dataset.

risk of being NEET is not evenly distributed among age cohorts, as this risk tends to increase with age (Buheji 2019). This rise in the oldest age cohort is observed as individuals undergo the transition from university to adulthood, as also evidenced in the Spanish context (Salvà-Mut, Tugores-Ques, and Quintana-Murci 2018). In the 25–34 age bracket (column III), for example, the AME for women is more than double compared to the younger age group (column II). This increased probability of being NEET for relatively older women, due to motherhood and other established social norms (eg. male breadwinner role), is supported by the literature (see, for instance, Caroleo et al. 2020

and Quintano, Mazzocchi, and Rocca 2018 for evidence on European countries and Maguire (2018) for England). The IQI is negatively associated with the probability of being NEET (−3.8 p.p.) underlying that an environment characterized by a greater degree of public spirit generates positive externalities to young people, namely being more active into the labour market. The AMEs for the household type offer interesting insights. Mono-parental households and couples with children bear a greater risk of being NEET with respect to couples without children or singles or (i.e. reference category). More specifically, looking at the whole sample (column I), the AMEs for couples without

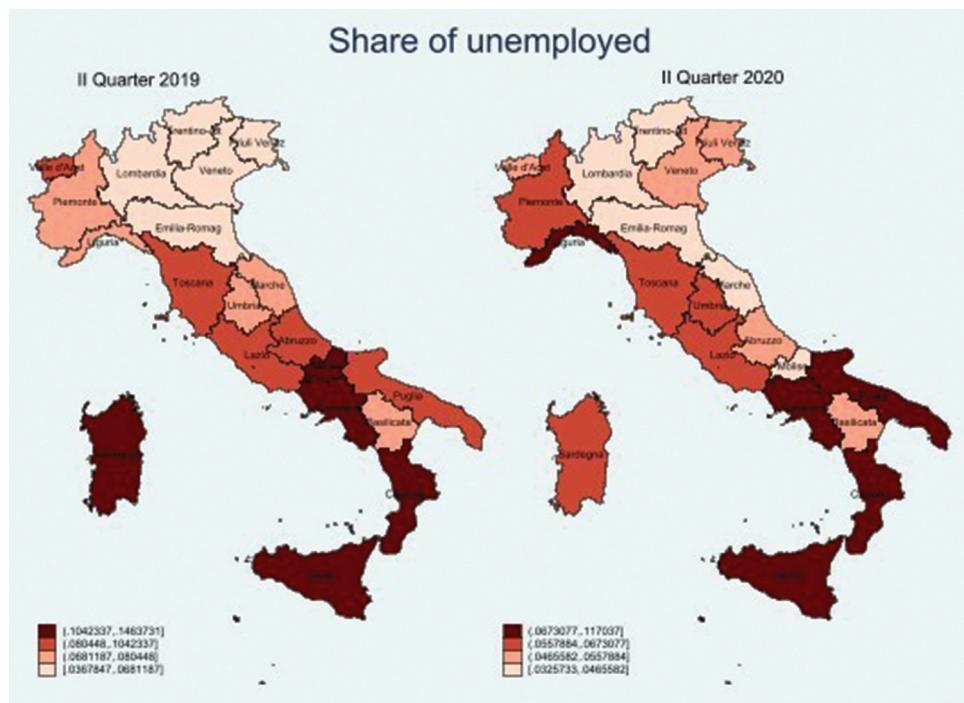


Figure 2. The share of unemployed by region and year (II quarter of 2019 and 2020). Source: Authors' elaborations from 2019Q2 and 2020Q2 ISTAT data.

children is negative and relatively low (-1.5 p.p.), while the AMEs for the other types of households considered is positive and relatively

higher for mono-parental households (Buheji 2019) compared with couple with children (+10.3 p.p. and +11.8 p.p. for single fathers

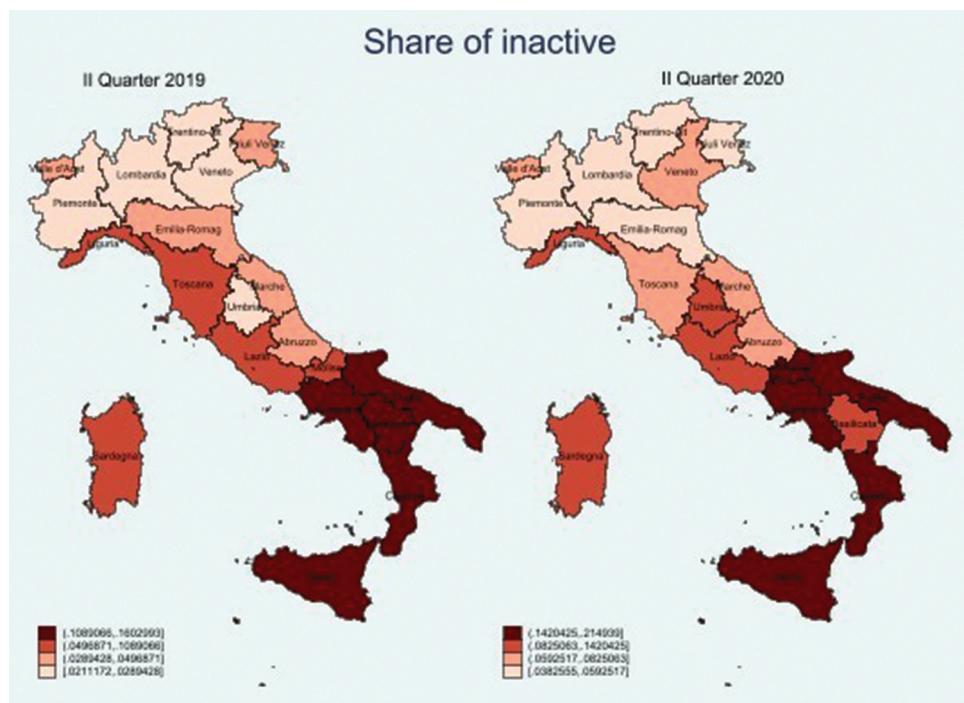


Figure 3. The share of inactive by region and year (II quarter of 2019 and 2020). Source: Authors' elaborations from 2019Q2 and 2020Q2 ISTAT data.

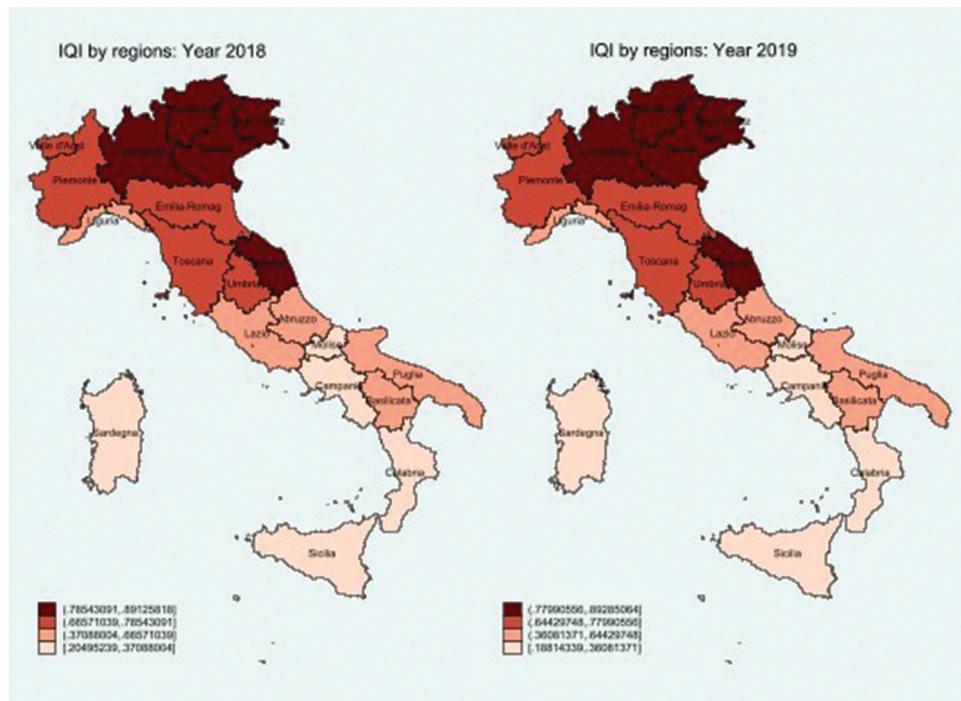


Figure 4. The regional distribution of IQI for year 2018 and 2019. Source: Authors' elaborations from 2019Q2 and 2020Q2 ISTAT data.

and single mothers, respectively, +5.7 p.p. for couple with children). The existing evidence pinpoints only the disadvantage of single women and in couple (Caroleo et al. 2020), while here we add evidence for a wider range of household types. Remarkably, as documented in the European countries where young people with a migrant background are more likely to become NEETs than natives (Mascherini et al. 2012), being foreigner is positively associated with the probability of being NEET (+2 p.p., column I), especially for those aged 15–24 (+3.9 p.p.). In addition, and as expected, individuals with a higher level of education are less likely to be NEET: being graduated reduces the probability of being NEET of about 1.9 p.p. with respect to individual with less than lower secondary school. Notably, looking and the disaggregation by age, we note that the advantage is significant only for the 25–34 age group with respect to the 15–24. Also, in this case, education as a form of protection is supported by the existing literature not only in Italy but also on other European countries (see for eg., Avagianou et al. 2022, 2022b; Pastore and Zimmermann 2019b; Ripamonti 2023). Having

received a subsidy is positively associated with the probability of being NEET, i.e. around 43 p.p., as well as the participation in a regional training in the past (1.3 p.p.), suggesting that having attended regional training in the past is not a protective factor against the risk of being NEET. As examined in a systematic literature review (Kluve et al. 2017), the findings suggest that allocating resources to youth through ALMPs typically leads to favourable outcomes, with more notable effects observed in low- or middle-income countries than in high-income countries. Furthermore, the most effective results are often seen among the most disadvantaged youth. This underscores the importance of implementing ALMPs that are tailored to address the specific needs of the target population. Finally, from the dummy variables for NUTS1-level (macro regions), in line with expectations, we note that regions in the south and islands are mainly exposed to high share of NEET, since they are the area with the greater early school leaving rates and worst labour market opportunities. This is consistent with evidence found in other Mediterranean countries where the NEET rate, although very high (e.g.

Table 3. Determinants of the risk of being NEET (only inactive young people), AME.

	I	II	III
COVID-19	0.056*** (0.003)	0.080*** (0.007)	0.047*** (0.004)
Institutional quality index	-0.031*** (0.005)	-0.025*** (0.010)	-0.026*** (0.005)
Female	0.028*** (0.002)	0.015*** (0.005)	0.033*** (0.002)
Age 2534	-0.011** (0.005)	-	-
Foreigner	0.003 (0.003)	0.003 (0.008)	0.003 (0.003)
<i>Education – base: Primary</i>			
Lower secondary school	0.019** (0.007)	0.016 (0.017)	0.020** (0.008)
Upper secondary school	-0.008 (0.008)	-0.007 (0.017)	-0.008 (0.008)
Graduate	-0.032*** (0.008)	-0.021*** (0.021)	-0.029*** (0.008)
<i>Household type – base: Single</i>			
Couple with child	0.035*** (0.004)	0.046*** (0.013)	0.029*** (0.004)
Couple without child	-0.003 (0.006)	0.019 (0.023)	-0.003 (0.006)
Single father	0.069*** (0.007)	0.075*** (0.017)	0.067*** (0.008)
Single mother	0.055*** (0.005)	0.066*** (0.014)	0.050*** (0.005)
Training course in the past	-0.015*** (0.004)	-0.032*** (0.011)	-0.008* (0.004)
Unemployment benefit	0.146*** (0.006)	0.154*** (0.016)	0.14*** (0.006)
Regional Unemployment rate	0.002*** (0.000)	0.002*** (0.000)	0.004*** (0.000)
<i>Geographical area of residence- base: North-West</i>			
North-East	0.004 (0.003)	0.002 (0.007)	0.007** (0.004)
Centre	0.025*** (0.003)	0.034*** (0.007)	0.019*** (0.004)
South	0.077*** (0.006)	0.10*** (0.012)	0.052*** (0.007)
Islands	0.101*** (0.007)	0.14*** (0.016)	0.058*** (0.008)
Quarterly dummies	Yes	Yes	Yes
Observations	87,840	25,782	62,058

Reference category: 15–24 years old; single; no education. Standard errors in parentheses; *** $p<0.01$, ** $p<0.05$, * $p<0.1$. (I) is the specification for the total sample; (II) is the specification for the age group 15–24; (III) is the specification for the age group 25–34.

Source: Authors' elaborations from 2019Q1–2020Q2 ISTAT-IQI dataset.

Spain and Greece), is not uniformly distributed internally due to varying levels of economic development and structural deficiencies across regions (see for instance, Avagianou et al. 2022, 2022b; Kapitsinis et al. 2024).

The evidence regarding the various control variable, aligned with the main studies of the literature (Rahmani and Groot 2023), confirms certain shared traits with some European countries, especially those in the Mediterranean area. These countries experience, like Italy, the highest and more persistent share of NEETs. Specifically, in these areas, a path-dependent process related to structural deficiencies in the economic system

particularly impacts the less developed regions. This is characterized by a high segmentation of the labour market and different levels of efficiency in implementing contemporary youth employment policies (Kapitsinis et al. 2024).

VII. Robustness checks

The estimation results discussed in Section VI may be sensitive to the adopted definition of NEET. To ensure the robustness and validity of our results, we conduct a sensitivity analysis. Specifically, we repeat the analysis considering only inactive young people as

**Table 4.** Determinants of the risk of being NEET, AME.

	I	II	III
Regional COVID-19 infection (per capita)	0.0024** (0.001)	0.002 (0.002)	0.003** (0.001)
Institutional Quality Index	-0.041*** (0.006)	0.002 (0.014)	-0.042*** (0.007)
Female	0.027*** (0.003)	0.009* (0.006)	0.033*** (0.003)
Age 2534	-0.027*** (0.006)	- (0.006)	- (0.006)
Foreigner	0.020*** (0.004)	0.040*** (0.010)	0.014*** (0.005)
<i>Education – base: Primary</i>			
Lower secondary school	0.025** (0.011)	0.044* (0.025)	0.023* (0.011)
Upper secondary school	-0.009 (0.011)	0.031 (0.025)	-0.022* (0.011)
Graduate	-0.027** (0.011)	0.003 (0.03)	-0.030*** (0.012)
<i>Household type – base: Single</i>			
Couple with child	0.056*** (0.005)	0.07*** (0.017)	0.048*** (0.005)
Couple without child	-0.018** (0.008)	-0.02 (0.030)	-0.015** (0.007)
Single father	0.102*** (0.010)	0.099*** (0.023)	0.107*** (0.012)
Single mother	0.116*** (0.006)	0.125*** (0.018)	0.112*** (0.007)
Training course in the past	0.013** (0.006)	0.016 (0.014)	0.014** (0.006)
Unemployment benefit	0.422*** (0.009)	0.44*** (0.025)	0.400*** (0.009)
Regional unemployment rate	0.005*** (0.000)	0.006*** (0.000)	0.008*** (0.000)
<i>Geographical area of residence- base: North-West</i>			
North-East	0.001 (0.004)	0.004 (0.010)	0.004 (0.006)
Centre	0.036*** (0.005)	0.051*** (0.011)	0.024*** (0.006)
South	0.084*** (0.008)	0.124*** (0.017)	0.029*** (0.009)
Islands	0.105*** (0.010)	0.18*** (0.02)	0.018 (0.012)
Quarterly dummies	Yes	Yes	Yes
Observations	74,016	21,747	52,269

Reference category: 15–24 years old; single; no education. Standard errors in parentheses; *** $p<0.01$, ** $p<0.05$, * $p<0.1$. (I) is the specification for the total sample; (II) is the specification for the age group 15–24; (III) is the specification for the age group 25–34.

Source: Authors' elaborations from 2019Q1-2020Q2 ISTAT-IQI dataset. The data about the number of COVID-19 infections can be downloaded from: <https://github.com/pcm-dpc/COVID-19>.

NEET, which represents a more restrictive subgroup or subcategory within the NEET classification.

In comparison with the estimates presented in Tables 2, 3 highlights that the effects of exposure to the pandemic have been more impactful on this subsample: the risk of being in a NEET condition has, indeed, increased. This probability amounted to 5.6 p.p., 8 p.p., and 4.7 p.p., for the entire sample, the 15–24 and 25–34 age groups respectively. The IQI exhibits a negative association, but, within the

inactive subgroup, it uniformly impacts individuals across all age categories. This underscores the crucial role of institutional context quality in providing widespread benefits to all members of this category who undoubtedly face amplified challenges. As indicated by existing studies, the level of education continues to prove a valuable characteristic in reducing the likelihood of NEET status and represents a suitable intervention (Rahmani and Groot 2023). Indeed, the negative association

remains evident for those holding a university degree. Additionally, this association is now significant even for the younger cohort. In this setup, family type demonstrates a negative impact on the likelihood of becoming NEET, particularly noticeable among couples with kids, and single parents. Despite the positive AMEs for these categories, the impact is relatively lower compared to the broader definition of the NEET. Notably, differences between childless couples and singles are no longer significant.

By considering only inactive individuals as NEET, it is found that having undergone training courses in the past act as a protective factor against becoming NEET, thereby reducing the risk, especially for the younger group. Meanwhile, passive labour policies in the form of subsidies continue to have negative effects on NEET status, albeit with a much lower magnitude (14 p.p. compared to approximately 40 p.p. in the broader group). Finally, regarding macro-geographical areas, the primary findings from Table 2 and the literature are validated. Specifically, it is reaffirmed that structural challenges in youth unemployment persist over time due to a path-dependent process (Avagianou et al. 2022). The AMEs underscore how persistent limited employment opportunities increase the likelihood of becoming NEET, particularly among individuals aged 25–34 residing in the south (5.2 p.p.) and the islands (5.8 p.p.).

Another potential source of bias stems from how we capture the effect of COVID-19. As described in Section IV, we measure the relationship between the pandemic and the probability of being NEET using a dummy variable equal to 1 for $t = 2020Q2$ and zero otherwise. However, this research strategy may not be efficient or sufficient for assessing the impact of exposure to coronavirus outbreak. Therefore, in place of COVID-19 dummy variable, we employ the number of infections per capita measured at the regional level.⁹ As discussed in Section VI, the probability of being NEET, an individual-level data, is influenced not only by individual characteristics but also by factors measured at a more aggregate level, such as the regional incidence of COVID-19 infections. This variable, along

with excess mortality, can be considered a crucial measure for monitoring the impact of the pandemic both nationally and locally (Buonanno, Galletta, and Puca 2020). This new specification includes the regional share of per-capita COVID-19 infections and confirms the positive effects of the pandemic on the probability of being NEET (see Table 4). Moreover, the signs and magnitude of the other variables remain largely unchanged. This robustness exercise reassures that the main findings presented in Table 2 are not driven by the choice of the variable used to control for the pandemic.

VIII. Conclusions

In this paper we provide novel empirical evidence about the determinants of NEET status in Italy by focusing on the role of the quality of institutions measured, and by investigating whether and to what extent the risk of becoming NEET has worsened during the COVID-19 outbreak.

The analyses were performed on a unique dataset created by merging of two sample surveys, and the findings were tested using different specifications. Moreover, it documents differences of the risk of being NEET by age-group separately. During the second quarter of the 2020 pandemic, results show that the probability of being NEET significantly increased by 1.7 p. p. and that individuals in the 25–34 age group are the most affected (+2.2 p.p.). A good quality of institutions decreases the risk to be NEET, particularly for individuals in the 25–34 age group, underlying that an environment characterized by a greater degree of public spirit generates positive externalities to young people, pushing them to enter the labour market.

A great contribution to ensure institutions of high quality, to finance policies in support of young people, and then to avoid NEET not to be transformed into a ‘lost generation’ of COVID-19 may come from the Next Generation European Union funds. The Italian Recovery and Resilience Plan should translate this opportunity into actions. One of the objec-

⁹The data were download from GitHub – pcm-dpc/COVID-19: COVID-19 Italia – Monitoraggio situazione.

tives of the Recovery and Resilience Plan is precisely to reduce the share of individuals NEET thanks to the integration of the other measures already in place in Italy, such as the dual system or the measures to strengthen the skills of adults. The aim is then to overcome quality differences in the services provided at territorial level, by setting timely interventions in line with the local labour demand. In line with our finding about institutional quality index, there is a project of extending universally the civil service amongst young people as a tool for enlarging their soft skills and the degree of commitment to civil society, thus contrasting NEET status. Moreover, considering the worsening situation of youth, the Italian government adopted in 2022 a 'NEET plan' that seeks at reducing the young people between 15 and 34 years of age that are neither working nor in education or training. However, the mentioned plan does not include new measures, but rather the extension and improvement of existing ones, such as the Youth Guarantee. These include establishing youth desks at employment centres, intensifying informational support, and initiating a multi-annual national plan to promote the inclusion of young people with fewer opportunities in the EU programme for education, training, youth and sport (i.e. Erasmus+) and cross-border volunteering activities, such as the European Solidarity Corps programmes. Nevertheless, statistics indicate that, on average, only about 40% of the Italian NEETs participated in such initiatives.¹⁰ Therefore, the measures introduced appear insufficient to fully tackle the phenomenon given its *multifaceted* nature and the various risk factors contributing to individuals becoming NEETs. Additional measures to enable targeted education and training, such as emphasizing the significance of our findings for the broader academic debate on education systems, as well as investing in promotional activities to reach a relatively higher proportion of NEET should be envisaged, with specific attention to regional features.

¹⁰For further details, see <https://esthinktank.com/2022/04/19/the-neet-problem-in-italy-a-complex-phenomenon-to-be-solved/>.

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Appendix A

The timeline of policy measures and mobility restrictions after Covid-19

Italy was the first European country to impose severe restrictions on travel and individual mobility to reduce the spread of the COVID-19 pandemic. In a few days, simple recommendations to ‘stay at home’ were transformed into localized restrictive measures, with administrative and criminal penalties for violations. This public policy came at a time when both government officials and the public had little and often conflicting information about the transmission of COVID-19. To prevent the outbreak in Italy, on 30 January 2020, the national government implemented the first restrictive measures: a state of emergency was declared and all direct flights to and from China were blocked. Following these cases, the government imposed extreme lockdowns in 11 small municipalities, which were quarantined on March 1. A few days later, on March 8, the Italian Prime Minister declared that, as of the following day, all 12 provinces in Lombardy, 14 provinces in Piedmont, Veneto, Emilia-Romagna, and Marche would be subject to a ban on numerous economic and social activities as well as severe restrictions on individual mobility. Such specific measures across

administrative units did not last long. The following evening, the Italian Prime Minister announced that, as of March 10, new restricting individual mobility measures would be imposed uniformly throughout the national territory. Thus, on March 25, the government imposed the ‘lockdown’, the temporary closure of all economic sectors, except for those considered ‘essential’ (i.e. necessary either for the survival of the population or for the full functioning of the health sector). These measures remained in force until May 4, when the so-called reopening phase 2 began. In sum, several economic activities (such as restaurants and cafes) were allowed to resume, and travel between municipalities within the same region was permitted for work or health reasons, as well as for small gatherings of close relatives. The so-called Phase 3 began immediately afterwards, on June 15, when the ban on most economic activities and social gatherings was lifted, with face masks and social distancing still mandatory in enclosed public spaces. In Figure 1A, we show a timeline showing the main dates and public policies adopted during this period.

Finally, the emergency legislation adopted as of February 2020 had to respond to the pandemic crisis with measures to protect employment, especially in the closed sectors.¹¹

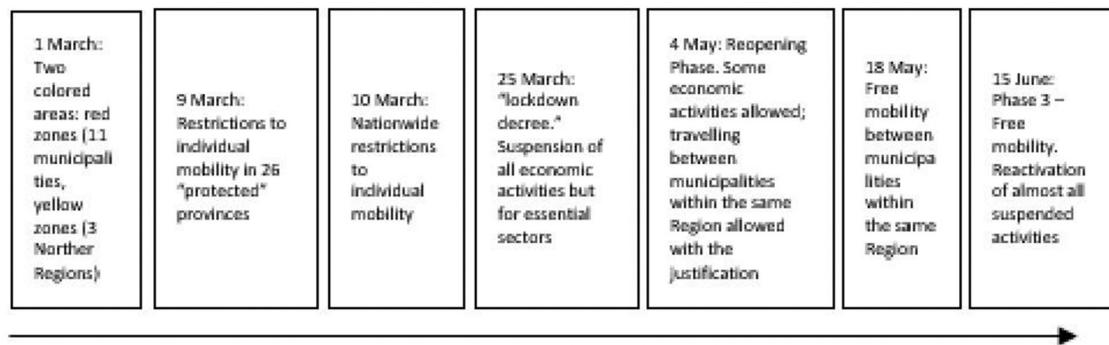


Figure 1A. Timeline of restrictions and lockdown measures in Italy against the Covid-19 in 2020.

¹¹See the L. n.27/2020 and Legislative Decree No. 34/2020 for more details.