The forgotten NEETs

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Abstract

European policies dealing with labor shortages have been targeting young people in NEET status (Not in Education, Employment, or Training). Given the limited EU budget, significant resources have been allotted to programs providing slots in active labor market policies (ALMPs) to the NEETs, and countries with higher than EU average NEET rates have been requested to devote at least 12,5 % of European Social Fund resources to tackling this issue. Is this emphasis on NEETs, and on ALMPs as key policy tool dealing with them, justified? Drawing on a variety of micro datasets on Italy (the country with the largest incidence of NEETs), in this paper we document that pooling active (actively seeking employment) and inactive (not actively seeking employment) NEETs is misleading. The key challenge for policies is how to mobilize inactive NEETs. Based on the Italian experience with the European Youth Guarantee (YG) policy, we find that failure to address structural impediments to participation, such as mental health status and caregiving responsibilities, notably of young women, makes the YG largely ineffective for those who need it most.

Keywords: NEET, Labor Shortage, Youth Unemployment, Labor Market Policy, Gender Disparities

JEL Classification: J13, J21, J64, I38

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1 Introduction

Young workers are becoming a scarce resource in most OECD countries. The dramatic decline in fertility rates experienced in the last decades has reversed the age pyramid shrinking the size of the cohorts entering working age every year. A major source of labor shortage for firms is indeed lack of young people.

Figure 1 documents the long-run drop in the fertility rate for Italy and the EU, while Figure 2 compares the current Italian age pyramid with that prevailing in 1950. Unsurprisingly industrialists and business leaders are warning of a "looming labor shortage" and a critical lack of young workers, particularly for intermediate, vocational, and technical roles. Moreover many youngsters are Not in Education, Employment, or Training (the so-called NEET): in many EU countries, the NEET rate (their share in the population aged 15 to 29) has been larger than 20%, with Italy displaying the highest rate in the continent for most of the past decade.

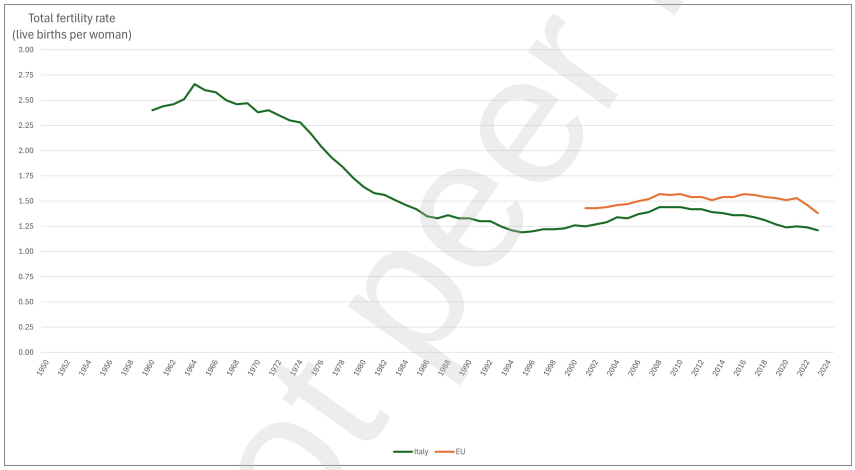

Figure 1: Fertility rate of Italy (1960-2023) and EU (2001-2023). Source: Eurostat data

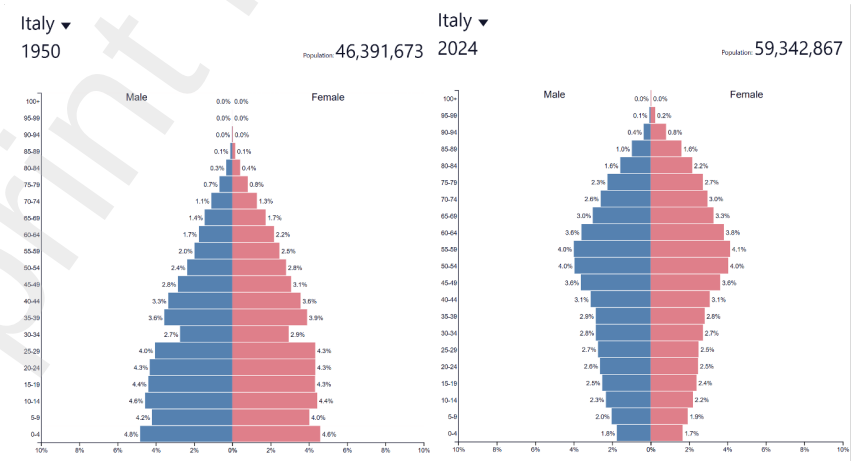

Figure 2: Population Pyramids for Italy, 1950 and 2024. Source: United Nations data

In an attempt to mobilize these potential workers European policies against labor shortages

have been heavily targeting NEETs. Despite the EU's limited budget, about 30 billion Euros have been set aside to support these individuals, especially through active labor market policies (ALMPs), like job training and placement programs. Countries with NEET rates higher than the EU average are required to spend at least 12.5% of their European Social Fund allocations to address the "NEET problem". EU Commission President Ursula von Der Leyen in her 2023 State of the European Union address stated that: "*Eight million young people are neither in employment, education or training (NEET). Their dreams put on hold, their lives on standby. This is not only the cause of so much personal distress, it is also one of the most significant bottlenecks for our competitiveness.*" The flagship Youth Guarantee program (costing about 10 billions) and the 2022 EU Year of Youth made extensive reference to the NEETs.

Originating in the UK in the late 1990s, the NEET label, institutionalized in policy discourse through the Bridging the Gap report (SEU, 1999), is a problematic construct both conceptually and empirically (Russell, 2014). It aggregates diverse social realities, ranging from temporary labor market detachment to chronic disengagement, under a single label, often obscuring the underlying causes of exclusion. NEETs include youth caring for ill family members, those involved in substance abuse or criminal trajectories, as well as those facing structural unemployment (MacDonald, 2011). Pooling together such distinct experiences under a single statistical category can be misleading and undermine the potential for targeted policy interventions.

In this paper, we look into the NEET blackbox. A key conceptual distinction within the NEET population lies between those who are unemployed (actively seeking work) and those who are inactive (not actively seeking or available for work). While public discourse often portrays NEETs as passive or disengaged, data show that approximately half of NEETs across Europe are in fact unemployed. This share is even higher in France, where 58 percent of NEETs are actively seeking employment, and in Spain and Greece, where the figure exceeds 70 percent. These countries, despite their high overall NEET rates, are thus characterized by a predominance of active job seekers, underscoring the structural nature of youth unemployment in their labor markets.

Interestingly, this pattern reverses in countries with more inclusive and efficient labor market institutions. In Germany, the Netherlands, and Denmark, which routinely rank among the top performers in youth employment outcomes, the inactive comprise the majority of NEETs, with roughly 60 percent not engaged in job search. This contrast highlights a paradox: countries with stronger youth labor markets often see a higher share of NEETs opting out temporarily, possibly due to caregiving responsibilities, or other life circumstances, rather than outright exclusion (Cavalca, 2015). This also suggests that labor shortage is likely to absorb a significant portion of NEETs while the key challenge for policies is how to mobilize inactive NEETs.

This paper leverages three different surveys to characterize the complexity and heterogeneity within the NEET category. The focus is on Italy, the country historically with the highest NEET

rates in the EU. We document that active NEETs (actively seeking employment) and inactive NEETs (not actively seeking employment) correspond to behaviorally different labor market conditions. The main challenge for policies dealing with labor shortages is figuring out how to reach and support the inactive NEETs. Drawing on longitudinal and cross-sectional data, we identify key determinants of the inactive NEET status, including mental health issues and caregiving responsibilities, highlighting their different impact on employment outcomes. The analysis underscores pronounced gender disparities exacerbated by childbirth and insufficient childcare services.

Furthermore, we evaluate the European Youth Guarantee (YG) policy, specifically its Italian implementation in the Garanzia Giovani (GG) program, notably its effectiveness in addressing structural barriers to employment such as mental health and caregiving responsibilities. Our findings emphasize the need for comprehensive, inclusive policy measures to effectively tackle persistent youth disengagement and foster greater labor market integration and social cohesion.

The remainder of the paper is structured as follows: Section 2 positions our work in the literature. Section 3 presents main dimensions of heterogeneity across Italian NEETs, looking at both labor market stocks and flows. Section 4 uses panel data and IV regressions to present evidence on some causal determinants of inactive NEET conditions, such as mental distress and parenthood. Section 5 evaluates the Youth Guarantee policy and its implementation in Italy in light of these results. Finally, Section 6 summarizes the key findings and draws directions for further research.

2 Literature review

There is some literature, mainly of a sociological nature, on the empirical relevance and significance of the NEET definition. Furlong (2007) highlights that among those NEETs who are not seeking work, there are also individuals who may be pursuing other interests, resting, developing skills in unpaid capacities such as voluntary work, or even taking time to travel [1].

Policymakers often frame NEET status as a youth problem rooted in personal failings, overlooking structural factors such as limited job opportunities and spatial inequality MacDonald (2011). Official classifications frequently label the NEETs as having "no identifiable barrier to employment", ignoring broader constraints.

Moreover, the NEET status fails to reflect the fluid and unstable nature of many young people's trajectories. Qualitative research (MacDonald and Marsh, 2005) shows that youth often move in

[1] In his words, the NEET definition combines "disadvantaged people who may lack the resources to navigate transitions or exercise choice" with "more privileged young people who are able to exercise a significant degree of choice regarding the ways in which they manage their lives".

and out of short-term jobs and low-quality training. Administrative data confirm that persistent NEET status is rare. Some engage in unpaid or informal activities—like caregiving or skill-building—not captured in standard metrics. Another strand of (mainly descriptive) literature has addressed the probability of entering and remaining in NEET status across socio-economic groups. Migration is a strong predictor: Luthra and Sottie (2019) find that in Sweden, "for men, the immigrant background had a significant association to being NEET, while this was not found for women". Family background plays also a fundamental role in shaping NEET trajectories, often reinforcing labor market exclusion regardless of education. Schoon and Lyons-Amos (2017) find that early school leaving, local labor market constraints, and family socio-economic status (SES) combine to create "cumulative (dis)advantage," in which youth from less privileged backgrounds "encounter more problems in establishing themselves in the labor market." Importantly, they also show that individual agency plays a role: young people are not passively exposed to disadvantage, but respond to it in a different fashion. Kevelson et al. (2020) underscore how persistent this disadvantage can be, even for the highly educated. Using OECD and US data, they show that "having parents who have not finished high school puts even college-educated individuals at greater risk of disconnection." Family background, in their view, remains a powerful filter for how young adults transition from higher education into work—especially for women with children.

Recent research consistently identifies educational attainment — a proxy for cognitive ability — as a key driver of NEET status across contexts. In the UK,Crawford et al. (2011) show that students with low academic achievement at age 16 face a substantially higher probability of becoming NEET by age 18. De Luca et al. (2020) find similar patterns for Italy and Spain, reinforcing the predictive role of early academic performance. In the Russian context, Zudina (2021) documents a shifting relationship between education levels and NEET risks over two decades. While higher education initially offered strong protection against NEET-unemployment, its premium eroded over time, suggesting saturation effects. By 2015–2017, risks were increasingly concentrated among technical and vocational graduates, with a U-shaped pattern of vulnerability re-emerging for university-educated women.

Beyond cognitive ability, a growing body of evidence emphasizes the role of non-cognitive skills, such as personality traits, locus of control, and socio-emotional characteristics—in shaping education and labor market trajectories. Gutman and Schoon (2013) and Heckman et al. (2006) argue that non-cognitive traits are crucial to understanding persistence in education and employment. Meta-analyses by Avey et al. (2011) and reviews by Almlund et al. (2011) suggest that "psychological capital" and soft skills are positively associated with labor market performance, while Goodman et al. (2015) link childhood socio-emotional skills to long-run adult outcomes. Carneiro et al. (2007) find that both cognitive and non-cognitive abilities matter for education and work outcomes in the UK. Interestingly, they uncover complementarities between the two: cognitive ability yields larger marginal benefits among individuals with higher social skills.

Gendered and migrant dimensions also interact with education in shaping NEET risks. Using Spanish data, Rodriguez-Modroño (2019) finds that foreign-born youth initially displayed higher NEET rates, but experienced marked improvements between 2013 and 2016—particularly foreign-born men, due to increased enrollment in education and employment. Educational background remains a protective factor for both native- and foreign-born populations, although convergence trends suggest compositional changes in NEET status. In Russia for women NEET-inactivity is strongly associated with marital status, rural residence, and low education, with primary-educated women facing NEET-inactivity rates 12–27 percentage points higher than university graduates (Zudina, 2021).

There is a growing literature documenting a strong link between NEET status and mental health challenges. NEET youth are more likely to experience depression and anxiety (Feng et al., 2015) and often show more severe symptoms (Basta, 2019, O'Dea, 2014). The relationship is complex and possibly bidirectional: poor mental health can reduce employability, while being NEET, especially for prolonged periods, may worsen psychological well-being. Nearly 60% of NEET youth in a British cohort had prior mental health problems, compared to 35% of non-NEETs (Goldman-Mellor et al., 2016), and NEET status in adolescence predicts poorer adult mental health (Gutiérrez-García et al., 2018). Further evidence of the strong association between NEET status and mental distress can be found in Rodwell et al. (2018), who find that adolescent mental disorders, cannabis use, and disruptive behavior increase NEET risk, Minh et al. (2023), who show that externalizing symptoms raise NEET probability for Dutch males, partly via lower educational attainment and Plenty et al. (2020), who report that internalizing and externalizing issues predict worse academic outcomes and greater NEET risk in Sweden.

There is also evidence of correlation between the NEET status and caregiving. Vancea and Utzet (2018) report that over 60% of women leaving work or education for caregiving remain NEET two years later. In Italy, Contini et al. (2019) show that women aged 24–29, especially mothers, face higher risks of long-term NEET status. Even among tertiary-educated women, 9% remain persistently NEET—compared to negligible rates among men—reflecting Italy's low female labor force participation and unequal caregiving burdens.

Our contribution to this literature is threefold. First, we focus on the active vs. inactive NEET status formally testing to which extent these two categories identify separate labor market trajectories. Secondly, we go beyond the descriptive nature of the literature to date, by providing evidence on potential determinants of the NEET status, notably the inactive NEET status, looking specifically at the impact of mental distress and childbearing responsibility. Finally, we evaluate policies dealing with NEETs, such as the Italian Youth Guarantee program.

3 Documenting the heterogeneity

A first step in assessing the main drivers of the NEET phenomenon is to identify the key dimensions of heterogeneity in this group. In order to do so, we leverage the longitudinal section of the Istat (the Italian statistical agency) Labor Force Survey (LFS) over the years going from 2013 to 2020, focusing on the population aged 15 to 30.
Table 1 shows the main statistics for the youth subset of the survey in the year 2019 – the most recent before the Covid pandemic. In the first column of the table, the moments shown refer to the entire under-30 population, while the second column displays descriptives specifically on the NEETs actively seeking employment – i.e. those classified as unemployed by the LFS – while the third column concerns inactive NEETs (those who are not actively looking or not available for a job).

As shown by the first four rows of the table, together active and inactive NEETs represent almost 20% of the young population in Italy, the rest being mostly students (more than half) with less than 30% employed individuals.Women are more likely to be NEET inactive. Born-abroad and non-citizens are also over-represented in the NEET population. Moreover, NEET inactive have, on average, lower levels of education than active NEETs

LFS data also allow us to establish whether there are substantial differences in the transition probabilities of active and inactive NEETs.
Table 2 provides the yearly 2019-20 transition matrix across the different labor market states. In particular, yearly flows from the labor market status displayed in each row and the status displayed in the column are portrayed as a proportion of the initial stock. A key fact highlighted by this table is that NEETs who are actively looking for a job (henceforth, "active" NEETs, N-A in the table) exhibit a much different behavior than NEETs who can be considered inactive (N-I in the Table). The latter are much less likely to transit to employment than the active NEETs and display a higher stayer coefficient (along the main diagonal) than active NEETs, pointing to a higher persistence in their status.

Table 1: Summary statistics for the overall under-30 sample and NEET subsamples (percentages)

Category	Sub-category	Percentage		
		All under-30	NEET-active	NEET-inactive
Employment status				
	Employed	29.3	—	
	NEET-active	7.5	—	
	NEET-inactive	11.8	—	
	Student	51.4	—	
Sex				
	Male	51.3	61.1	41.9
	Female	48.7	38.9	58.1
Place of birth				
	Born in Italy	89.1	84.8	81.6
	Born abroad	10.9	15.2	18.4
Citizenship				
	Citizen	90.2	87.3	83.6
	Non-citizen	9.8	12.7	16.4
Education level				
	No qualification	0.3	0.7	1.6
	Primary school	0.6	0.9	1.9
	Lower secondary / vocational	39.3	31.4	35.4
	Vocational 2–3 yrs	4.4	6.8	5.3
	High-school diploma 4–5 yrs	44.0	49.5	46.7
	Academy / Conservatory	0.2	0.5	0.2
	University diploma 2–3 yrs	0.2	0.5	0.2
	Bachelor's degree	6.7	3.8	2.9
	Master's degree	2.6	4.5	3.4
	Long-cycle degree	1.7	1.4	2.3
Age group				
	20–24	36.8	19.7	16.4
	25–29	33.4	42.9	36.4
	30–34	29.8	37.5	47.2

Note. The table shows key statistics of the Istat subsample referring to youth. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed according to the objective classification provided by the LFS), "inactive" if they are not employed and not actively seeking employment.

Table 2: Under–30 transition matrix by gender — Q2 2018 - Q2 2019

	All genders				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	3	5	7	86	3	5	6	82	4	5	9
Stud	5	86	4	5	6	85	4	5	4	87	4	5
N-A	29	7	35	29	29	5	37	28	30	9	31	30
N-I	16	9	18	58	22	10	21	47	12	8	15	65

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows show the 2019 status; columns show the 2020 status. Row percentages sum to 100.

These differences hold for both men and women. NEET inactive women are, however, nearly half as likely to transition to employment than inactive NEET men. Stayer coefficients for inactive women are also particularly large involving an average duration of this status of about 3 years. Thus, the over-representation of women in the inactive NEET pool seems to be driven mainly by low outflows rather than large inflows. In the case of NEET-active, transition probabilities have not such an important gender differentiation. This suggests that the gendered dimension of the NEET status is mainly related to the inactive component of the NEETs.

Table 3: Under–30 transition matrix by region — Q2 2018 - Q2 2019

	North				Centre				South			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	88	3	3	5	83	3	7	7	78	4	8	10
Stud	7	85	4	4	4	89	2	4	3	86	5	6
N-A	41	7	31	21	31	7	39	24	21	7	37	36
N-I	18	10	14	57	21	8	18	53	13	9	19	59

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Percentage values. Rows indicate status in 2019; columns indicate status in 2020. Row percentages sum to 100.

Table 3 provides the same transitions by macro-region. Whilst the South fares worse than the North and Center when it comes to the probability of finding a job, there is everywhere a substantial gap between being an active or inactive NEET. In the South, where the NEET phenomenon is more pronounced, the probabilities of transitioning from NEET inactive and NEET active to employment are lower than elsewhere.

The impression that NEET active and NEET inactive behave differently and that there is a gender dimension in transitions out of the inactive NEET status is confirmed by running a simple

F-test of heterogeneity of transition matrices for first-order Markov chains. Table 4 shows that differences are statistically significant over all yearly transitions in the period 2014-19 [2].

$$F = \frac{(p_1 - p_2)^2}{\hat{p}(1-\hat{p})(\frac{1}{n_1} + \frac{1}{n_2})} \cdot \frac{n_1 + n_2 - 2}{\hat{p}(1-\hat{p})} \tag{1}$$

Table 4: **F-test on the difference in transition probabilities to employment between active and inactive NEETs (under 30)**

Year	$p_{\text{Active NEET}}$	$p_{\text{Inactive NEET}}$	F-Statistic	p-value
2014	0.25	0.16	24.39	8.52e-07***
2015	0.26	0.17	22.74	2.00e-06***
2016	0.29	0.18	30.53	3.76e-08***
2017	0.29	0.17	31.40	2.43e-08***
2018	0.29	0.19	21.17	4.52e-06***
2019	0.29	0.16	38.49	7.15e-10***

Note. Transition rates refer to NEETs aged under 30. Significance levels: $^{***}p < 0.001$.

Transition probabilities are also statistically different between men and women (Table 5).

Table 5: **F-test on the difference in transition probabilities to employment between male and female NEETs (under 30)**

Year	p_{Male}	p_{Female}	F-Statistic	p-value
2014	0.22	0.19	2.84	9.24e-02
2015	0.25	0.18	15.21	9.93e-05***
2016	0.25	0.20	7.21	7.32e-03**
2017	0.27	0.18	21.96	2.99e-06***
2018	0.28	0.19	18.75	1.58e-05***
2019	0.25	0.17	14.71	1.31e-04***

Note. Transition rates refer to NEETs aged under 30. Significance levels: $^{***}p < 0.001$.

The heterogeneous behavior that we observe between active and inactive NEETs begs the question of whether treating these people as workers waiting for an employment opportunity is the correct approach to tackle the NEET phenomenon. There might be additional hurdles that prevent these people from entering either the labor force or educational programs.

The relevant asymmetries in transition probabilities between men and women within the inactive NEET population may also point to an asymmetric sharing of responsibilities outside the labor market, e.g., family responsibilities, notably on childcare. This would be consistent with literature pointing to the key role played by the "child penalty" in gender differences in labor

[2] see the Appendix for all the yearly transition matrices

market performance (Kleven et al., 2019a,b). We explore these two potential determinants of the NEET status in the following section.

4 NEETs, parenthood and mental distress

In this section we draw on household survey data for 2015 and 2016, kindly shared with us by the Istituto Toniolo. They cover young people aged 18 to 33, providing detailed information on the respondents' mental status, parenthood as well as a richer set of covariates than LFS data.

4.1 Mental Distress

Given the large number of questions on the mental status of respondents and the limited relevance that each of these variables taken in isolation has on the overall mental well-being of a person, we extracted a common "factor" from them. Since these were binary variables, we were unable to use a Principal Component Analysis, whose assumption of normality would not be suitable to dichotomic variables. Thus, we carried out a Multiple Correspondence Analysis (MCA henceforth). MCA provides an orthogonal, low-dimensional summary that preserves a relevant distance (Abdi and Valentin, 2007). Methods that reduce the dimensionality might sometimes prove to be of difficult interpretation. In our case, as shown in the appendix (Table A24), the values of the factor we use are consistently negative for positive outcomes (e.g. negative when you reply yes to "feeling happy") and positive for negative outcomes (e.g. positive when you reply yes to "feeling unhappy"). Thus, they can be considered as an overall indicator of "mental distress".

Isolating the causal effect of mental distress on being NEET is dauntingly difficult. To move beyond correlation, we exploit the panel dimension of the Toniolo dataset to examine whether mental distress measured in 2015 predicts NEET status and labor market outcomes in 2016. We focus on a subset of young interviewees who were employed (thus non-NEET) in 2015, and we explore the impact that mental health distress has on the likelihood of becoming NEET in 2016. We do this so as to isolate a kind of mental distress that is not related to the NEET condition, but pre-existing to it. This allows us to shut down the bi-directionality that characterizes a contemporaneous measure. This estimation introduces a degree of exogeneity to mental distress, thus providing evidence of a potential determinant of the NEET status. Full details regarding the specification are available in the appendix.

Table 6: The effects of mental distress

VARIABLES	(1) Neet in 2016	(2) Occupied in 2016	(3) Neet in 2016	(4) Occupied in 2016
Mental distress factor	0.0140*	-0.0218**	0.0130*	-0.0208**
	(0.00788)	(0.00855)	(0.00780)	(0.00857)
Parents more educated	0.0663	-0.0455	0.0623	-0.0417
	(0.0448)	(0.0462)	(0.0438)	(0.0455)
Mental distress * Parents more educated	0.0129	0.00459	0.0122	0.00595
	(0.0381)	(0.0392)	(0.0379)	(0.0388)
Constant	0.352***	0.586***	0.349***	0.580***
	(0.114)	(0.118)	(0.111)	(0.115)
Observations	2,651	2,651	2,635	2,635
R-squared	0.042	0.042	0.053	0.051
Demographic Controls	YES	YES	YES	YES
Family Controls	YES	YES	YES	YES
Dwellings Controls	YES	YES	YES	YES
Region FE	NO	NO	YES	YES

Notes: Demographic controls include age, parenthood, type of high school attended, years of schooling, gender and migrant background.
Family controls include mother's and father's educational level, co-residence with family, whether the relationship with parents is problematic, whether the parents are more educated than the child, and parental separation.
Dwelling controls include whether a relative owns the residence and whether the respondent is renting.
The sample is restricted to those individuals employed in 2015.
See the appendix for full specification details.
Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.
Robust standard errors in parenthesis.

Table 6 shows that pre-existing, non-NEET-related, mental health distress increases the probability of becoming NEET in the following year. In particular, a one per cent increase of the mental distress factor, M increases the probability of being NEET the following year by 1.4% (1.3% when fixed regional effects are included). This is a large effect (almost a 30 % increase) as the probability of moving from employment to the NEET status in the baseline is 5% for this subsample.

Whilst looking solely at the population of employed individuals allows us to at least partially eliminate the endogenous relation between mental distress and NEET status, we tried to move closer to causality by focusing on one specific dimension of mental status and to instrument it. Furthermore, looking at a specific dimension of mental distress allows us to give it a more clearcut interpretation. In particular, we asked a licensed therapist to help us define a dummy variable capturing the depression status on the basis of the respondents questions. About one third of under 30 according to the Toniolo survey are in such a condition. The incidence of depression is higher (42 %) among the NEETs. We then instrumented this variable with the lagged value of the number of therapists per 1,000 inhabitants by province of residence in 2014.

The first stage, shown in table A33, clearly shows that the instrument is relevant as the F-statistic of the regression is above 20. [3]. Panel (a) of Figure 4 in the Appendix displays the distribution of psychologists by province used in the IV estimation. Table 7 suggests that mental depression increases the probability of being in the following year in the NEET status and this result survives when we include region fixed effects.

Table 7: The effects of depression on employed people (IV estimate)

	All		Male		Female	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Neet 2016	Neet 2016	Neet 2016	Neet 2016	Neet 2016	Neet 2016
Depressed	0.0556***	0.0543***	0.0238	0.0211	0.0936***	0.0911***
	(0.0212)	(0.0206)	(0.0187)	(0.0152)	(0.0336)	(0.0319)
Observations	2,614	2,614	1,545	1,545	1,069	1,067
R-squared	0.048	0.047	0.060	0.052	0.087	0.091
Demographic Controls	YES	YES	YES	YES	YES	YES
Family Controls	YES	YES	YES	YES	YES	YES
Dwellings Controls	YES	YES	YES	YES	YES	YES
Region FE	NO	YES	NO	YES	NO	YES

Notes: Neet 2016 refers to belonging to the Neet category in 2016.
Demographic controls include age, parenthood, type of high school attended, years of schooling, gender and migrant background.
Family controls include mother's and father's educational level, co-residence with family, whether the relationship with parents is problematic, whether the parents are more educated than the child, and parental separation.
Dwelling controls include whether a relative owns the residence and whether the respondent is renting.
The sample is restricted to those individuals employed in 2015.
See the appendix for full specification details.
Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. Robust standard errors in parenthesis.

Interestingly, the impact differ substantially across genders. Whilst depression does not seem to significantly affect transitions of women from employment to the NEET status, this is not the case for men. Perhaps young male workers include a larger fraction of individuals particularly vulnerable to mental distress in their labor market decisions. Women in employment, in other words, being a more selected group, may display a stronger attachment to the labor market whatever their mental status. Overall, mental distress seems to be a key risk factor for job loss and entry in the NEET status, notably for young men.

4.2 Parenthood

As discussed in section three, there are relevant gender differences in the probability of being NEET, most notably of being a inactive NEET. In this section we explore the impact of having children on the likelihood of becoming NEET, whether active or inactive.

[3] Data were kindly provided by the Ordine degli Psicologi (Italian association of psychologists)

The panel component of the Toniolo survey makes it possible to investigate the causal impact of having a newborn baby on the NEET status, whether active or inactive. We do so by creating a new variable "newborn", N_i, which measures whether the number of kids reported by the respondent is higher in 2016 relative to 2015.

As having a child corresponds to a voluntary decision which may well be affected by labor market status, we instrument the newborn variable by a measure of childcare availability, that is, the number of kindergarten spots for 100 children at the provincial level [4]. The results of the first stage of the regression are provided in the appendix, in Table A34, together with the full model results for the second stage. We conclude that it is a strong first stage as the F-statistic of the regression is 14 without fixed effects and 12 when including regional fixed effects.

We then run the main regression using the number of kindergarten spots as instrument for having children. As Table 8 shows, having a child raises the probability of becoming inactive the following year by almost 10% for women, whilst it has no effect whatsoever on men. The effect on women is very large: the share of inactive NEETs is 11.8% (see Table 1), of whom 58.1% are women.

Table 8: The impact of having a newborn (IV estimates)

	Male		Female	
	(1)	(2)	(3)	(4)
VARIABLES	Inactive Neet 2016	Inactive Neet 2016	Inactive Neet 2016	Inactive Neet 2016
Newborn in 2016	0.0161	0.0169	0.0980**	0.0995**
	(0.0210)	(0.0211)	(0.0453)	(0.0435)
Observations	2,009	2,009	3,432	3,342
R-squared	0.025	0.025	0.192	0.191
Demographic Controls	YES	YES	YES	YES
Family Controls	YES	YES	YES	YES
Dwellings Controls	YES	YES	YES	YES
Region FE	NO	YES	NO	YES

Notes: Inactive Neet refers to the component of the Neet group that it is not actively seeking a job.
Demographic controls include age, parenthood, type of high school attended, years of schooling, gender and migrant background.
Family controls include mother's and father's educational level, co-residence with family, whether the relationship with parents is problematic, whether the parents are more educated than the child, and parental separation.
Dwelling controls include whether a relative owns the residence and whether the respondent is renting.
See the appendix for full specification details.
Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. Robust standard errors in parenthesis.

The full results, displayed in the appendix at the tables A30A31A32, indicate that the birth of a child does not significantly increase unemployment. This suggests that the drop in employ-

[4]Data on kindergarten spots in 2015 was retrieved on the IstatData online portal, from the annual Istat survey "Indagine sugli interventi e i servizi sociali dei comuni singoli e associati". Panel (b) of Figure 4 in the Appendix shows the variation across provinces of this instrument.

ment following childbirth is not primarily due to job loss followed by job search, but rather to an exit from the labor force. Taken together, our results strongly suggest that childbirth acts as a major turning point in the short-term trajectories of young women, increasing labor-market detachment.

These effects are robust to controls for pre-existing children, suggesting that they capture the specific burden of newborn care adding to the effects of general parenthood. The direction of the coefficients imply that, in the Italian context, having a newborn effectively displaces young women from both the labor market and the education system, leading to heightened risks of inactivity and NEET status, with potential long-run consequences for employment stability and earnings trajectories.

Our findings are relevant in evaluating policies carried out in Italy to cope with labor shortages by mobilizing the NEETs. This is the task set out for next Section.

5 The Youth Guarantee experience

Since its inception in 2013, the Youth Guarantee (YG) program has become a central component of the European Union's policy toolkit to increase youth employment. Its primary objective is to provide all NEETs with offers of slots in employment or training within few months of becoming unemployed or leaving formal education.
In Italy, the Youth Guarantee initiative, known locally as "Garanzia Giovani" (GG), was introduced in 2014 and, by the end of 2022, had registered approximately 1.72 million NEET participants. According to official data, a considerable majority of users — approximately 85% — were actively engaged by public employment services, with about 64.5% ultimately receiving some type of activation measure (ANPAL, 2022). As documented by Table 9, the principal interventions under GG have overwhelmingly focused on extracurricular internships, which accounted for more than half of all offers provided. Other measures, such as employment incentives and training programs, represented smaller shares of total offers.

5.1 The impact of Garanzia Giovani on the forgotten NEETs

In order to explore the effects of the Italian YG on the activation of NEETs we draw on INAPP's Participation, Labour, Unemployment Survey (PLUS), whose 2016 edition includes an ad-hoc module on Garanzia Giovani. Table 9 displays summary statistics for the respondents in the PLUS survey below 30 years of age.

Table 9: Summary statistics of under-30 respondents in the PLUS survey

Category	Sub-category	Percentage		
		Total	Male	Female
Employment status				
	Student	39.6	38.8	40.2
	Employed	33.1	34.4	32.0
	Unemployed-active	24.2	24.5	23.9
	Inactive	3.2	2.2	4.0
Sex				
		100.0	46.4	53.6
Education level				
	No qualification	0.1	0.1	0.1
	Primary school	10.5	12.6	8.7
	Lower secondary / vocational	58.1	63.0	53.8
	High-school diploma (4–5 yrs)	31.4	24.4	37.4
Age group				
	20–24	49.9	52.7	47.6
	25–29	50.1	47.3	52.4
Citizenship				
	Italian	99.2	99.4	99.0
	Non-Italian	0.8	0.6	0.9
	Dual citizenship	0.0	0.0	0.1
Focus on Garanzia Giovani (GG):				
Enrolled in GG				
	Yes, still enrolled	31.0	32.5	30.0
	Yes, but not enrolled anymore	5.8	5.4	6.2
	No	63.1	62.1	63.9
Received a GG offer				
	Yes	40.2	39.4	40.8
	No	59.8	60.6	59.2
Type of GG offer received				
	Job (incl. apprenticeship)	21.4	27.4	16.9
	Internship at a firm/organisation	61.1	57.0	64.3
	Civil service	4.8	3.8	5.6
	Training course	11.7	11.3	12.0
	Support/consulting for business creation	0.9	0.5	1.2

When asked why they do not work, NEETs report discouragement as, by far, primary reason (Figure 3). Childcare and family responsibilities represent the second leading reason for non-employment. It is particularly interesting to note how child and family care disproportionately fall on the shoulders of young women, a key issue in a country such as Italy with one of the largest gender employment gaps in the EU. A negligible share of NEETs declare that they do not work simply because they do not need to.

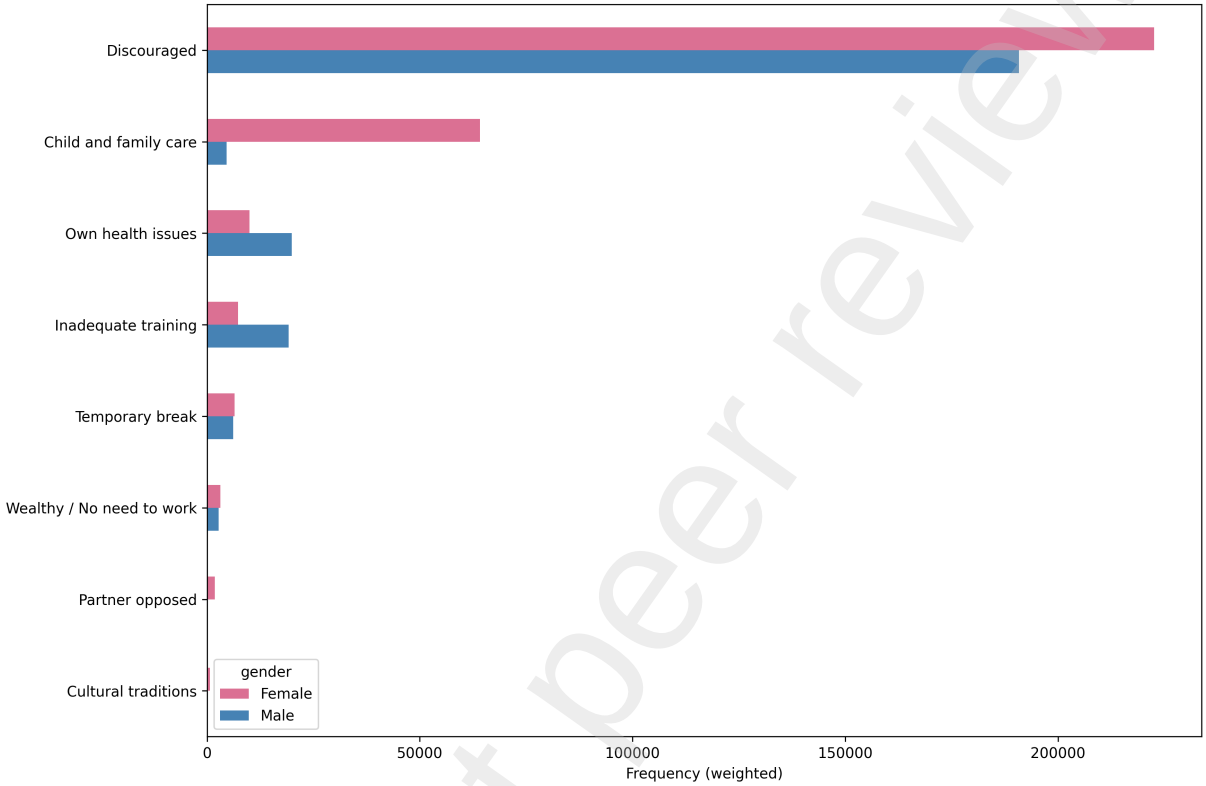

Figure 3: Reason for not having had a job. Source: INAPP's PLUS data 2016.

Table 10 suggests that participation in GG leading to the receipt of an activation offer substantially reduces the likelihood of remaining in a NEET status. Similarly, receiving a GG offer also reduces the probability of becoming discouraged, hence inactive NEET, with coefficients significant at the 1% level. On the other hand, however, youth who register for GG without receiving an offer, not only are more likely to remain NEET – but significantly also experience an increased risk of becoming inactive.

These analyses also underscore the role of socioeconomic factors, in line with previous results using other surveys: higher parental education reduces NEET risk, pointing to persistent intergenerational inequalities. Individual educational attainment further acts as a protective factor against inactivity, reflected in significant negative coefficients. Interestingly, gender does not explain much of the divide in this survey.

Given the importance of receiving an offer in exits from the NEET status, what are the key factors affecting the probability of receiving a job offer? In particular, in light of the results of the previous sections, does having young children and suffering from mental health distress

Table 10: Effect of Garanzia Giovani offers on being NEET and inactive

	NEET	NEET	inactive NEET	inactive NEET
GG	0.379***	0.355***	0.105***	0.095***
	(0.011)	(0.012)	(0.005)	(0.006)
GG*offer	-0.061***	-0.053***	-0.039***	-0.035***
	(0.011)	(0.011)	(0.005)	(0.005)
Female	-0.003	-0.007	0.007*	0.005
	(0.008)	(0.008)	(0.004)	(0.004)
Education	0.013*	0.015**	-0.011***	-0.011***
	(0.007)	(0.007)	(0.003)	(0.003)
Parents' education	-0.081***	-0.078***	-0.021***	-0.019***
	(0.005)	(0.005)	(0.003)	(0.003)
Region FE	No	Yes	No	Yes
Intercept	0.462***	0.430***	0.135***	0.125***
	(0.027)	(0.027)	(0.013)	(0.013)
R-squared	0.121	0.136	0.042	0.057
R-squared Adj.	0.121	0.134	0.042	0.055
F-statistic	306.873	72.725	97.600	27.935
No. Observations	11111	11111	11111	11111

Notes: Regression on the likelihood of being NEET based on having registered for the Garanzia Giovani (GG) and having received an offer from GG, controlling on demographic variables such as gender, education, family of origin and regional fixed effects. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. Source: INAPP's PLUS data 2016.

reduce the probability of receiving job offers in the GG program?

Testing this hypothesis is straightforward in the case of youth with children, as there is a variable in the PLUS survey providing this information. For mental health, unfortunately there is no variable capturing this dimension in the PLUS survey. Hence, we imputed the probability of suffering from mental health distress, taking advantage of the information on mental status provided by the Toniolo survey used in Section 4. In particular, we considered demographic variables common to both surveys (age, gender, education, parents' education, children, labor market inactivity) to estimate the impact of these variables on mental health in the Toniolo survey. We then used the resulting coefficients to create a probability of mental health distress variable in the PLUS survey.

Table 11 shows the resulting estimations in the group of NEETs in the PLUS survey. Both having young children and having mental health distress are associated with a lower probability of receiving a GG offer. The first two columns display the impact of having young children, alongside the standard demographic controls, suggesting that having children reduces by about 4 percentage points the likelihood of receiving a GG offer. The third and forth columns show the impact of mental health distress, which reduces by more than 15 p.p. the likelihood of receiv-

Table 11: Effect of children and mental health distress on the probability of receiving a Garanzia Giovani offer

	(1)	(2)	(3)	(4)
Young children	-0.039*	-0.041*		
	(0.023)	(0.023)		
Mental health distress			-0.159***	-0.175***
			(0.052)	(0.052)
Female	0.013	0.012		
	(0.010)	(0.009)		
Education	0.005	0.006		
	(0.008)	(0.008)		
Parents' education	0.002	0.002		
	(0.006)	(0.006)		
Region FE	No	Yes	No	Yes
Intercept	0.037	0.036	0.086***	0.084***
	(0.029)	(0.029)	(0.008)	(0.012)
R-squared	0.002	0.019	0.003	0.019
R-squared Adj.	0.000	0.011	0.003	0.013
F-statistic	1.370	2.488	9.458	3.069
No. Observations	2957	2957	3252	3252

Notes: Regression on the likelihood of receiving an offer in the Garanzia Giovani program, based on having small children or having a higher probability of mental health distress, controlling on the following demographic variables: gender, education, family of origin and regional fixed effects. Significance levels: $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$. Source: Toniolo data for mental health distress, INAPP's PLUS data 2016.

ing an offer. These two regressions are run without controls as the main demographic variables are used to create the distress probability variable. In all cases, NEETs with young children or mental health issues are less likely to receive an offer by the public employment services in the Garanzia Giovani program.

Hence, despite the extensive outreach and engagement efforts involved by the GG's policy design, the scheme does not seem to deal with either mental distress or with young parents, notably mothers, caregiving responsibilities. GG, in other words, does not appear to provide accommodations in terms of childcare support or flexible employment arrangements. Consequently, internships, the primary offer type, remain largely inaccessible or impractical for this subgroup.

Our findings point to the importance of adjusting the YG program to cope with these forgotten dimensions of the NEET status. While Italy's Garanzia Giovani has demonstrated some effectiveness in transitioning NEET youth into employment, its current structure remains inadequately equipped to address the multifaceted barriers faced by some of the most vulnerable NEET groups. Expanding policy offers beyond internships to include childcare support, flexible work arrangements, entrepreneurship training tailored to young caregivers, and more holistic

mental health and psychosocial support could significantly improve outcomes.

The experience of other EU countries can offer valuable examples as to how to address inactive NEETs. Comparative studies of the YG highlight the critical importance of integrated and personalized support services (European Commission, 2024). Finland stands out for integrating low-threshold mental-health services into its YG implementation, supported by its national "therapy guarantee" reforms aimed at the youth, which has enhanced participation among youth facing psychological barriers to employment or training (Finnish Ministry of Social Affairs and Health, 2020). Sweden and Denmark have also incorporated psychosocial counseling and multidisciplinary youth guidance within their YG frameworks, aligning with broader Nordic social-investment approaches (Eurofound, 2021, Mascherini, 2019).

On the childcare side, France and Belgium – especially Flanders – have linked YG participation with expanded access to subsidized early-childhood education and care, while Ireland has experimented with flexible training schedules and targeted childcare supports for young parents (Eurydice Report, 2019, OECD, 2025). Comparative assessments indicate that YG programs explicitly bundling employment or training offers with integrated mental-health services and guaranteed childcare access are more effective in engaging young women with children, yet such comprehensive models remain the exception and are insufficiently evaluated with gender-disaggregated data. (Escudero and López Mourelo, 2017, Ruggeri et al., 2020).

6 Final remarks

People Not in Education, Employment, or Training (NEET) represents a highly heterogeneous group. This study has unpacked several dimensions of the NEET status, notably the difference between active and inactive NEETs and documented that the latter has a significant gender dimension. Active NEETs exhibit markedly different trajectories and barriers compared to inactive NEETs, who often confront distinct personal or structural barriers such as mental health issues and caregiving responsibilities. We found that mental distress is a particularly salient determinant of NEET status, notably for young men, underscoring the importance of targeted mental health interventions within employment policy frameworks.

Another critical finding from our analysis pertains to the pronounced impact of parenthood on labor market outcomes. Childbirth and caregiving responsibilities substantially increase parents, notably women's, likelihood of becoming inactive and out of the education system. The Youth Guarantee (YG) and its Italian implementation, Garanzia Giovani (GG) provided, unlike YG schemes in Belgium and France, insufficient support for young caregivers and inadequate attention to mental health barriers. Policy effectiveness could be greatly enhanced by more inclusive interventions, specifically addressing these gaps through childcare support, mental health services, and integrated service hubs, as those provided in other European contexts such as Finland and Germany. Further work should possibly assess the effectiveness of these integrated hubs in

mobilizing the forgotten NEETs. Changes in the generational profile of mental depression, increasingly concentrated on young people, and the persistence of large child penalties in OECD countries indicate that these features of the NEET status are relevant and should not be overlooked by policies dealing with labor shortages.

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Technical Appendix

I Data description

Labor Force Surveys

LFS data used to estimate transition matrices come from the longitudinal component of ISTAT's Continuous Labor Force Survey (RCFL), covering waves from 2014 to 2019, by taking the subsample below 30 years of age. The first interview happens in the second semester as it is the first quarter available in the dataset. The RCFL is the primary source of Italian labor market statistics, and its rotating panel design allows re-interviewing of families over four quarterly waves within a 15-month span. Each quarter, roughly 75,000 households are surveyed, with 50% overlap across adjacent quarters enabling the construction of 3-month and 12-month transition matrices.

The RCFL longitudinal microdata are a subsample of individuals interviewed in the same municipality at both baseline and follow-up waves. Due to internal migration and attrition, the longitudinal sample does not represent the full national population but only those resident in the same city over the observation window. Transitions between labor market states (employment, unemployment, inactivity) are derived from these re-interviews.

Interviews are conducted via computer-assisted methods (CAPI for initial interviews and CATI for follow-ups), with procedures for deterministic matching of individual records. Survey weights are computed using calibration estimators to ensure representativeness across age, sex, region, and citizenship strata, accounting for differential non-response and attrition. All analyses apply the final longitudinal weights provided by ISTAT.

Table A1: Labor Force Survey Information

Year	Observations
2014	8,275
2015	8,442
2016	7,910
2017	7,912
2018	7,842
2019	7,645

Toniolo surveys

Data are drawn from the 2015 and 2016 waves of the surveys used by the Istituto Toniolo to write the Rapporto Giovani. The survey waves cover youths aged 18–33. The 2015 wave comprises 9,358 observations; in 2016, 6,172 of these respondents were re-interviewed, producing a linked two-year panel of 6,172 individuals that also constitutes the 2016 cross-sectional sample. Fieldwork in both years was carried out by Ipsos, and our analyses use the survey weights provided by this agency to account for the sampling design and differential non-response.

PLUS - INAPP

The data used in the analysis of Garanzia Giovani are drawn from the 2016 wave of the Participation Labor Unemployment Survey (PLUS 2016), which includes a total of 52,519 respondents aged 18–74. Among these, 11,891 respondents are aged under 30, comprising 6,379 females and 5,512 males. The survey also includes a total of 3,252 NEET individuals, with 1,778 females and 1,474 males. Fieldwork for the 2016 wave was carried out by INAPP using computer-assisted telephone interviewing (CATI), with sampling based on stratified random selection to ensure representativeness at national and regional levels. INAPP provides calibrated survey weights to correct for the sampling design and potential non-response bias. All analyses in our study apply the appropriate survey weights provided in the dataset documentation to produce nationally representative estimates.

II Additional tables

Panel summary statistics

Table A2: Summary Statistics Toniolo Panel, first part

Variable	Mean	SD	Min	Max	N
Studying	0.34	0.47	0.00	1.00	6172
Relationship problems w/ father	0.13	0.34	0.00	1.00	5729
Relationship problems w/ mother	0.06	0.23	0.00	1.00	6013
People are trustworthy	0.34	0.48	0.00	1.00	6172
Future full of risks	0.72	0.45	0.00	1.00	6172
Life close to ideal	0.42	0.49	0.00	1.00	6172
Satisfied with life	0.53	0.50	0.00	1.00	6172
Achieved what I wanted	0.50	0.50	0.00	1.00	6172
Change almost nothing	0.42	0.49	0.00	1.00	6172
Able to concentrate	0.77	0.42	0.00	1.00	6172
Felt useful	0.79	0.41	0.00	1.00	6172
Able to make decisions	0.82	0.38	0.00	1.00	6172
Able to do daily tasks	0.78	0.41	0.00	1.00	6172
Able to handle problems	0.81	0.39	0.00	1.00	6172
Felt happy	0.75	0.43	0.00	1.00	6172
Felt worried	0.65	0.48	0.00	1.00	6172
Felt stressed	0.72	0.45	0.00	1.00	6172
Unable to overcome difficulties	0.69	0.46	0.00	1.00	6172
Felt unhappy	0.60	0.49	0.00	1.00	6172
Lost confidence	0.57	0.49	0.00	1.00	6172
Felt worthless	0.50	0.50	0.00	1.00	6172
As valuable as others	0.87	0.33	0.00	1.00	6172
I have qualities	0.94	0.24	0.00	1.00	6172
Feel like a failure	0.45	0.50	0.00	1.00	6172
As capable as others	0.93	0.25	0.00	1.00	6172
Few things I'm proud of	0.50	0.50	0.00	1.00	6172
Positive attitude toward self	0.83	0.38	0.00	1.00	6172
Satisfied with myself	0.85	0.36	0.00	1.00	6172
Respect for myself	0.79	0.41	0.00	1.00	6172
Feel useless	0.54	0.50	0.00	1.00	6172
Feel good for nothing	0.48	0.50	0.00	1.00	6172
Distracted by new projects	0.80	0.40	0.00	1.00	6172
Set goal, then abandon	0.68	0.47	0.00	1.00	6172
Hard to remain focused	0.56	0.50	0.00	1.00	6172
Complete what I start	0.84	0.37	0.00	1.00	6172
Diligent person	0.91	0.28	0.00	1.00	6172
Inactive in 2015	0.03	0.16	0.00	1.00	6172
Male	0.37	0.48	0.00	1.00	6172
Age	27.25	4.20	18.00	33.00	6172
Migrant background	0.06	0.23	0.00	1.00	6172
Has children	0.13	0.34	0.00	1.00	6172
Parents separated (now)	0.13	0.33	0.00	1.00	5607
Neet in 2015	0.19	0.39	0.00	1.00	6172
Unemployed in 2015	0.16	0.37	0.00	1.00	6172
Living w/ family	0.58	0.49	0.00	1.00	6172
Vocational track (tecn.)	0.84	0.37	0.00	1.00	1876
Academic track (liceo)	0.57	0.50	0.00	1.00	6172
Vocational track (prof.)	0.13	0.33	0.00	1.00	6172
Observations	6176				

Table A3: Summary statistics Toniolo Panel, second part

Variable	Mean	SD	Min	Max	N
Mental distress factor (dim1)	.000	1.000	-2.039	2.958	6 172
Nursery places per 100 kids	20.232	9.684	4.7	39.6	5 906
Own their home	0.42	0.49	0.00	1.00	6172
Relative own home	0.38	0.49	0.00	1.00	6172
Renting	0.15	0.36	0.00	1.00	6172
Mother lets me choose projects	0.59	0.49	0.00	1.00	5998
Mother lets me decide	0.61	0.49	0.00	1.00	5992
Mother lets me choose tasks	0.60	0.49	0.00	1.00	5997
Mother considers my POV	0.40	0.49	0.00	1.00	6005
Mother solves my problems	0.69	0.46	0.00	1.00	6149
Mother imposes their POV	0.22	0.42	0.00	1.00	4552
Mother looks for opportunities	0.28	0.45	0.00	1.00	4336
Father lets me choose projects	0.56	0.50	0.00	1.00	5714
Father lets me decide	0.59	0.49	0.00	1.00	5690
Father lets me choose tasks	0.55	0.50	0.00	1.00	
Father considers my POV	0.31	0 .46	0	1	5711
Father solves my problems	0.64	0.48	0	1	6136
Mother's years of schooling	11.33	3.80	0	20	6165
Mother tertiary ed.	0.16	0.36	0	1	6176
Mother high school ed.	0.50	.50	0	1	6176
Mother dropout	0.34	0.47	0	1	6176
Father's years of schooling	11.40	4.045	0	20	6144
Father tertiary ed.	.18	.38	0	1	6176
Father high school ed.	.46	.49	0	1	6176
Father dropout	0.36	0.48	0	1	6176
Years of schooling	14.57	3.18	0	20	6176
"Depression" in 2015	0.31	0.46	0.00	1.00	6172
Newborn in 2016 (imputed)	0.04	0.20	0.00	1.00	6172
Observations	6176				

Additional Transition Matrices from the LFS

In this section we display additional transition matrices for the past few years, both in aggregate for Italy and for the North, Centre and the South and Islands (henceforth called the South) macro-regions. The tables show the transitions by gender and in aggregate and return a picture similar to that outlined in the main text. Please note that Emp refers to employed, Stud to student, N-A to "Neet active" (in other words to unemployed individuals) and N-I to "Neet inactive".

Table A4: Under–30 transition matrix — North — Q2 2013 to Q2 2014

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	88	2	5	5	92	1	4	3	83	4	6	7
Stud	6	86	4	4	6	86	4	3	6	86	4	4
N-A	30	7	38	26	30	10	39	22	30	4	36	30
N-I	17	6	21	55	25	4	28	43	13	7	19	61

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2013; columns indicate status in Q2 2014. Row percentages sum to 100.

Table A5: Under–30 transition matrix — Centre — Q2 2013 to Q2 2014

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	3	5	7	88	1	6	5	82	4	4	9
Stud	4	88	3	4	5	88	3	4	4	89	4	4
N-A	37	8	32	23	34	10	35	21	40	6	28	25
N-I	24	9	19	48	19	9	25	47	28	8	14	49

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2013; columns indicate status in Q2 2014. Row percentages sum to 100.

Table A6: Under–30 transition matrix — South — Q2 2013 to Q2 2014

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	78	2	10	10	82	2	10	7	73	3	10	14
Stud	3	86	5	6	3	85	5	7	2	87	5	6
N-A	18	6	46	30	19	4	46	31	18	8	45	29
N-I	14	8	25	53	17	6	30	47	12	9	20	59

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2013; columns indicate status in Q2 2014. Row percentages sum to 100.

Table A7: Under–30 transition matrix — All areas — Q2 2013 to Q2 2014

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	2	6	6	89	1	6	5	80	4	7	9
Stud	5	87	4	5	5	86	4	5	4	87	4	4
N-A	25	7	41	28	25	7	42	26	25	6	39	29
N-I	16	7	23	53	19	6	29	46	14	8	19	58

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2013; columns indicate status in Q2 2014. Row percentages sum to 100.

Table A8: Under–30 transition matrix — North — Q2 2014 to Q2 2015

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	90	2	4	4	92	2	3	3	86	3	4	6
Stud	7	85	4	3	7	85	4	4	7	86	4	3
N-A	35	7	33	25	37	9	32	22	32	5	34	29
N-I	25	7	14	53	36	9	22	32	18	6	10	66

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2014; columns indicate status in Q2 2015. Row percentages sum to 100.

Table A9: Under–30 transition matrix — Centre — Q2 2014 to Q2 2015

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	2	8	5	86	3	8	4	85	1	8	6
Stud	6	86	4	4	7	84	4	4	6	88	3	4
N-A	34	6	33	27	40	5	35	20	29	6	32	33
N-I	26	10	23	41	30	12	27	31	24	8	21	47

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2014; columns indicate status in Q2 2015. Row percentages sum to 100.

Table A12: Under–30 transition matrix — North — Q2 2015 to Q2 2016

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	89	3	4	4	91	1	5	3	87	5	4	5
Stud	8	84	4	4	8	83	4	5	7	86	3	4
N-A	40	5	32	23	42	4	31	23	38	6	34	23
N-I	24	8	16	51	28	11	20	41	23	7	14	56

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2015; columns indicate status in Q2 2016. Row percentages sum to 100.

Table A10: Under–30 transition matrix — South — Q2 2014 to Q2 2015

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	79	3	8	9	81	3	9	7	76	3	8	13
Stud	3	85	5	7	3	84	5	7	3	86	4	7
N-A	18	4	45	33	19	3	47	31	16	6	43	35
N-I	11	8	23	58	14	6	26	55	10	10	20	60

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2014; columns indicate status in Q2 2015. Row percentages sum to 100.

Table A11: Under–30 transition matrix — All areas — Q2 2014 to Q2 2015

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	86	3	6	6	88	3	5	4	83	3	6	8
Stud	5	85	4	5	6	84	5	5	5	86	4	5
N-A	26	6	39	29	28	5	40	26	24	6	38	32
N-I	17	8	20	54	22	8	25	45	14	8	17	60

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2014; columns indicate status in Q2 2015. Row percentages sum to 100.

Table A13: Under–30 transition matrix — Centre — Q2 2015 to Q2 2016

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	87	4	5	4	90	3	4	2	83	4	7	6
Stud	6	85	4	5	5	84	5	6	7	86	3	4
N-A	33	4	39	24	33	4	47	16	33	4	30	33
N-I	20	13	20	48	27	21	16	37	13	7	23	57

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2015; columns indicate status in Q2 2016. Row percentages sum to 100.

Table A14: Under–30 transition matrix — South — Q2 2015 to Q2 2016

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	82	4	7	8	86	2	5	6	74	6	9	10
Stud	3	87	5	6	3	85	6	6	3	88	3	6
N-A	21	6	44	29	24	5	45	26	16	8	43	34
N-I	14	7	24	55	15	7	27	51	13	7	21	59

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2015; columns indicate status in Q2 2016. Row percentages sum to 100.

Table A15: Under–30 transition matrix — All areas — Q2 2015 to Q2 2016

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	87	3	5	5	90	2	5	4	83	5	6	7
Stud	6	85	4	5	6	84	5	5	5	87	3	5
N-A	29	5	39	26	31	4	41	24	26	6	37	30
N-I	18	8	21	53	20	10	24	47	16	7	19	58

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2015; columns indicate status in Q2 2016. Row percentages sum to 100.

Table A16: Under–30 transition matrix — North — Q2 2016 to Q2 2017

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	89	3	4	4	90	3	4	2	87	4	4	6
Stud	8	85	3	4	9	84	3	4	7	86	3	4
N-A	41	6	29	24	43	4	33	20	38	9	26	28
N-I	23	7	13	57	31	8	18	42	17	6	10	66

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2016; columns indicate status in Q2 2017. Row percentages sum to 100.

Table A17: Under–30 transition matrix — Centre — Q2 2016 to Q2 2017

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	2	7	7	88	2	6	4	80	1	8	11
Stud	4	89	2	4	4	88	4	4	4	90	1	5
N-A	35	8	30	27	38	8	30	25	32	8	30	30
N-I	21	9	12	58	29	8	14	49	14	9	11	66

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2016; columns indicate status in Q2 2017. Row percentages sum to 100.

Table A18: Under–30 transition matrix — South — Q2 2016 to Q2 2017

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	78	2	8	12	81	1	7	10	73	3	10	15
Stud	3	87	4	7	3	86	4	7	3	87	4	6
N-A	20	6	35	39	20	5	39	35	19	7	30	44
N-I	14	5	19	62	20	4	23	53	9	6	16	68

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2016; columns indicate status in Q2 2017. Row percentages sum to 100.

Table A19: Under–30 transition matrix — All areas — Q2 2016 to Q2 2017

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	85	3	6	6	87	2	5	5	83	3	6	9
Stud	5	86	3	5	6	86	3	5	5	87	3	5
N-A	28	6	32	33	30	6	36	29	27	8	29	37
N-I	17	6	16	60	24	6	20	50	12	7	14	67

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2016; columns indicate status in Q2 2017. Row percentages sum to 100.

Table A20: Under–30 transition matrix — North — Q2 2017 to Q2 2018

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	90	3	3	3	92	3	3	3	89	3	4	4
Stud	9	84	3	4	9	83	4	4	8	85	2	5
N-A	40	7	28	25	38	6	28	28	44	8	27	21
N-I	27	9	13	52	34	13	17	36	22	6	11	60

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2017; columns indicate status in Q2 2018. Row percentages sum to 100.

Table A21: Under–30 transition matrix — Centre — Q2 2017 to Q2 2018

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	89	2	3	5	91	2	3	4	87	2	4	7
Stud	7	87	2	4	6	87	3	5	7	87	2	4
N-A	39	5	20	36	48	2	19	31	28	9	22	41
N-I	28	13	11	48	31	16	14	40	25	11	8	56

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2017; columns indicate status in Q2 2018. Row percentages sum to 100.

Table A22: Under–30 transition matrix — South — Q2 2017 to Q2 2018

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	81	2	6	11	85	1	7	7	76	2	5	16
Stud	4	86	4	7	4	85	3	8	3	87	4	5
N-A	20	5	39	36	22	6	42	31	17	3	36	43
N-I	14	7	20	59	21	8	23	48	9	6	18	67

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2017; columns indicate status in Q2 2018. Row percentages sum to 100.

Table A23: Under–30 transition matrix — All areas — Q2 2017 to Q2 2018

	All				Men				Women			
	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I	Emp	Stud	N-A	N-I
Emp	88	2	4	6	90	2	4	4	85	3	4	8
Stud	6	85	3	5	7	85	3	5	6	86	3	5
N-A	29	5	33	33	30	5	34	30	27	6	31	36
N-I	19	8	17	56	26	11	20	43	15	7	14	63

Note. Emp = Employed, Stud = Student, N-A = NEET active, N-I = NEET inactive. NEETs are classified as "active" if they are not employed but actively seeking employment (i.e. unemployed), "inactive" otherwise. Rows indicate status in Q2 2017; columns indicate status in Q2 2018. Row percentages sum to 100.

III The mental distress factor

In this section, we present the tables for the MCA analysis and a summary of what is MCA. In contrast to Principal Component Analysis (PCA), which is based on the covariance matrix of continuous variables, MCA deals with categorical data by analyzing the deviation from independence among categories. It allows for dimensionality reduction and visualization of complex categorical datasets, where individuals and variable categories can be jointly represented in a lower-dimensional Euclidean space.

MCA is particularly suited for binary data when each category of a variable is encoded as a separate dummy (0/1) variable. In this sense, MCA serves as a natural counterpart to PCA when the data is not continuous. In particular, we extract two mental health factors, we use the first one in the regressions as it explains most of the variance in the dummies being considered. From the tables below, which report the mean it is clear that this factor can easily be interpreted as mental distress, since it has positive values for negative variables and negative variables for positive ones.

Table A24: Means for panel

Variable	Mean (0)	Mean (1)
Able to concentrate	0.65	-0.20
Able to do daily tasks	0.79	-0.22
Able to handle problems	0.94	-0.22
Able to make decisions	0.94	-0.20
Achieved what I wanted	0.53	-0.52
As capable as others	0.72	-0.05
As valuable as others	0.36	-0.05
Change almost nothing	0.40	-0.55
Complete what I start	0.69	-0.13
Diligent person	0.70	-0.07
Distracted by new projects	-0.29	0.07
Feel good for nothing	-0.63	0.67
Feel like a failure	-0.58	0.72
Feel useless	-0.71	0.61
Felt happy	0.84	-0.28
Felt stressed	-0.50	0.20
Felt unhappy	-0.61	0.40
Felt useful	0.86	-0.23
Felt worried	-0.47	0.26
Felt worthless	-0.49	0.50
Few things I'm proud of	-0.52	0.52
Future full of risks	-0.52	0.20
Hard to remain focused	-0.45	0.35
I have qualities	0.93	-0.06
Life close to ideal	0.46	-0.62
Lost confidence	-0.59	0.44
People are trustworthy	0.18	-0.34
Positive attitude toward self	1.10	-0.23
Respect for myself	-0.66	0.18
Satisfied with life	0.64	-0.57
Satisfied with myself	1.24	-0.22
Set goal, then abandon	-0.41	0.19
Unable to overcome difficulties	-0.59	0.27
"Depression"	-0.41	0.94

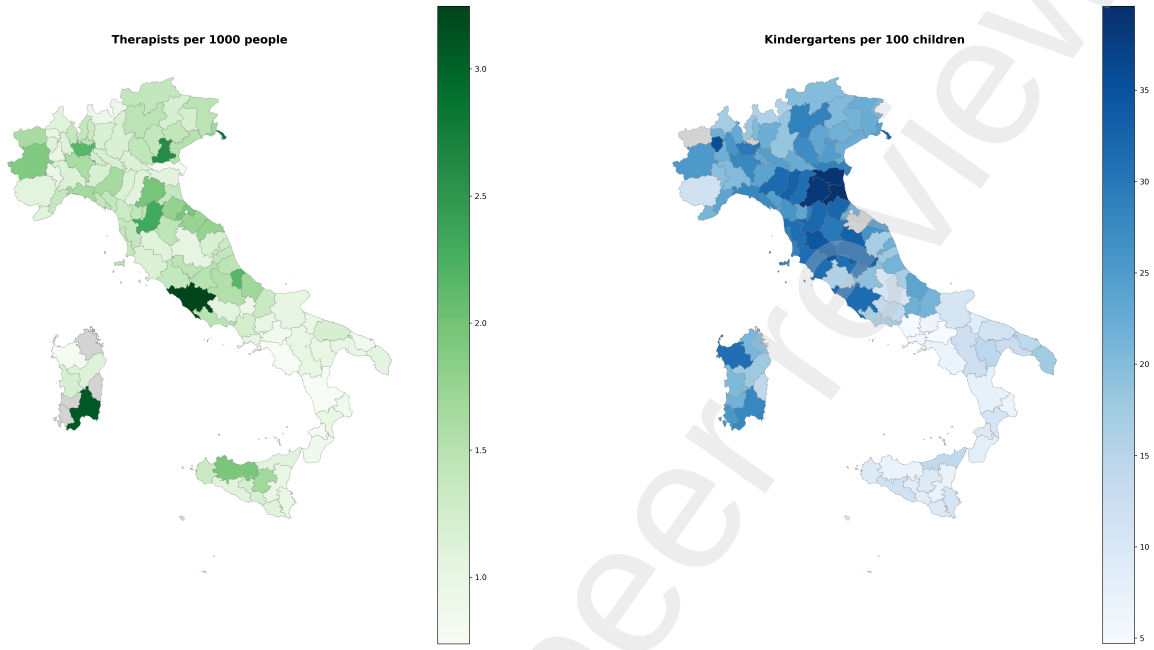
IV The depression variable

The variable depression was coded on the basis of expert advice from a licensed psychologist and it corresponds to the question d171 of the Toniolo survey. The dummy variable was coded as being 1 (i.e. "depressed") for people stating that they were "Not at all happy" ("Per nulla felice") or "Not happy" ("Poco felice") and it was coded 0 (i.e. "not depressed") for those stating that they were "Somewhat happy" ("Abbastanza felice") or "Very happy" ("Molto felice").

V Additional results

V.1 Instrument maps

The following Figures show the geographical variation, at the province level, of the instruments used in the IV regression.



(a) Instrument for mental health (b) Instrument for young children

Figure 4: Heat map for IV regression instruments at the province level. Sources: Ordine degli Psicologi for (a), Istat data for (b).

V.2 Mental health

Full results for LPM

In the tables below we fit the following panel model, on the subsample of people that were occupied in 2015:

$$S_{i,2016} = \beta_1 M_{i,2015} + \beta_2 E_{i,2015} + \beta_3 EM_i + \beta_4 EF_i + \beta_5 M_{i,2015} * ME_{i,2015} + \beta_6 ME_{i,2015} + \beta_7 IB_i + \beta_8 C_{i,2015} + \beta_9 G_{i,2015} + \beta_{10} LF_{i,2015} + \beta_{11} PP_{i,2015} + \beta_{12} H_i + \beta_{14} V_i + \beta_{15} A_{i,2015} + \beta_{16} R_{i,2015} + \beta_{17} RO_{i,2015} + \beta_{18} PS_{i,2015} + REGIO_{i,2015} + \epsilon_{i,2015} \quad (2)$$

where:

- $S_{i,2015}$ is the state in 2016 (NEET aggregate or occupied);
- $M_{i,2015}$ is the mental distress factor for person i in 2015;

- $E_{i,2015}$ is the number of years of schooling of person i in 2015;
- EM_i and EF_i are, respectively, the years of education of i's mother and father;
- $ME_{i,2015}$ is a dummy telling us whether i's parents are more educated than i in 2015, while $M_{i,2015} * ME_{i,2015}$ gives its interaction with the mental distress factor;
- IB_i is a dummy telling us whether i's has migrant background (born out of parents not born in Italy);
- $C_{i,2015}$ is a dummy representing whether individual i has children or not in 2015
- $G_{i,2015}$ is a dummy assuming value of 1 if is has male gender;
- $LF_{i,2015}$ is a dummy telling us whether i is living with a family member in 2015;
- $PP_{i,2015}$ is a dummy indicating whether i has stated to have a problematic relationship with either of their parents in 2015;
- H_i and V_i are dummies capturing whether i has attended an academic or vocational track high school;
- $A_{i,2015}$ controls for the age of i in 2015;
- $R_{i,2015}$ and $RO_{i,2015}$ are dummies capturing whether i in 2015 lives in a rented house or in a house owned by a relative;
- $PS_{i,2015}$ is a dummy indicating whether i's parents are separated in 2015;
- $REGIO_{i,2015}$ are a fixed effects indicating in which region i lives in 2015;

Table A25: The impact of mental distress - full results for the LPM

VARIABLES	(1) Neet in 2016	(2) Occupied in 2016	(3) Neet in 2016	(4) Occupied in 2016
Mental distress factor	0.0140*	-0.0218**	0.0130*	-0.0208**
	(0.00788)	(0.00855)	(0.00780)	(0.00857)
Parents more educated	0.0663	-0.0455	0.0623	-0.0417
	(0.0448)	(0.0462)	(0.0438)	(0.0455)
Mental distress * Parents more educated	0.0129	0.00459	0.0122	0.00595
	(0.0381)	(0.0392)	(0.0379)	(0.0388)
Years of schooling (imputed)	-0.00191	0.000681	-0.00222	0.000858
	(0.00334)	(0.00342)	(0.00330)	(0.00339)
Mother's years of schooling	-0.00498	0.00412	-0.00513	0.00447
	(0.00310)	(0.00323)	(0.00319)	(0.00334)
Father's years of schooling	-0.00632**	0.00493	-0.00596**	0.00451
	(0.00316)	(0.00330)	(0.00297)	(0.00312)
Migrant background	0.0252	-0.0378	0.0314	-0.0430
	(0.0600)	(0.0602)	(0.0570)	(0.0580)
Has children	-0.00748	0.00383	-0.00398	0.00115
	(0.0179)	(0.0193)	(0.0176)	(0.0193)
Male	0.00540	-0.00310	0.00571	-0.00242
	(0.0155)	(0.0167)	(0.0155)	(0.0168)
Living w/ family	0.0191	-0.0372	0.0157	-0.0335
	(0.0305)	(0.0324)	(0.0296)	(0.0316)
Relationship problems w/ a parent	-0.0336*	0.0311	-0.0304*	0.0282
	(0.0185)	(0.0211)	(0.0183)	(0.0210)
Academic track (liceo)	0.0241	-0.0315	0.0242	-0.0313
	(0.0247)	(0.0254)	(0.0248)	(0.0256)
Vocational track (professionale)	-0.0173	0.0172	-0.0148	0.0134
	(0.0225)	(0.0243)	(0.0217)	(0.0237)
Age	-0.00596*	0.00913***	-0.00590**	0.00932***
	(0.00306)	(0.00326)	(0.00294)	(0.00317)
Renting	0.0338	-0.0493*	0.0371	-0.0531*
	(0.0268)	(0.0295)	(0.0259)	(0.0291)
Relative own home	0.0136	0.000256	0.0188	-0.00466
	(0.0306)	(0.0326)	(0.0290)	(0.0311)
Parents separated (now)	-0.0131	0.00784	-0.0136	0.00733
	(0.0230)	(0.0266)	(0.0223)	(0.0263)
Constant	0.352***	0.586***	0.349***	0.580***
	(0.114)	(0.118)	(0.111)	(0.115)
Observations	2,651	2,651	2,635	2,635
R-squared	0.042	0.042	0.053	0.051
Region FE	NO	NO	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results using a probit model

We fit the same model on the same subsample using probit for completeness

Table A26: The impact of mental distress - probit model

VARIABLES	(1) Neet in 2016	(2) Occupied in 2016	(3) Neet in 2016	(4) Occupied in 2016
Mental distress factor	0.116*	-0.155***	0.116*	-0.155***
	(0.0599)	(0.0541)	(0.0599)	(0.0541)
Parents more educated	0.415	-0.256	0.415	-0.256
	(0.255)	(0.238)	(0.255)	(0.238)
Mental distress * Parents more educated	0.0577	0.0891	0.0577	0.0891
	(0.239)	(0.211)	(0.239)	(0.211)
Years of schooling (imputed)	-0.0200	0.00163	-0.0200	0.00163
	(0.0238)	(0.0208)	(0.0238)	(0.0208)
Mother's years of schooling	-0.0331	0.0252	-0.0331	0.0252
	(0.0232)	(0.0204)	(0.0232)	(0.0204)
Father's years of schooling	-0.0539**	0.0314	-0.0539**	0.0314
	(0.0221)	(0.0195)	(0.0221)	(0.0195)
Migrant background	0.218	-0.244	0.218	-0.244
	(0.307)	(0.262)	(0.307)	(0.262)
Has children	-0.0537	0.0306	-0.0537	0.0306
	(0.176)	(0.163)	(0.176)	(0.163)
Male	0.0493	-0.0386	0.0493	-0.0386
	(0.117)	(0.105)	(0.117)	(0.105)
Living w/ family	0.161	-0.233	0.161	-0.233
	(0.192)	(0.172)	(0.192)	(0.172)
Relationship problems w/ a parent	-0.277*	0.208	-0.277*	0.208
	(0.153)	(0.135)	(0.153)	(0.135)
Academic track (liceo)	0.215	-0.224	0.215	-0.224
	(0.169)	(0.146)	(0.169)	(0.146)
Vocational track (professionale)	-0.0880	0.0702	-0.0880	0.0702
	(0.159)	(0.150)	(0.159)	(0.150)
Age	-0.0440**	0.0586***	-0.0440**	0.0586***
	(0.0180)	(0.0166)	(0.0180)	(0.0166)
Renting	0.336*	-0.368**	0.336*	-0.368**
	(0.180)	(0.166)	(0.180)	(0.166)
Relative own home	0.156	-0.0487	0.156	-0.0487
	(0.167)	(0.149)	(0.167)	(0.149)
Parents separated (now)	-0.112	0.0523	-0.112	0.0523
	(0.173)	(0.165)	(0.173)	(0.165)
Constant	0.438	-0.471	0.438	-0.471
	(0.657)	(0.578)	(0.657)	(0.578)
Observations	2,605	2,605	2,605	2,605
Region FE	NO	NO	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

V.2.1 IV estimates for depression

The second stage of our IV for the impact of newborns fits the following model:

$$S_{i,2016} = \beta_1 D^{IV}_{i,2016} + \beta_2 E_{i,2015} + \beta_3 EM_i + \beta_4 EF_i + \beta_5 ME_{i,2015} + \beta_6 IB_i + \beta_7 C_{i,2015} + \beta_8 G_i + \beta_9 LF_{i,2015} + \beta_{10} PP_{i,2015} + \beta_{11} H_i + \beta_{12} V_i + \beta_{13} A_{i,2015} + \beta_{14} R_{i,2015} + \beta_{15} RO_{i,2015} + \beta_{16} PS_{i,2015} + \beta_{17} SN_{i,2015} + REGIO_{i,2015} + \epsilon_{i,2016} \quad (3)$$

where:

- $S_{i,2016}$ is the labor market status in 2016 (NEET aggregate, NEET active, NEET inactive not student, working)
- $D_{i,2015}$ is a dummy telling us whether in 2015 they are "depressed" according to our measure $D^{IV}_{i,2015}$ is the same dummy instrumented by the number of therapists per 1000 in the province of residence in 2014;
- $E_{i,2015}$ is the number of years of schooling of person i in 2015;
- EM_i and EF_i are, respectively, the years of education of i's mother and father;
- $ME_{i,2015}$ is a dummy telling us whether i's parents are more educated than i in 2015;
- IB_i is a dummy telling us whether i's has migrant background (born out of parents not born in Italy);
- $C_{i,2015}$ is a dummy representing whether individual i has children or not in 2015
- $G_{i,2015}$ is a dummy assuming value of 1 if is has male gender in 2015;
- $LF_{i,2015}$ is a dummy telling us whether i is living with a family member in 2015;
- $PP_{i,2015}$ is a dummy indicating whether i has stated to have a problematic relationship with either of their parents in 2015;
- H_i and V_i are dummies capturing whether i has attended an academic or vocational track high school;
- $A_{i,2015}$ controls for the age of i in 2015;
- $R_{i,2015}$ and $RO_{i,2015}$ are dummies capturing whether i in 2015 lives in a rented house or in a house owned by a relative;
- $PS_{i,2015}$ is a dummy indicating whether i's parents are separated in 2015;
- $REGIO_{i,2015}$ is a fixed effect indicating in which region are i lives in 2015;

Table A27: The impact of mental distress (employed all)

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Depressed	0.0556***	0.0549***	0.000548	-0.0511**	0.0543***	0.0533***	0.000828	-0.0496**
	(0.0212)	(0.0207)	(0.00474)	(0.0222)	(0.0206)	(0.0200)	(0.00475)	(0.0217)
Parents more educated	0.0703*	0.0626	0.00770	-0.0519	0.0676	0.0606	0.00706	-0.0500
	(0.0421)	(0.0401)	(0.0146)	(0.0440)	(0.0414)	(0.0390)	(0.0148)	(0.0435)
Years of schooling (imputed)	-0.00152	-0.000754	-0.000713	0.000403	-0.00187	-0.00109	-0.000726	0.000559
	(0.00320)	(0.00287)	(0.00143)	(0.00331)	(0.00323)	(0.00292)	(0.00135)	(0.00334)
Mother's years of schooling	-0.00440	-0.00522*	0.000796	0.00392	-0.00465	-0.00551*	0.000841	0.00440
	(0.00308)	(0.00286)	(0.00127)	(0.00322)	(0.00318)	(0.00295)	(0.00129)	(0.00334)
Father's years of schooling	-0.00685**	-0.00431	-0.00253*	0.00509	-0.00644**	-0.00384	-0.00260*	0.00464
	(0.00319)	(0.00291)	(0.00148)	(0.00332)	(0.00298)	(0.00266)	(0.00146)	(0.00312)
Migrant background	0.0252	0.0391	-0.0140***	-0.0365	0.0314	0.0406	-0.00935**	-0.0414
	(0.0578)	(0.0572)	(0.00495)	(0.0580)	(0.0550)	(0.0544)	(0.00420)	(0.0561)
Has children	-0.00790	-0.0158	0.00848	0.00349	-0.00511	-0.0121	0.00755	0.00156
	(0.0181)	(0.0124)	(0.0138)	(0.0195)	(0.0181)	(0.0126)	(0.0134)	(0.0198)
Male	0.00692	0.00180	0.00496	-0.00425	0.00644	0.000971	0.00528	-0.00293
	(0.0151)	(0.0143)	(0.00481)	(0.0165)	(0.0151)	(0.0144)	(0.00484)	(0.0166)
Living w/ family	0.000918	0.00701	-0.00606	-0.0213	-0.00182	0.00635	-0.00821	-0.0183
	(0.0278)	(0.0267)	(0.00804)	(0.0306)	(0.0271)	(0.0257)	(0.00834)	(0.0301)
Relationship problems w/ a parent	-0.0485***	-0.0352**	-0.0134***	0.0433**	-0.0451***	-0.0322**	-0.0130***	0.0399**
	(0.0160)	(0.0156)	(0.00400)	(0.0196)	(0.0156)	(0.0152)	(0.00427)	(0.0194)
Academic track (liceo)	0.0187	0.0194	-0.000430	-0.0252	0.0184	0.0193	-0.000698	-0.0244
	(0.0237)	(0.0233)	(0.00395)	(0.0245)	(0.0238)	(0.0233)	(0.00424)	(0.0248)
Vocational track (professionale)	-0.0201	-0.0203	0.000191	0.0199	-0.0186	-0.0187	8.33e-05	0.0171
	(0.0217)	(0.0208)	(0.00698)	(0.0237)	(0.0212)	(0.0200)	(0.00746)	(0.0235)
Age	-0.00612**	-0.00750**	0.00136*	0.00949***	-0.00597**	-0.00741***	0.00142*	0.00957***
	(0.00302)	(0.00294)	(0.000798)	(0.00323)	(0.00287)	(0.00279)	(0.000784)	(0.00311)
Renting	0.0200	0.00635	0.0135	-0.0368	0.0236	0.00880	0.0147	-0.0408
	(0.0238)	(0.0193)	(0.0150)	(0.0279)	(0.0232)	(0.0186)	(0.0149)	(0.0278)
Relative own home	0.0244	0.0243	2.49e-05	-0.00807	0.0300	0.0280	0.00196	-0.0134
	(0.0284)	(0.0282)	(0.00337)	(0.0309)	(0.0269)	(0.0266)	(0.00358)	(0.0296)
Parents separated (now)	-0.0115	-0.0115	-7.64e-05	0.00662	-0.0133	-0.0150	0.00173	0.00758
	(0.0224)	(0.0219)	(0.00575)	(0.0263)	(0.0218)	(0.0213)	(0.00525)	(0.0261)
Constant	0.344***	0.346***	-0.00168	0.586***				
	(0.113)	(0.111)	(0.0252)	(0.117)				
Observations	2,614	2,614	2,614	2,614	2,614	2,614	2,614	2,614
R-squared	0.048	0.057	0.022	0.043	0.047	0.056	0.023	0.042
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A28: The impact of mental distress (employed men)

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Depressed	0.0936***	0.0928***	0.000870	-0.101***	0.0911***	0.0901***	0.00105	-0.100***
	(0.0336)	(0.0327)	(0.00691)	(0.0344)	(0.0319)	(0.0308)	(0.00735)	(0.0330)
Parents more educated	0.0833	0.0649	0.0184	-0.0804	0.0868*	0.0666	0.0202	-0.0855
	(0.0518)	(0.0484)	(0.0215)	(0.0540)	(0.0498)	(0.0460)	(0.0207)	(0.0525)
Years of schooling (imputed)	-0.00641	-0.00504	-0.00137	0.00336	-0.00660	-0.00546	-0.00114	0.00316
	(0.00563)	(0.00496)	(0.00265)	(0.00573)	(0.00557)	(0.00508)	(0.00220)	(0.00573)
Mother's years of schooling	-0.00694	-0.00812*	0.00118	0.00695	-0.00714	-0.00835*	0.00121	0.00779
	(0.00476)	(0.00438)	(0.00207)	(0.00492)	(0.00497)	(0.00458)	(0.00216)	(0.00518)
Father's years of schooling	-0.00727	-0.00258	-0.00468*	0.00638	-0.00750	-0.00235	-0.00515**	0.00639
	(0.00507)	(0.00465)	(0.00242)	(0.00524)	(0.00478)	(0.00426)	(0.00240)	(0.00501)
Migrant background	0.0577	0.0748	-0.0171*	-0.0778	0.0723	0.0826	-0.0102	-0.0911
	(0.0795)	(0.0774)	(0.00947)	(0.0801)	(0.0750)	(0.0724)	(0.00873)	(0.0780)
Has children	-0.00422	-0.0219	0.0177	0.00979	-0.00615	-0.0226	0.0164	0.0119
	(0.0291)	(0.0163)	(0.0250)	(0.0315)	(0.0276)	(0.0165)	(0.0228)	(0.0307)
Living w/ family	0.0565*	0.0592**	-0.00270	-0.0487	0.0505	0.0558*	-0.00533	-0.0455
	(0.0331)	(0.0298)	(0.0134)	(0.0351)	(0.0325)	(0.0294)	(0.0125)	(0.0348)
Relationship problems w/ a parent	-0.0679***	-0.0526**	-0.0153**	0.0616**	-0.0686***	-0.0539**	-0.0146**	0.0637**
	(0.0253)	(0.0244)	(0.00658)	(0.0300)	(0.0248)	(0.0239)	(0.00679)	(0.0299)
Academic track (liceo)	0.0377	0.0354	0.00238	-0.0347	0.0337	0.0316	0.00210	-0.0303
	(0.0382)	(0.0374)	(0.00535)	(0.0392)	(0.0370)	(0.0360)	(0.00626)	(0.0389)
Vocational track (professionale)	-0.0470	-0.0535*	0.00648	0.0562*	-0.0520*	-0.0566*	0.00457	0.0584*
	(0.0302)	(0.0289)	(0.00999)	(0.0326)	(0.0309)	(0.0289)	(0.0114)	(0.0336)
Age	-0.000803	-0.00418	0.00338***	0.00352	-0.00174	-0.00493	0.00319***	0.00468
	(0.00350)	(0.00332)	(0.00125)	(0.00379)	(0.00357)	(0.00339)	(0.00120)	(0.00388)
Renting	0.0258	0.0110	0.0148	-0.0264	0.0311	0.0133	0.0178	-0.0308
	(0.0330)	(0.0238)	(0.0249)	(0.0359)	(0.0319)	(0.0225)	(0.0247)	(0.0357)
Relative own home	0.0125	0.00938	0.00314	-0.00992	0.0111	0.00797	0.00309	-0.00652
	(0.0398)	(0.0393)	(0.00466)	(0.0413)	(0.0364)	(0.0358)	(0.00546)	(0.0384)
Parents separated (now)	-0.0283	-0.0195	-0.00883	0.0229	-0.0378	-0.0317	-0.00613	0.0307
	(0.0351)	(0.0352)	(0.00675)	(0.0408)	(0.0328)	(0.0325)	(0.00575)	(0.0395)
Constant	0.261*	0.295**	-0.0335	0.687***				
	(0.134)	(0.128)	(0.0384)	(0.138)				
Observations	1,069	1,069	1,069	1,069	1,067	1,067	1,067	1,067
R-squared	0.087	0.102	0.050	0.069	0.091	0.104	0.055	0.074
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A29: The impact of mental distress (employed women)

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Depressed	0.0238	0.0216	0.00190	0.00103	0.0211	0.0186	0.00222	0.00337
	(0.0187)	(0.0181)	(0.00540)	(0.0227)	(0.0152)	(0.0144)	(0.00519)	(0.0203)
Parents more educated	0.0625	0.0719	-0.00921	-0.0261	0.0708	0.0792	-0.00811	-0.0355
	(0.0677)	(0.0686)	(0.00708)	(0.0690)	(0.0679)	(0.0697)	(0.00682)	(0.0696)
Years of schooling (imputed)	0.00553**	0.00491*	0.000718	-0.00502*	0.00527*	0.00473*	0.000650	-0.00479
	(0.00275)	(0.00274)	(0.000447)	(0.00305)	(0.00270)	(0.00271)	(0.000422)	(0.00303)
Mother's years of schooling	0.000748	-0.000122	0.000825	-0.00168	0.000295	-0.000712	0.000955	-0.00104
	(0.00197)	(0.00182)	(0.000738)	(0.00240)	(0.00213)	(0.00197)	(0.000764)	(0.00251)
Father's years of schooling	-0.00574**	-0.00602**	0.000307	0.00315	-0.00572**	-0.00603**	0.000325	0.00301
	(0.00268)	(0.00264)	(0.000547)	(0.00290)	(0.00266)	(0.00260)	(0.000621)	(0.00294)
Migrant background	-0.0479	-0.0360	-0.0122***	0.0507	-0.0434	-0.0322	-0.0114**	0.0462
	(0.0312)	(0.0313)	(0.00439)	(0.0423)	(0.0320)	(0.0320)	(0.00445)	(0.0433)
Has children	-0.0208	-0.0168	-0.00261	0.00625	-0.0101	-0.00750	-0.00120	-0.00463
	(0.0182)	(0.0170)	(0.00695)	(0.0199)	(0.0167)	(0.0153)	(0.00741)	(0.0187)
Living w/ family	-0.0600	-0.0524	-0.00753	-0.00427	-0.0578*	-0.0508	-0.00692	-0.00821
	(0.0384)	(0.0379)	(0.00850)	(0.0466)	(0.0346)	(0.0340)	(0.00924)	(0.0455)
Relationship problems w/ a parent	-0.0336*	-0.0205	-0.0133**	0.0320	-0.0321*	-0.0187	-0.0137**	0.0325
	(0.0191)	(0.0185)	(0.00523)	(0.0237)	(0.0175)	(0.0169)	(0.00541)	(0.0224)
Academic track (liceo)	-0.00344	0.00165	-0.00462	-0.0139	-0.00329	0.000731	-0.00375	-0.0127
	(0.0172)	(0.0164)	(0.00545)	(0.0201)	(0.0171)	(0.0163)	(0.00562)	(0.0201)
Vocational track (professionale)	0.0328	0.0327	-1.72e-05	-0.0483	0.0251	0.0254	-0.000335	-0.0407
	(0.0313)	(0.0309)	(0.00720)	(0.0346)	(0.0276)	(0.0272)	(0.00704)	(0.0328)
Age	-0.0133**	-0.0122**	-0.00114	0.0178***	-0.0123***	-0.0113**	-0.00101	0.0166***
	(0.00523)	(0.00524)	(0.000900)	(0.00550)	(0.00466)	(0.00466)	(0.000978)	(0.00502)
Renting	0.0183	0.00919	0.00871	-0.0541	0.0118	0.000875	0.0105	-0.0493
	(0.0288)	(0.0273)	(0.0114)	(0.0366)	(0.0201)	(0.0167)	(0.0120)	(0.0321)
Relative own home	0.0278	0.0321	-0.00447	0.0155	0.0375*	0.0402*	-0.00291	0.00701
	(0.0226)	(0.0218)	(0.00558)	(0.0348)	(0.0224)	(0.0216)	(0.00566)	(0.0357)
Parents separated (now)	-0.00108	-0.0124	0.0112	-0.00545	0.00503	-0.00617	0.0112	-0.0133
	(0.0244)	(0.0223)	(0.00996)	(0.0288)	(0.0254)	(0.0237)	(0.00958)	(0.0305)
Constant	0.419**	0.393**	0.0256	0.488***				
	(0.163)	(0.163)	(0.0312)	(0.171)				
Observations	1,545	1,545	1,545	1,545	1,545	1,545	1,545	1,545
R-squared	0.060	0.060	0.013	0.073	0.052	0.054	0.013	0.063
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

V.3 Childcare

The second stage of our IV for the impact of newborns fits the following model:

$$S_{i,2016} = \beta_1 N^{IV}_{i,2016} + \beta_2 E_{i,2015} + \beta_3 EM_i + \beta_4 EF_i + \beta_5 ME_{i,2015} + \beta_6 IB_i + \beta_7 C_{i,2015} + \beta_8 G_i + \beta_9 LF_{i,2015} + \beta_{10} PP_{i,2015} + \beta_{11} H_i + \beta_{12} V_i + \beta_{13} A_{i,2015} + \beta_{14} R_{i,2015} + \beta_{15} RO_{i,2015} + \beta_{16} PS_{i,2015} + \beta_{17} SN_{i,2015} + REGIO_{i,2015} + \epsilon_{i,2016} \quad (4)$$

where:

- $S_{i,2016}$ is the labor market status in 2016 (NEET aggregate, NEET active, NEET inactive not student, working)
- $N_{i,2016}$ is a dummy telling us whether in 2016 they have one more kid relative to 2015 and $N^{IV}_{i,2016}$ is the newborn dummy instrumented by the number of places per 100 kids available in the kindergartens of the province of residence;

- $E_{i,2015}$ is the number of years of schooling of person i in 2015;
- EM_i and EF_i are, respectively, the years of education of i's mother and father;
- $ME_{i,2015}$ is a dummy telling us whether i's parents are more educated than i in 2015;
- IB_i is a dummy telling us whether i's has migrant background (born out of parents not born in Italy);
- $C_{i,2015}$ is a dummy representing whether individual i has children or not in 2015
- $G_{i,2015}$ is a dummy assuming value of 1 if is has male gender in 2015;
- $LF_{i,2015}$ is a dummy telling us whether i is living with a family member in 2015;
- $PP_{i,2015}$ is a dummy indicating whether i has stated to have a problematic relationship with either of their parents in 2015;
- H_i and V_i are dummies capturing whether i has attended an academic or vocational track high school;
- $A_{i,2015}$ controls for the age of i in 2015;
- $R_{i,2015}$ and $RO_{i,2015}$ are dummies capturing whether i in 2015 lives in a rented house or in a house owned by a relative;
- $PS_{i,2015}$ is a dummy indicating whether i's parents are separated in 2015;
- $SN_{i,2015}$ is a dummy indicating whether i was NEET in 2015;
- $REGIO_{i,2015}$ is a fixed effect indicating in which region are i lives in 2015;

Table A30: Second stage newborn impact

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Newborn in 2016	0.0482	-0.0160	0.0640**	0.0499	0.0457	-0.0188	0.0643**	0.0592
	(0.0316)	(0.0287)	(0.0294)	(0.0376)	(0.0314)	(0.0293)	(0.0289)	(0.0382)
Male	-0.00618	0.0228*	-0.0290***	0.0689***	-0.00559	0.0234*	-0.0290***	0.0688***
	(0.0130)	(0.0131)	(0.00507)	(0.0159)	(0.0129)	(0.0128)	(0.00525)	(0.0155)
Parents more educ	0.0429*	0.0433*	-0.000375	-0.0871***	0.0413*	0.0406	0.000744	-0.0830***
	(0.0249)	(0.0247)	(0.00900)	(0.0295)	(0.0249)	(0.0247)	(0.00921)	(0.0290)
Has children	-0.000295	-0.0654***	0.0656***	-0.0225	0.000686	-0.0635***	0.0646***	-0.0196
	(0.0185)	(0.0179)	(0.0179)	(0.0246)	(0.0183)	(0.0180)	(0.0176)	(0.0238)
Years of schooling (imputed)	-0.00270	1.70e-06	-0.00267**	0.0114***	-0.00267	-0.000158	-0.00248*	0.0109***
	(0.00240)	(0.00235)	(0.00130)	(0.00336)	(0.00242)	(0.00237)	(0.00128)	(0.00329)
Mother's years of schooling	-0.00383	-0.00337	-0.000462	-0.00335	-0.00374	-0.00335	-0.000403	-0.00360
	(0.00247)	(0.00245)	(0.000911)	(0.00275)	(0.00248)	(0.00246)	(0.000915)	(0.00273)
Father's years of schooling	-0.00711***	-0.00673***	-0.000381	0.00304	-0.00690***	-0.00639***	-0.000500	0.00361
	(0.00228)	(0.00220)	(0.000879)	(0.00261)	(0.00224)	(0.00215)	(0.000894)	(0.00256)
Migrant background	0.0525	0.0492	0.00326	-0.0465	0.0573*	0.0520	0.00521	-0.0590*
	(0.0326)	(0.0334)	(0.0110)	(0.0293)	(0.0334)	(0.0340)	(0.0109)	(0.0304)
Living w/ family	0.0352*	0.0661***	-0.0310***	-0.121***	0.0303	0.0643***	-0.0341***	-0.0918***
	(0.0210)	(0.0216)	(0.00924)	(0.0251)	(0.0209)	(0.0213)	(0.00974)	(0.0248)
Relationship problems w/ a parent	-0.00810	0.000254	-0.00841	0.00807	-0.0107	-0.000935	-0.00978	0.0112
	(0.0175)	(0.0175)	(0.00727)	(0.0234)	(0.0171)	(0.0171)	(0.00736)	(0.0225)
Academic track (liceo)	-0.00115	-0.00382	0.00272	-0.151***	-0.00455	-0.00505	0.000542	-0.138***
	(0.0148)	(0.0149)	(0.00543)	(0.0186)	(0.0153)	(0.0152)	(0.00543)	(0.0188)
Vocational track (professionale)	0.0173	0.0192	-0.00201	0.107***	0.0201	0.0221	-0.00206	0.0911***
	(0.0208)	(0.0210)	(0.00927)	(0.0268)	(0.0203)	(0.0205)	(0.00925)	(0.0258)
Age	-0.000502	-0.00123	0.000726	0.0370***	-0.000566	-0.00126	0.000683	0.0378***
	(0.00185)	(0.00182)	(0.000868)	(0.00212)	(0.00184)	(0.00180)	(0.000857)	(0.00206)
Renting	0.0199	0.0173	0.00248	-0.0324	0.0209	0.0177	0.00311	-0.0381
	(0.0197)	(0.0197)	(0.0129)	(0.0258)	(0.0197)	(0.0197)	(0.0128)	(0.0258)
Relative own home	-0.0215	-0.0244	0.00287	-0.00156	-0.0189	-0.0223	0.00335	-0.0155
	(0.0187)	(0.0188)	(0.00438)	(0.0224)	(0.0185)	(0.0186)	(0.00437)	(0.0217)
Parents separated (now)	-0.000909	0.0133	-0.0142*	0.0609**	0.00322	0.0150	-0.0118	0.0381
	(0.0222)	(0.0215)	(0.00831)	(0.0260)	(0.0217)	(0.0210)	(0.00844)	(0.0245)
Neet in 2015	0.670***	0.569***	0.100***	-0.409***	0.664***	0.566***	0.0981***	-0.384***
	(0.0196)	(0.0211)	(0.0116)	(0.0218)	(0.0198)	(0.0212)	(0.0118)	(0.0220)
Constant	0.217***	0.156**	0.0605**	-0.431***				
	(0.0632)	(0.0636)	(0.0254)	(0.0728)				
Observations	5,441	5,441	5,441	5,441	5,441	5,441	5,441	5,441
R-squared	0.446	0.366	0.126	0.332	0.437	0.358	0.124	0.319
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A31: Second stage newborn impact-man

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Newborn in 2016	0.0311	0.0150	0.0161	0.0329	0.0305	0.0136	0.0169	0.0329
	(0.0436)	(0.0388)	(0.0210)	(0.0492)	(0.0433)	(0.0383)	(0.0211)	(0.0499)
Male = o,	-	-	-	-				
Parents more educ	0.0601*	0.0513	0.00878	-0.1000**	0.0623*	0.0529	0.00942	-0.0987**
	(0.0357)	(0.0348)	(0.0105)	(0.0434)	(0.0355)	(0.0346)	(0.0103)	(0.0422)
Has children	-0.0193	-0.0385**	0.0192	0.0330	-0.0243	-0.0439**	0.0197	0.0429
	(0.0278)	(0.0194)	(0.0218)	(0.0425)	(0.0278)	(0.0203)	(0.0208)	(0.0404)
Years of schooling (imputed)	-0.00278	-0.00216	-0.000625	0.0108**	-0.00245	-0.00201	-0.000443	0.0100**
	(0.00405)	(0.00377)	(0.00151)	(0.00504)	(0.00411)	(0.00385)	(0.00143)	(0.00495)
Mother's years of schooling	-0.00110	-0.00156	0.000455	-0.00533	-0.00150	-0.00199	0.000494	-0.00479
	(0.00381)	(0.00373)	(0.00110)	(0.00441)	(0.00378)	(0.00369)	(0.00115)	(0.00437)
Father's years of schooling	-0.0126***	-0.0105***	-0.00208*	0.00683	-0.0128***	-0.0107***	-0.00206*	0.00773*
	(0.00346)	(0.00333)	(0.00119)	(0.00419)	(0.00341)	(0.00327)	(0.00121)	(0.00408)
Migrant background	0.121**	0.133**	-0.0121***	-0.0622	0.129**	0.138**	-0.00914**	-0.0857*
	(0.0573)	(0.0567)	(0.00458)	(0.0448)	(0.0589)	(0.0580)	(0.00410)	(0.0488)
Living w/ family	0.0836***	0.0853***	-0.00172	-0.128***	0.0740**	0.0759***	-0.00185	-0.0959**
	(0.0294)	(0.0276)	(0.0110)	(0.0391)	(0.0299)	(0.0284)	(0.0105)	(0.0378)
Relationship problems w/ a parent	0.00550	0.0117	-0.00620	-0.0200	0.00154	0.00830	-0.00676	-0.0177
	(0.0299)	(0.0298)	(0.00596)	(0.0357)	(0.0294)	(0.0293)	(0.00633)	(0.0335)
Academic track (liceo)	-0.00215	-0.00451	0.00236	-0.146***	-0.00302	-0.00372	0.000692	-0.142***
	(0.0236)	(0.0235)	(0.00446)	(0.0277)	(0.0238)	(0.0236)	(0.00445)	(0.0282)
Vocational track (professionale)	-0.0107	-0.0137	0.00296	0.175***	-0.0128	-0.0149	0.00214	0.156***
	(0.0278)	(0.0275)	(0.00636)	(0.0388)	(0.0274)	(0.0270)	(0.00694)	(0.0377)
Age	0.00136	-0.000340	0.00170**	0.0370***	0.00112	-0.000422	0.00154**	0.0377***
	(0.00282)	(0.00275)	(0.000774)	(0.00322)	(0.00283)	(0.00276)	(0.000727)	(0.00310)
Renting	0.0174	0.00559	0.0118	-0.0223	0.0146	0.00200	0.0126	-0.0289
	(0.0296)	(0.0251)	(0.0176)	(0.0428)	(0.0295)	(0.0255)	(0.0173)	(0.0427)
Relative own home	-0.0329	-0.0351	0.00214	0.0137	-0.0298	-0.0300	0.000187	-0.00494
	(0.0288)	(0.0288)	(0.00384)	(0.0329)	(0.0282)	(0.0281)	(0.00378)	(0.0321)
Parents separated (now)	-0.0140	-0.00758	-0.00639	0.0972**	-0.0129	-0.00709	-0.00581	0.0837**
	(0.0347)	(0.0347)	(0.00467)	(0.0416)	(0.0329)	(0.0330)	(0.00474)	(0.0382)
Neet in 2015	0.623***	0.616***	0.00745	-0.393***	0.623***	0.615***	0.00756	-0.374***
	(0.0340)	(0.0344)	(0.00782)	(0.0371)	(0.0338)	(0.0342)	(0.00872)	(0.0370)
Male					0	0	0	0
					(0)	(0)	(0)	(0)
Constant	0.170*	0.184*	-0.0146	-0.392***				
	(0.0976)	(0.0958)	(0.0223)	(0.110)				
Observations	2,009	2,009	2,009	2,009	2,009	2,009	2,009	2,009
R-squared	0.398	0.406	0.025	0.340	0.390	0.398	0.025	0.329
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A32: Second stage newborn impact-women

VARIABLES	(1) Neet in 2016	(2) Unemployed in 2016	(3) Inactive in 2016	(4) Occupied in 2016	(5) Neet in 2016	(6) Unemployed in 2016	(7) Inactive in 2016	(8) Occupied in 2016
Newborn in 2016	0.0602	-0.0381	0.0980**	0.0716	0.0624	-0.0375	0.0995**	0.0774
	(0.0418)	(0.0377)	(0.0453)	(0.0520)	(0.0407)	(0.0384)	(0.0435)	(0.0511)
Male = o,	-	-	-	-	-	-	-	-
Parents more educ	0.0163	0.0282	-0.0119	-0.0790**	0.0120	0.0217	-0.00964	-0.0750**
	(0.0335)	(0.0343)	(0.0146)	(0.0356)	(0.0333)	(0.0342)	(0.0144)	(0.0359)
Has children	-0.00347	-0.0856***	0.0829***	-0.0462*	-0.00237	-0.0854***	0.0838***	-0.0452*
	(0.0240)	(0.0276)	(0.0250)	(0.0273)	(0.0230)	(0.0270)	(0.0245)	(0.0268)
Years of schooling (imputed)	-0.00261	0.00270	-0.00525***	0.0117***	-0.00238	0.00274	-0.00506***	0.0108**
	(0.00247)	(0.00278)	(0.00199)	(0.00429)	(0.00240)	(0.00273)	(0.00196)	(0.00420)
Mother's years of schooling	-0.00642**	-0.00491*	-0.00152	-0.00101	-0.00563**	-0.00445	-0.00120	-0.00175
	(0.00267)	(0.00279)	(0.00146)	(0.00304)	(0.00271)	(0.00285)	(0.00146)	(0.00298)
Father's years of schooling	-0.000724	-0.00154	0.000828	-0.000623	-0.000566	-0.00101	0.000448	0.000215
	(0.00266)	(0.00272)	(0.00117)	(0.00290)	(0.00256)	(0.00259)	(0.00118)	(0.00287)
Migrant background	-0.0155	-0.0416*	0.0259	-0.0324	-0.0118	-0.0371	0.0251	-0.0385
	(0.0209)	(0.0245)	(0.0193)	(0.0356)	(0.0216)	(0.0248)	(0.0193)	(0.0334)
Living w/ family	-0.00602	0.0434	-0.0494***	-0.117***	-0.0146	0.0378	-0.0524***	-0.0819***
	(0.0276)	(0.0301)	(0.0141)	(0.0317)	(0.0263)	(0.0285)	(0.0148)	(0.0312)
Relationship problems w/ a parent	-0.0137	-0.00902	-0.00478	0.0276	-0.0144	-0.00778	-0.00670	0.0322
	(0.0183)	(0.0194)	(0.0117)	(0.0303)	(0.0175)	(0.0186)	(0.0117)	(0.0299)
Academic track (liceo)	0.00340	-0.000397	0.00389	-0.170***	-0.00551	-0.00416	-0.00129	-0.146***
	(0.0165)	(0.0172)	(0.00999)	(0.0239)	(0.0164)	(0.0173)	(0.00993)	(0.0238)
Vocational track (professionale)	0.0511*	0.0680**	-0.0170	0.0221	0.0540*	0.0708**	-0.0169	0.0135
	(0.0302)	(0.0319)	(0.0186)	(0.0342)	(0.0289)	(0.0306)	(0.0186)	(0.0329)
Age	-0.00234	-0.00274	0.000390	0.0371***	-0.00229	-0.00288	0.000570	0.0376***
	(0.00227)	(0.00232)	(0.00150)	(0.00268)	(0.00222)	(0.00226)	(0.00147)	(0.00260)
Renting	0.0299	0.0305	-0.000883	-0.0407	0.0320	0.0298	0.00190	-0.0395
	(0.0259)	(0.0294)	(0.0183)	(0.0298)	(0.0241)	(0.0276)	(0.0181)	(0.0287)
Relative own home	-0.00633	-0.00797	0.00159	-0.0170	-0.00157	-0.00534	0.00371	-0.0312
	(0.0201)	(0.0209)	(0.00802)	(0.0286)	(0.0200)	(0.0207)	(0.00808)	(0.0280)
Parents separated (now)	0.00158	0.0242	-0.0227	0.0306	0.00804	0.0275	-0.0195	0.00120
	(0.0259)	(0.0253)	(0.0148)	(0.0308)	(0.0250)	(0.0245)	(0.0147)	(0.0296)
Neet in 2015	0.700***	0.535***	0.165***	-0.418***	0.689***	0.530***	0.160***	-0.384***
	(0.0221)	(0.0249)	(0.0179)	(0.0258)	(0.0225)	(0.0250)	(0.0180)	(0.0261)
Constant	0.237***	0.139*	0.0981**	-0.391***				
	(0.0777)	(0.0805)	(0.0418)	(0.0966)				
Observations	3,432	3,432	3,432	3,432	3,432	3,432	3,432	3,432
R-squared	0.501	0.341	0.192	0.320	0.495	0.335	0.191	0.301
Region FE	NO	NO	NO	NO	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

First stage of the instruments

V.3.1 Impact of therapists on mental health

The first stage of our IV for the impact of depression fits the following model:

$$D_{i,2015} = \beta_1 T_{i,2014} + \beta_2 E_{i,2015} + \beta_3 EM_i + \beta_4 EF_i + \beta_5 ME_{i,2015} + \beta_6 IB_i + \beta_7 C_{i,2015} + \beta_8 G_i + \beta_9 LF_{i,2015} + \beta_{10} PP_{i,2015} + \beta_{11} H_i + \beta_{12} V_i + \beta_{13} A_{i,2015} + \beta_{14} R_{i,2015} + \beta_{15} RO_{i,2015} + \beta_{16} PS_{i,2015} + \beta_{17} SN_{i,2015} + REGIO_{i,2015} + \epsilon_{i,2015} \quad (5)$$

where:

- $D_{i,2015}$ is a dummy telling us whether in 2015 they are "depressed" according to our measure;
- $T_{i,2014}$ is the number of therapists per 1000 in the province of residence in 2014;
- $E_{i,2015}$ is the number of years of schooling of person i in 2015;
- EM_i and EF_i are, respectively, the years of education of i's mother and father;
- $ME_{i,2015}$ is a dummy telling us whether i's parents are more educated than i in 2015;
- $IB_{i,2015}$ is a dummy telling us whether i's has migrant background (born out of parents not born in Italy);
- $C_{i,2015}$ is a dummy representing whether individual i has children or not in 2015
- $G_{i,2015}$ is a dummy assuming value of 1 if is has male gender in 2015;
- $LF_{i,2015}$ is a dummy telling us whether i is living with a family member in 2015;
- $PP_{i,2015}$ is a dummy indicating whether i has stated to have a problematic relationship with either of their parents in 2015;
- H_i and V_i are dummies capturing whether i has attended an academic or vocational track high school;
- $A_{i,2015}$ controls for the age of i in 2015;
- $R_{i,2015}$ and $RO_{i,2015}$ are dummies capturing whether i in 2015 lives in a rented house or in a house owned by a relative;
- $PS_{i,2015}$ is a dummy indicating whether i's parents are separated in 2015;
- $REGIO_{i,2015}$ is a fixed effect indicating in which region are i lives in 2015;

Table A33: First stage depression

	(1)	(2)
VARIABLES	Depressed	Depressed
Therapists per 1000 ppl	-0.0171*	-0.000438
	(0.00893)	(0.0131)
Parents more educated	-0.00514	-0.00428
	(0.0222)	(0.0222)
Years of schooling (imputed)	-0.00587**	-0.00567**
	(0.00246)	(0.00245)
Mother's years of schooling	-0.00570***	-0.00552***
	(0.00209)	(0.00209)
Father's years of schooling	-0.00459**	-0.00497**
	(0.00196)	(0.00196)
Migrant background	-0.0414	-0.0304
	(0.0261)	(0.0262)
Has children	-0.0931***	-0.0965***
	(0.0206)	(0.0206)
Male	-0.0243*	-0.0233*
	(0.0128)	(0.0128)
Living w/ family	0.113***	0.0975***
	(0.0192)	(0.0194)
Relationship problems w/ a parent	0.242***	0.243***
	(0.0168)	(0.0168)
Academic track (liceo)	0.0233	0.0196
	(0.0149)	(0.0149)
Vocational track (professionale)	-0.0104	-0.00859
	(0.0201)	(0.0201)
Age	0.0109***	0.0104***
	(0.00174)	(0.00174)
Renting	0.0661***	0.0675***
	(0.0189)	(0.0189)
Relative own home	-0.0136	-0.00631
	(0.0168)	(0.0168)
Parents separated (now)	-0.0174	-0.0123
	(0.0191)	(0.0192)
Constant	0.136**	0.130**
	(0.0579)	(0.0598)
Observations	5,521	5,521
R-squared	0.069	0.080
Region FE	NO	YES
F-statistic	26	24

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

V.3.2 Childcare

We fit the following model for the first stage of the IV regression:

$$N_{i,2015} = \beta_1 M_{i,2015} + \beta_2 E_{i,2015} + \beta_3 EM_i + \beta_4 EF_i + \beta_5 M_{i,2015} * ME_{i,2015} + \beta_6 ME_{i,2015} + \beta_7 IB_i + \beta_8 C_{i,2015} + \beta_9 G_i + \beta_{10} LF_{i,2015} + \beta_{11} PP_{i,2015} + \beta_{12} H_i + \beta_{14} V_i + \beta_{15} A_{i,2015} + \beta_{16} R_{i,2015} + \beta_{17} RO_{i,2015} + \beta_{18} PS_{i,2015} + \beta_{19} SN_{i,2015} + \beta_{20} KG_{i,2015} + REGIO_{i,2015} + \epsilon_{i,2015} \quad (6)$$

where:

- $Ni, 2016$ is a dummy telling us whether in 2016 they have one more kid relative to 2015;
- $KG_{i,2015}$ is the number of kindergarten places per 100 kids in the province where i lives in 2015;
- $E_{i,2015}$ is the number of years of schooling of person i in 2015;
- EM_i and EF_i are, respectively, the years of education of i's mother and father;
- $ME_{i,2015}$ is a dummy telling us whether i's parents are more educated than i in 2015;
- IB_i is a dummy telling us whether i's has migrant background (born out of parents not born in Italy);
- $C_{i,2015}$ is a dummy representing whether individual i has children or not in 2015
- $G_{i,2015}$ is a dummy assuming value of 1 if is has male gender in 2015;
- $LF_{i,2015}$ is a dummy telling us whether i is living with a family member in 2015;
- $PP_{i,2015}$ is a dummy indicating whether i has stated to have a problematic relationship with either of their parents in 2015;
- H_i and V_i are dummies capturing whether i has attended an academic or vocational track high school;
- $A_{i,2015}$ controls for the age of i in 2015;
- $R_{i,2015}$ and $RO_{i,2015}$ are dummies capturing whether i in 2015 lives in a rented house or in a house owned by a relative;
- $PS_{i,2015}$ is a dummy indicating whether i's parents are separated in 2015;
- $SN_{i,2015}$ is a dummy indicating whether i was neet in 2015;
- $KG_{i,2015}$ is the number of kindergarten places per 100 kids in the province where i lives;
- $REGIO_{i,2015}$ is a fixed effect indicating in which region are i lives in 2015.;

Table A34: First stage IV regression for impact of newborn

VARIABLES	(1) Newborn in 2016
Male	-0.00386
	(0.00579)
Parents more educ	-0.000555
	(0.0100)
Has children	0.0113
	(0.00934)
Years of schooling (imputed)	-0.000102
	(0.00111)
Mother's years of schooling	0.000558
	(0.000948)
Father's years of schooling	-0.00136
	(0.000885)
Migrant background	0.00293
	(0.0118)
Living w/ family	-0.0710***
	(0.00874)
Relationship problems w/ a parent	-0.00536
	(0.00759)
Academic track (liceo)	-0.0172**
	(0.00673)
Vocational track (professionale)	-0.00217
	(0.00910)
Age	0.00104
	(0.000789)
Renting	-0.0271***
	(0.00851)
Relative own home	-0.000157
	(0.00756)
Parents separated (now)	-0.0171**
	(0.00866)
Neet in 2015	0.00878
	(0.00716)
Kindergarden places per 100 kids	0.000726
	(0.000684)
Constant	0.0679**
	(0.0286)
Observations	5,441
R-squared	0.040
Region FE	YES
F-statistic	12

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1