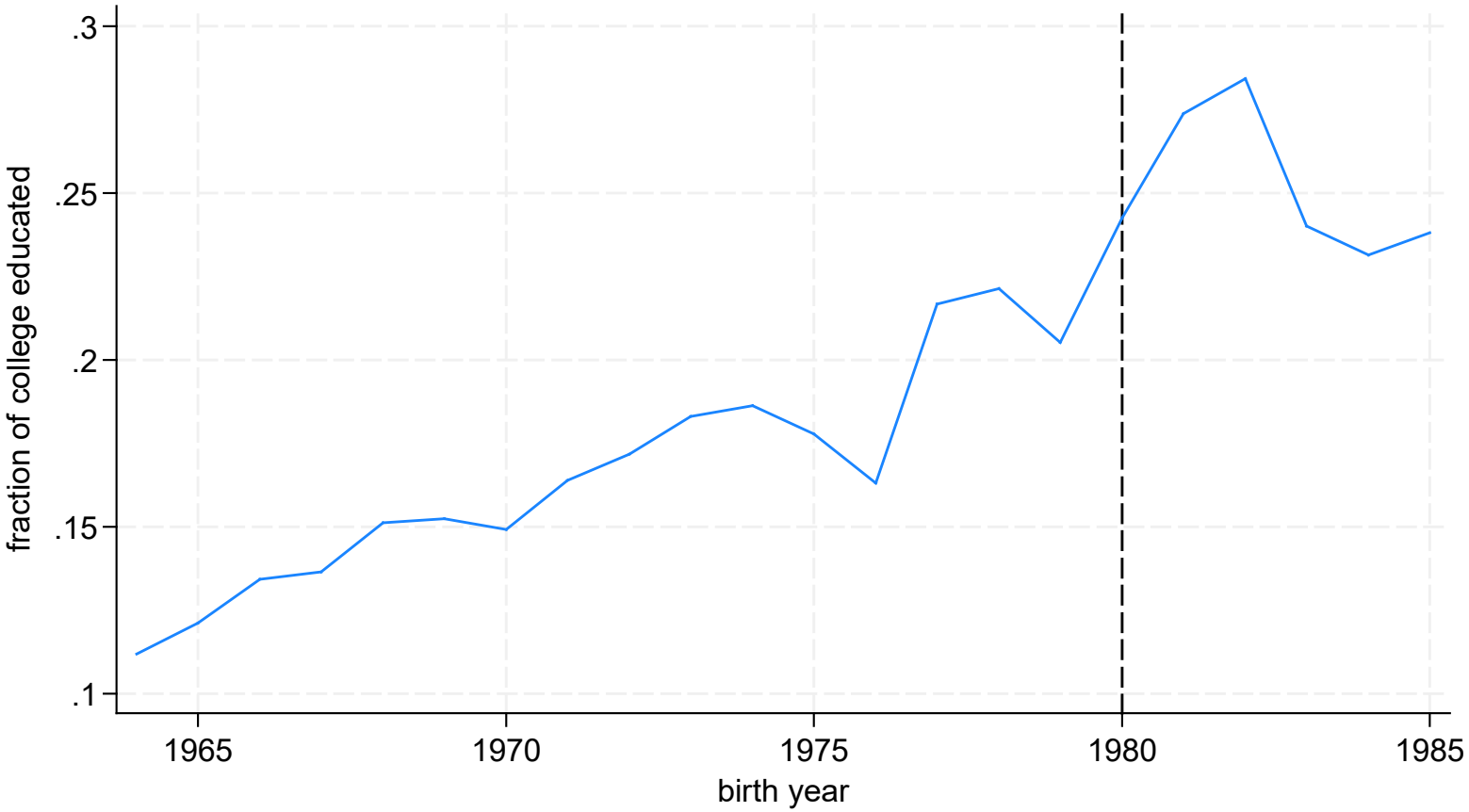
Scuola, mobilità sociale e nuove generazioni: di quale innovazione sociale dovremmo aver bisogno?

Daniele Checchi
(Università di Milano)

La grande rivoluzione



Bank of Italy SHIW data, survey from 1993 to 2016 - variable: maximum educational attainment - population older than 30

Ma come è stata raggiunta ? Ricordiamo che obiettivo EU per 2030 è 45% della popolazione 25-34 con titolo di studio terziario.

PRIMA

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	90	0	*90*
Genitore laureato	0	10	*10*
totali	*90*	*10*	*100*

Varie riforme: 1963 scuola media unica (don Milani) – 1968 accesso libero università – 1999 riforma 3+2

PRIMA

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	90	0	*90*
Genitore laureato	0	10	*10*
totali	*90*	*10*	*100*

IN MEZZO

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	85	5	*90*
Genitore laureato	5	5	*10*
totali	*90*	*10*	*100*

Per aumentare i laureati bisogna prima aumentare i diplomati

PRIMA

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	90	0	*90*
Genitore laureato	0	10	*10*
totali	*90*	*10*	*100*

IN MEZZO

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	85	5	*90*
Genitore laureato	5	5	*10*
totali	*90*	*10*	*100*

DOPO

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	70	20	*90*
Genitore laureato	0	10	*10*
totali	*70*	*30*	*100*

In quale mondo preferiamo vivere ?

così

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	40	20	*60*
Genitore laureato	20	20	*40*
totali	*60*	*40*	*100*

o così

	Figlio non laureato	Figlio laureato	*totali*
Genitore non laureato	40	10	*50*
Genitore laureato	10	40	*50*
totali	*50*	*50*	*100*

Relevant transition rates in secondary education – Italy – year 2022

graduation rate of population born in 2001 observed in 2021 (from SILC 2021)	77.0
graduation rate of regular students – 19-year-old in 2022 - born in 2003 (from administrative data)	67.3
transition rate of regular students – 19-year-old in 2022	58.9
transition rate of repeating students - older than 19 in 2022	61.2
gross transition rate - high schools (enrolled/graduates) in 2022	76.6
gross transition rate - technical schools (enrolled/graduates) in 2022	46.2
gross transition rate - vocational schools (enrolled/graduates) in 2022	24.6
gross transition rate (enrolled/graduates) in 2022	59.5
drop-out rate (end 1st year) - graduate from high schools - in 2021	9.3
drop-out rate (end 1st year) - graduate from technical schools - in 2021	21.1
drop-out rate (end 1st year) - graduate from vocational schools - in 2021	26.8
drop-out rate (end 1st year) - in 2021	14.5
estimated survival rate (start of second year) - graduate from high schools - in 2022	69.4
estimated survival rate (start of second year) - graduate from technical schools - in 2022	36.5
estimated survival rate (start of second year) - graduate from vocational schools - in 2022	18.0
estimated survival rate (start of second year) - in 2022	50.9

Cosa impedisce alle persone di accedere alla formazione completa ?

Articolo 34 delle Costituzione Italiana

La scuola è aperta a tutti.
L'istruzione inferiore, impartita per almeno otto anni, è obbligatoria e gratuita.
I capaci e meritevoli, anche se privi di mezzi, hanno diritto di raggiungere i gradi più alti degli studi.
La Repubblica rende effettivo questo diritto con borse di studio, assegni alle famiglie ed altre provvidenze, che devono essere attribuite per concorso.

Si procede per via indiziaria: si osserva un risultato – si ipotizzano dei fattori – si studia la correlazione – si verificano effetti delle riforme.

Ordered probit correlation between maximal educational attainment, gender and family background, by country patterns (population aged 31-40), EU- SILC 2019

Variables	All EU-27 countries	Mediterranean (7 countries)	Italy
Dep. variable: % of maximal attainment			
Pre-primary	0.97	1.53	1.03
Primary	2.61	3.72	1.50
Lower secondary	12.16	21.63	24.10
Upper Secondary	37.75	36.00	45.30
Post-secondary non-tertiary	5.51	1.67	1.35
1st & 2nd tertiary	41.00	35.45	26.72
Female	0.241***	0.309***	0.236***
	[0.035]	[0.046]	[0.046]
Age	-0.009	0.004*	0.006
	[0.006]	[0.002]	[0.008]
(log) Household income	0.475***	0.500***	0.445***
	[0.043]	[0.073]	[0.049]
Parental education	0.109*	0.184***	0.344***
	[0.065]	[0.057]	[0.039]
Foreign-born parent	-0.431***	-0.358***	-0.316**
	[0.090]	[0.100]	[0.159]
Observations	58,047	22,046	4,291
Pseudo R^2	0.0599	0.0601	0.0667
Number of countries	27	8	1

Notes: "Mediterran" includes Italy, Greece, Spain, Portugal, Maltha, Cyprus and Slovenia. *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets and errors clustered at country level. The model includes constant and country fixed effects and uses sample weights. Source: Authors' elaboration of EU-SILC 2019 data using Stata.

Imputati:

⇨ istruzione dei genitori (libri in casa, computer, mostre/concerti)

⇨ reddito dei genitori (spazio, vacanze, sport, ripetizioni)

⇨ origini migratorie (conoscenza della lingua, funzionamento istituzioni)

⇨ differenze di genere (stereotipi, modelli di ruolo)

ma anche

⇨ indirizzi della scuola secondaria (contenuti formativi, aspirazioni, pari)

Le differenze cominciano con la scuola materna

Probability of attendance (probit model: columns 1-3) and weekly hours attended (OLS model: columns 4-6) in pre-primary education, EU-SILC 2019

Variables	(1) EU-25	(2) Mediterran	(3) Italy	(4) EU-25	(5) Mediterran	(6) Italy
Dependent variable	*% of attendees on potential users*			*weekly hours of attendance*		
	75.51	*77.68*	*75.08*	*24.06*	*24.24*	*25.34*
Female	0.014	-0.039	0.051	-0.033	-0.326	-0.048
	[0.038]	[0.075]	[0.117]	[0.229]	[0.228]	[0.689]
Age	0.628***	0.635***	0.513***	4.377***	3.939***	6.004***
	[0.099]	[0.104]	[0.054]	[0.434]	[0.529]	[0.276]
(log) Household income	0.142***	0.176***	0.251***	1.006***	1.138***	1.565***
	[0.038]	[0.057]	[0.081]	[0.272]	[0.184]	[0.602]
Father employed	-0.102***	-0.118***	-0.126	-0.719*	-0.454	-0.982
	[0.038]	[0.032]	[0.161]	[0.411]	[0.456]	[0.901]
Mother employed	0.320***	0.402***	0.283**	5.404***	3.277**	2.593***
	[0.066]	[0.115]	[0.125]	[0.959]	[0.963]	[0.790]
Parental education	0.039	0.079***	0.099*	0.425*	0.395*	1.313***
	[0.027]	[0.013]	[0.054]	[0.219]	[0.169]	[0.332]
Foreign-born parent	0.090*	0.155**	0.093	0.892*	-0.344	-0.524
	[0.052]	[0.065]	[0.148]	[0.512]	[0.736]	[1.075]
Observations	17 750	7 070	1 169	16 473	6 585	1 133
pseudo R^2 and R^2	0.266	0.344	0.233	0.216	0.227	0.348
Number of countries	25	8	1	25	8	1

Notes: “Mediterran” includes Italy, Greece, Spain, Portugal, Maltha, Cyprus and Slovenia. Germany and Finland are excluded from EU-25 for limited number of observations. *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets and errors clustered at country level. The model includes constant and country fixed effects and uses sample weights. Source: Authors’ elaboration of EU-SILC 2019 data using Stata.

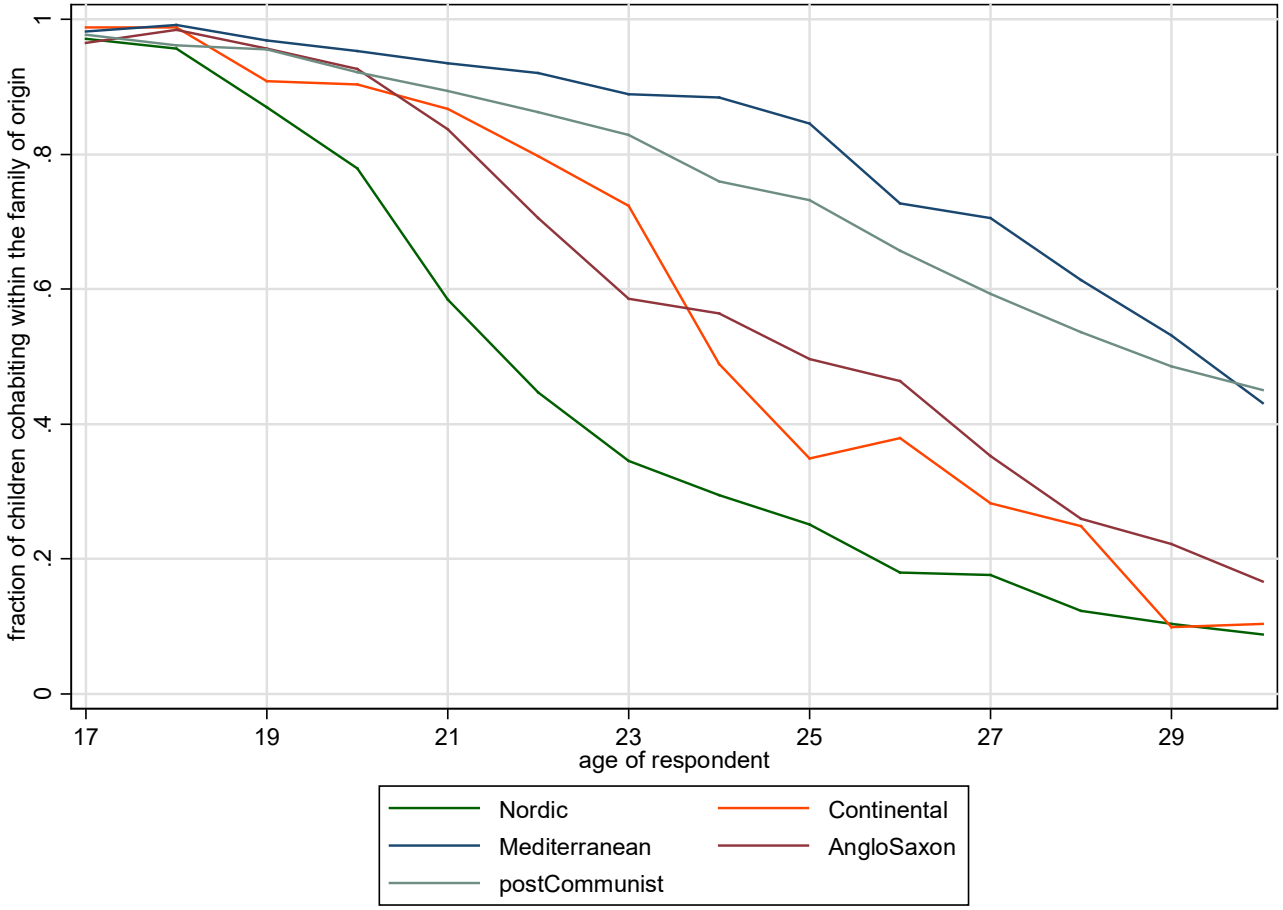
Si continua con l'abbandono scolastico

Probability of attendance secondary education or being NEET – probit models - EU-SILC 2019

Variables	(1) EU-26	(2) Mediterran	(3) Italy	(4) EU-27	(5) Mediterran	(6) Italy
Dependent variable	*% attending secondary 17-19 year-old*			*% not in education, employment or training 18-30*		
	84.50	*80.55*	*55.21*	*7.92*	*10.37*	*16.70*
Female	0.079**	0.163***	0.014	0.359***	0.279***	0.330***
	[0.037]	[0.058]	[0.086]	[0.041]	[0.035]	[0.061]
Age	-0.401***	-0.665***	-0.486***	0.011	-0.024	-0.049***
	[0.070]	[0.119]	[0.054]	[0.016]	[0.020]	[0.011]
(log) Household income	0.051**	0.031	0.044	-0.160***	-0.159***	-0.149***
	[0.026]	[0.024]	[0.063]	[0.025]	[0.008]	[0.045]
Ability to make ends meet	0.031**	0.037*	0.075	-0.076***	-0.019	-0.012
	[0.013]	[0.020]	[0.046]	[0.022]	[0.015]	[0.032]
Father employed	0.155***	0.114	-0.104	0.12	0.241***	0.327***
	[0.053]	[0.103]	[0.175]	[0.074]	[0.057]	[0.107]
Mother employed	0.145***	0.05	-0.1	0.009	0.071	0.154*
	[0.042]	[0.057]	[0.102]	[0.071]	[0.080]	[0.080]
Parental education	0.132***	0.151***	0.067	0.029	-0.021***	-0.021
	[0.020]	[0.025]	[0.044]	[0.020]	[0.007]	[0.032]
Foreign-born parent	0.035	0.039	-0.117	0.163**	0.153	0.008
	[0.056]	[0.065]	[0.134]	[0.068]	[0.137]	[0.114]
Absence of father	0.034	-0.014	-0.153	0.106	0.224***	0.294**
	[0.052]	[0.109]	[0.192]	[0.078]	[0.047]	[0.130]
Absence of mother	-0.216***	-0.340***	-0.264	0.087	0.163**	0.251**
	[0.082]	[0.104]	[0.210]	[0.068]	[0.068]	[0.112]
Max education attainment: *illiterate*				1.243***	0.967***	0.38
				[0.177]	[0.247]	[0.391]
Max education attainment: *primary*				0.807***	0.497***	0.437
				[0.114]	[0.065]	[0.335]
Max education attainment: *lower secondary*				0.382***	0.057	-0.074
				[0.102]	[0.080]	[0.118]
Max education attainment: *upper secondary*				0.123	-0.257***	-0.397***
				[0.114]	[0.097]	[0.095]
Observations	16 356	5 743	940	67 217	27 114	4 582
pseudo R^2	0.188	0.304	0.0783	0.0943	0.111	0.0638
Number of countries	26	8	1	27	8	1

E continuano con il passaggio all'università (non uscendo di casa dei genitori)

Share of children cohabiting within the family, by age – SILC 2019

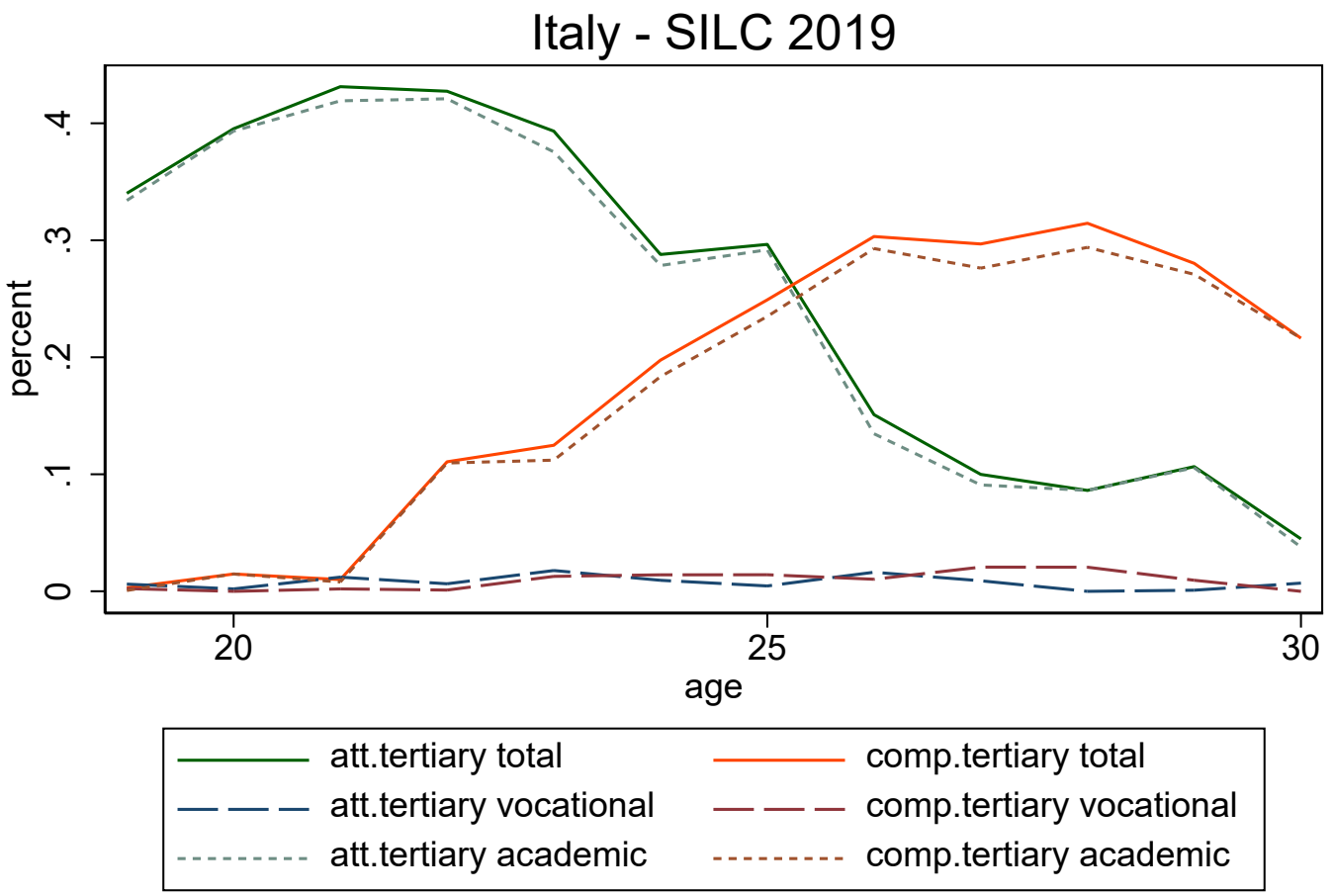


Probability of tertiary education attendance – probit models - EU-SILC 2019

	(1) EU-27 All	(2) Mediterran cohabiting	(4) Mediterran non cohabiting	(5) Italy cohabiting	(6) Italy non cohabiting
Dependent variable:	*% tertiary enrolled aged 18-30*				
Female	0.238***	0.311***	-0.09	0.289***	-0.364**
	[0.022]	[0.035]	[0.097]	[0.048]	[0.155]
Age	-0.133***	-0.158***	-0.178***	-0.103***	-0.136***
	[0.014]	[0.019]	[0.048]	[0.008]	[0.028]
(log) Household income	-0.190***	-0.062	-0.163**	-0.007	0.013
	[0.048]	[0.045]	[0.082]	[0.040]	[0.085]
Ability to make ends meet	0.075***	0.055***	0.184***	0.081***	0.202**
	[0.012]	[0.020]	[0.037]	[0.025]	[0.084]
Parental education	0.305***	0.302***	-0.101	0.303***	0.114
	[0.015]	[0.027]	[0.097]	[0.023]	[0.181]
Father employed	0.106***	0.079		-0.01	
	[0.036]	[0.051]		[0.066]	
Mother employed	0.153***	0.109*		-0.015	
	[0.036]	[0.056]		[0.055]	
Foreign-born parent	0.012	-0.170***		-0.338***	
	[0.071]	[0.062]		[0.091]	
Absence of father	0.017	-0.05		-0.231***	
	[0.045]	[0.062]		[0.085]	
Absence of mother	0.064	-0.054		-0.154	
	[0.077]	[0.072]		[0.128]	
Observations	58 531	19 207	4 560	3 425	826
pseudo R^2	0.186	0.21	0.263	0.128	0.121
Number of countries	27	8	8	1	1

Notes: "Mediterran" includes Italy, Greece, Spain, Portugal, Maltha, Cyprus and Slovenia. *** p<0.01, ** p<0.05, * p<0.1. Robust standard errors in brackets and errors clustered at country level. The model includes constant and country fixed effects and uses sample weights. Source: Authors' elaboration of EU-SILC 2019 data using Stata.

Attendance and completion rates in tertiary education, IT-SILC 2019 (weighted)



Actual enrolment and completion relative to the age cohort, using sample weights

Transitions and attainment in Italy (2023)

Relevant transitions		Final attainment	
drop out during secondary without completing	20.0	20.0	below secondary
complete secondary but not enrol university	13.6	35.2	secondary graduate
complete secondary, enrol university but drop out during tertiary	8.00		
complete secondary, enrol university but not yet completed after 3 years of theoretical duration	13.6		
complete tertiary education within 3 years by the end of legal duration	44.8	44.8	tertiary graduate

Source: data from figure 3 of OECD (2025)

Quindi si può migliorare:

⇨ portando tutti al diploma di maturità (estensione obbligo)

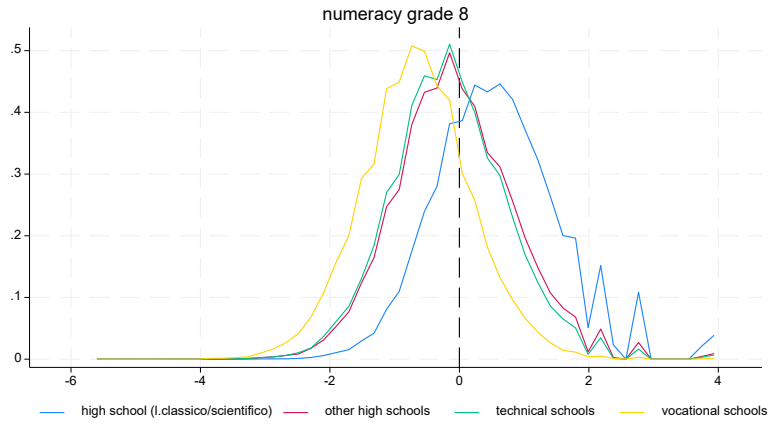
⇨ aumentando i passaggi dalla secondaria all'università/ITS Academies

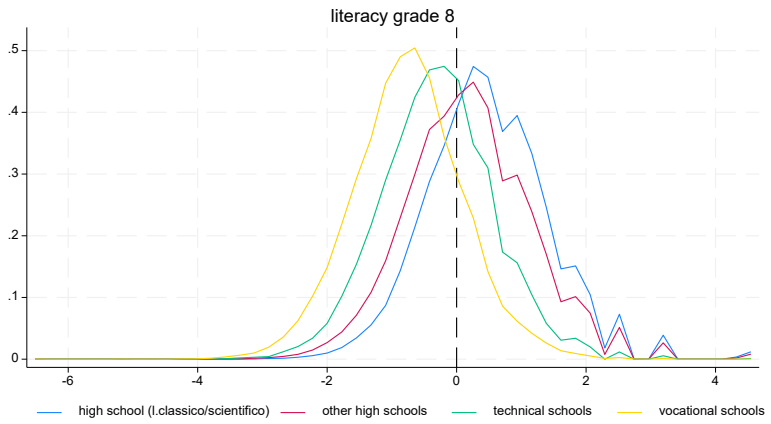
⇨ riducendo abbandoni universitari

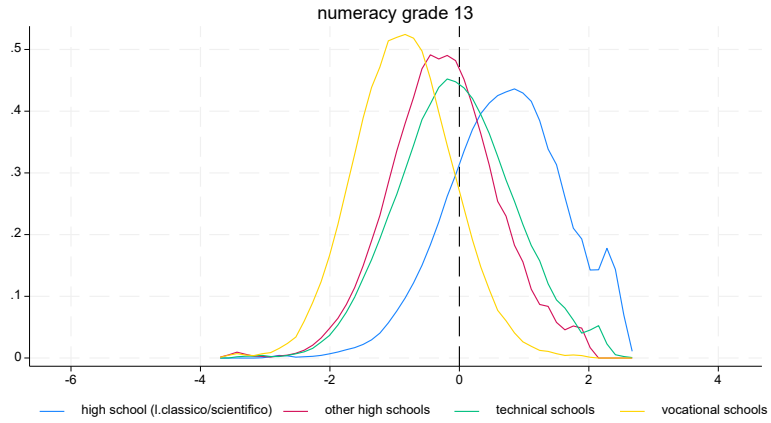
⇨ accorciando le carriere universitarie

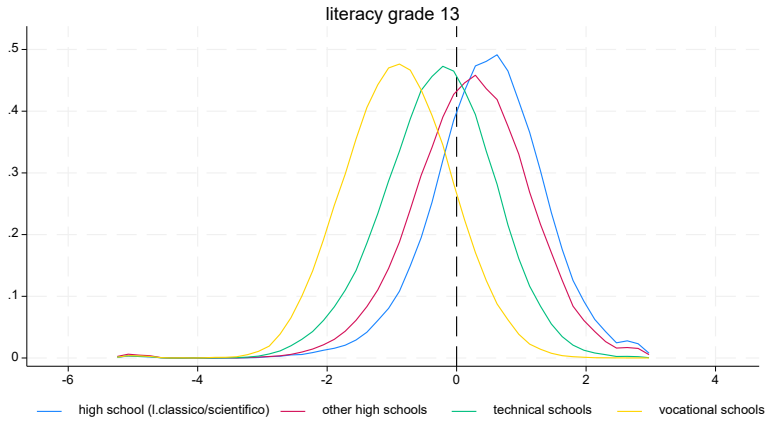
Il nodo della scuola secondaria: differenziata o opzionale ?

Distribution of test score – Invalsi matched sample (2013-14 and 2018-19)









Liceo o professionale ? chi decide ? sulla base di cosa ?

Probability of track allocation – ordered probit model

	1	2	3	4
dependent variable: track allocation (%)				
1.high schools (classico/scientifico)	*29.54*	*29.40*	*29.40*	*29.40*
2.other high schools	*30.28*	*30.22*	*30.22*	*30.22*
3.technical schools	*29.02*	*29.14*	*29.14*	*29.14*
4.vocational schools	*11.17*	*11.23*	*11.23*	*11.23*
highest parental education=primary	0.588***	0.443***	0.422***	0.388***
highest parental education=lower secondary	0.390***	0.297***	0.286***	0.230***
highest parental education=vocational	0.314***	0.245***	0.233***	0.175***
highest parental education=high school	0.033***	0.043***	0.044***	0.005
highest parental education=non academic tertiary	-0.074***	-0.077***	-0.073***	-0.117***
highest parental education=BA or MA	-0.339***	-0.262***	-0.240***	-0.270***
ESCS (cultural-socio-economic conditions)	-0.253***	-0.206***	-0.197***	-0.195***
Marks in Italian (oral)		-0.227***	-0.171***	-0.176***
Marks in Mathematics (oral)		-0.262***	-0.201***	-0.204***
Literacy test score			-0.003***	-0.003***
Numeracy test score			-0.004***	-0.004***
Observations	253 786	224 138	224 138	224 138
Pseudo R^2	0.064	0.142	0.151	0.156

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

Controls include gender, birth year, citizenship and macro-region of residence (replaced by province fixed effects in column 4)

Si decide a 13 anni sulla prospettiva dell'università ?

Descriptive statistics (weighed) – Italy – PISA 2018

	high school	technical schools	vocational schools	Total	# cases	std.dev.	min	max
female	0.60	0.29	0.47	0.48	11710	0.50	0.00	1.00
age	15.78	15.77	15.74	15.77	11710	0.28	15.25	16.33
ESCS index	0.11	-0.39	-0.73	-0.21	11401	0.91	-5.92	3.07
Highest occup.prestige	54.07	42.89	36.74	47.42	10991	21.28	11.74	88.96
numeracy	522.17	482.00	409.75	487.70	11710	88.00	191.82	746.77
literacy	521.05	457.52	397.65	477.43	11710	93.34	175.34	754.42
science	502.70	460.19	398.01	469.08	11710	84.98	128.31	742.00
Child expects HE	0.87	0.64	0.46	0.72	11262	0.45	0.00	1.00
Parents expect HE	0.82	0.58	0.35	0.66	11528	0.47	0.00	1.00