



**POLITECNICO  
DI TORINO**

# Università e Ricerca

Pilastri su cui fondare  
lo sviluppo sociale ed  
economico del Paese

**Marco Gilli | Rettore Politecnico di Torino**



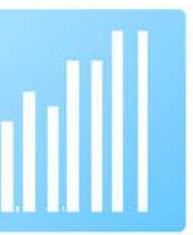
## **Ruolo cruciale università**

**Per promuovere sviluppo sociale,  
culturale, scientifico, tecnologico  
ed economico dei Territori**



# Societal challenges

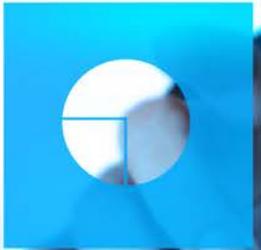
According to the study *Entrepreneurial Impact: The Role of MIT*, which analyzes the economic effect of MIT alumni-founded companies and its entrepreneurial ecosystem, if the active companies founded by MIT graduates formed an independent nation, their revenues would make that nation at least the seventeenth-largest economy in the world. Within the U.S., these companies currently generate hundreds of billions of dollars and hundreds of thousands of jobs to regional economies, particularly those in Massachusetts and California. Globally, a less conservative estimate of their annual world sales would equal \$2 trillion, producing the equivalent of the eleventh-largest economy in the world.



Manufacturing  
Supply chain  
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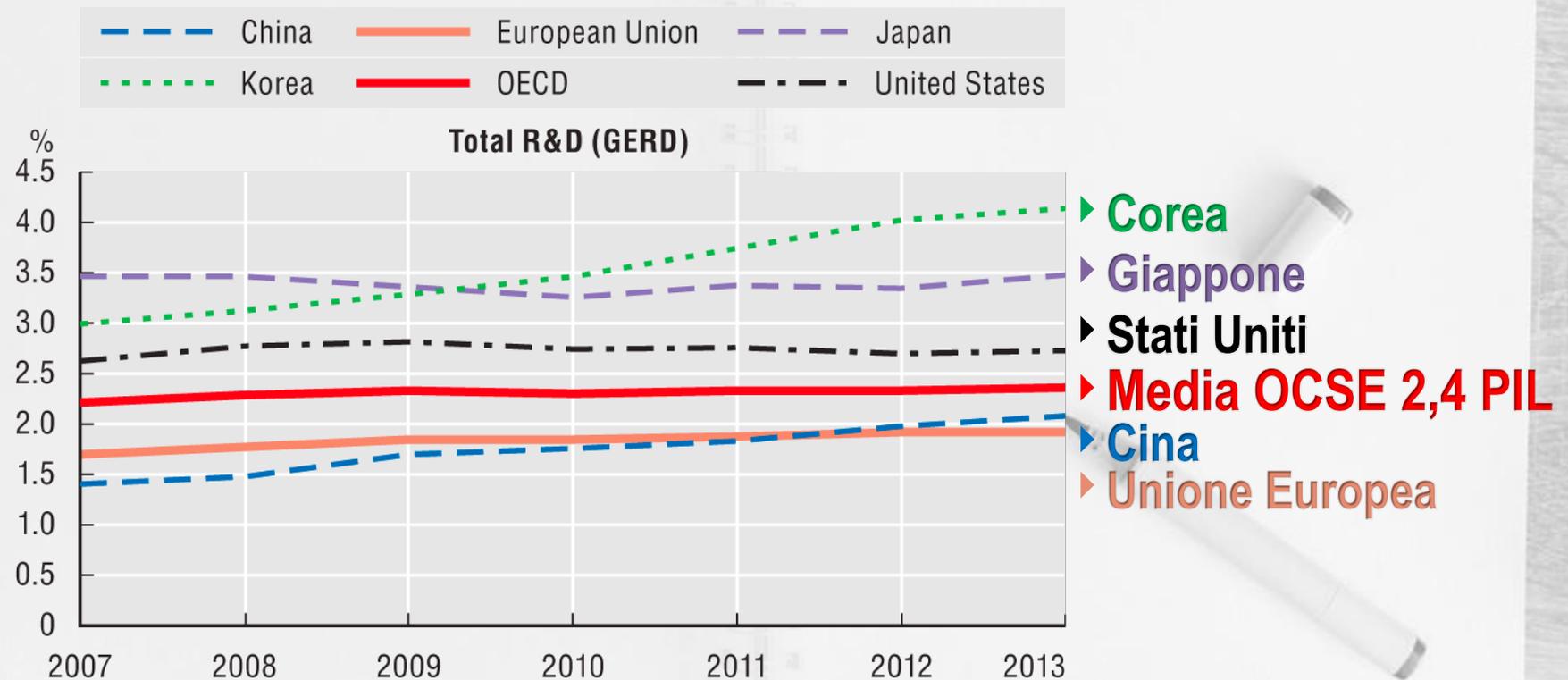


# Investimenti e Risorse umane

# Investimenti complessivi in Ricerca e Sviluppo

Recent trends in R&D performance,  
OECD and selected economies, 2007-13

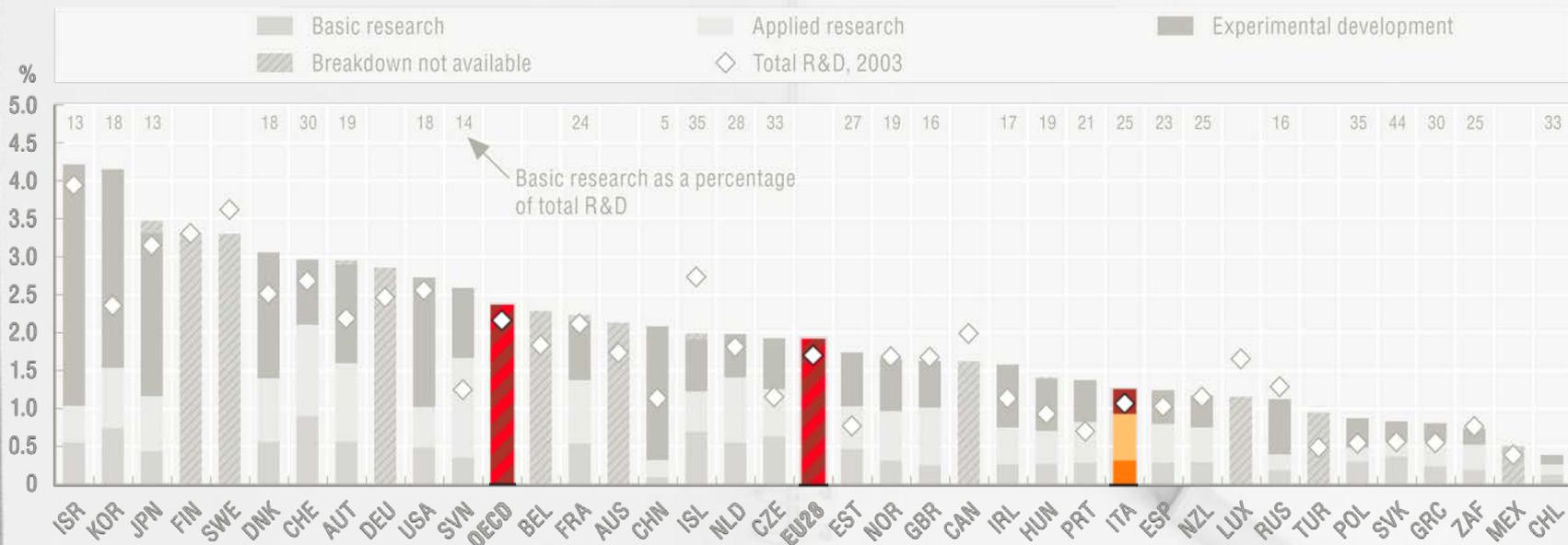
Totals and sector estimates, as a percentage of GDP



# Investimenti complessivi in Ricerca e Sviluppo

## Gross domestic expenditure on R&D, by type, 2013

As a percentage of GDP



**Media  
OCSE**

**Unione  
Europea**

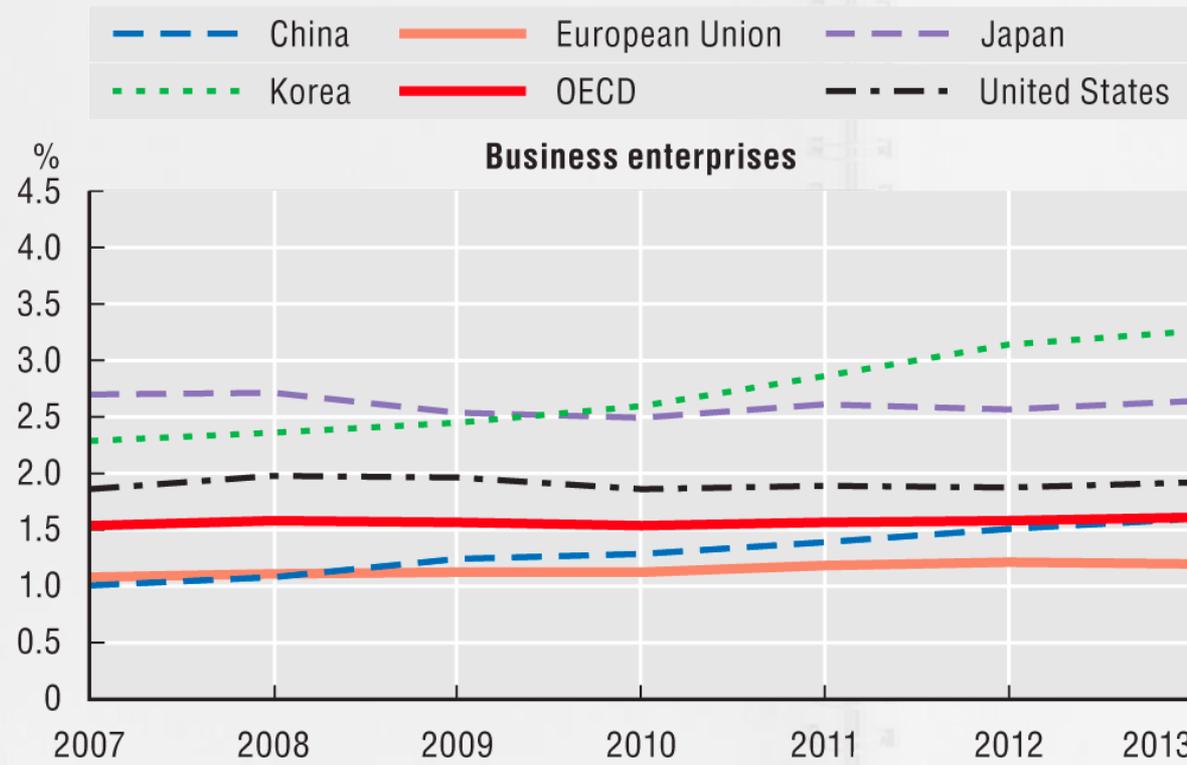
**Italia**

In Italia circa la metà  
degli investimenti OCSE

# BERD Investimenti privati in Ricerca e Sviluppo

## Recent trends in R&D performance, OECD and selected economies, 2007-13

Totals and sector estimates, as a percentage of GDP



# BERD Investimenti privati in Ricerca e Sviluppo

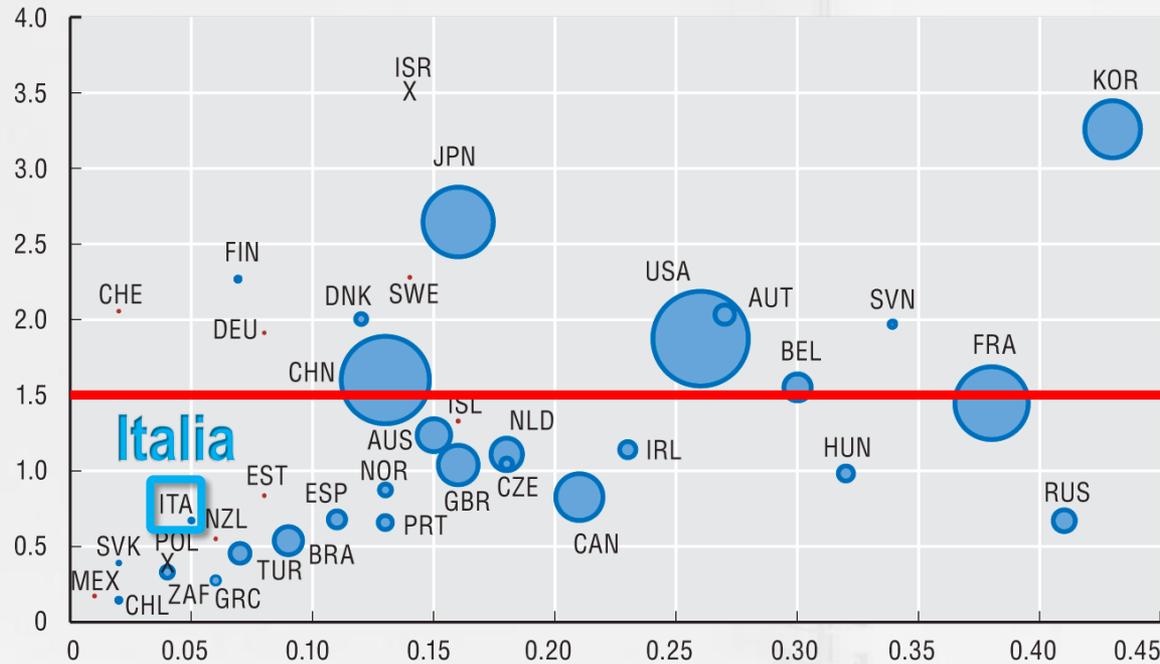
## Business R&D intensity and government support to business R&D, 2013

As a percentage of GDP

Volume of tax support to business R&D, million USD PPP, 2013

• No incentive X No data available • USD 75 million • USD 250 million • USD 2 500 million

BERD, as % of GDP

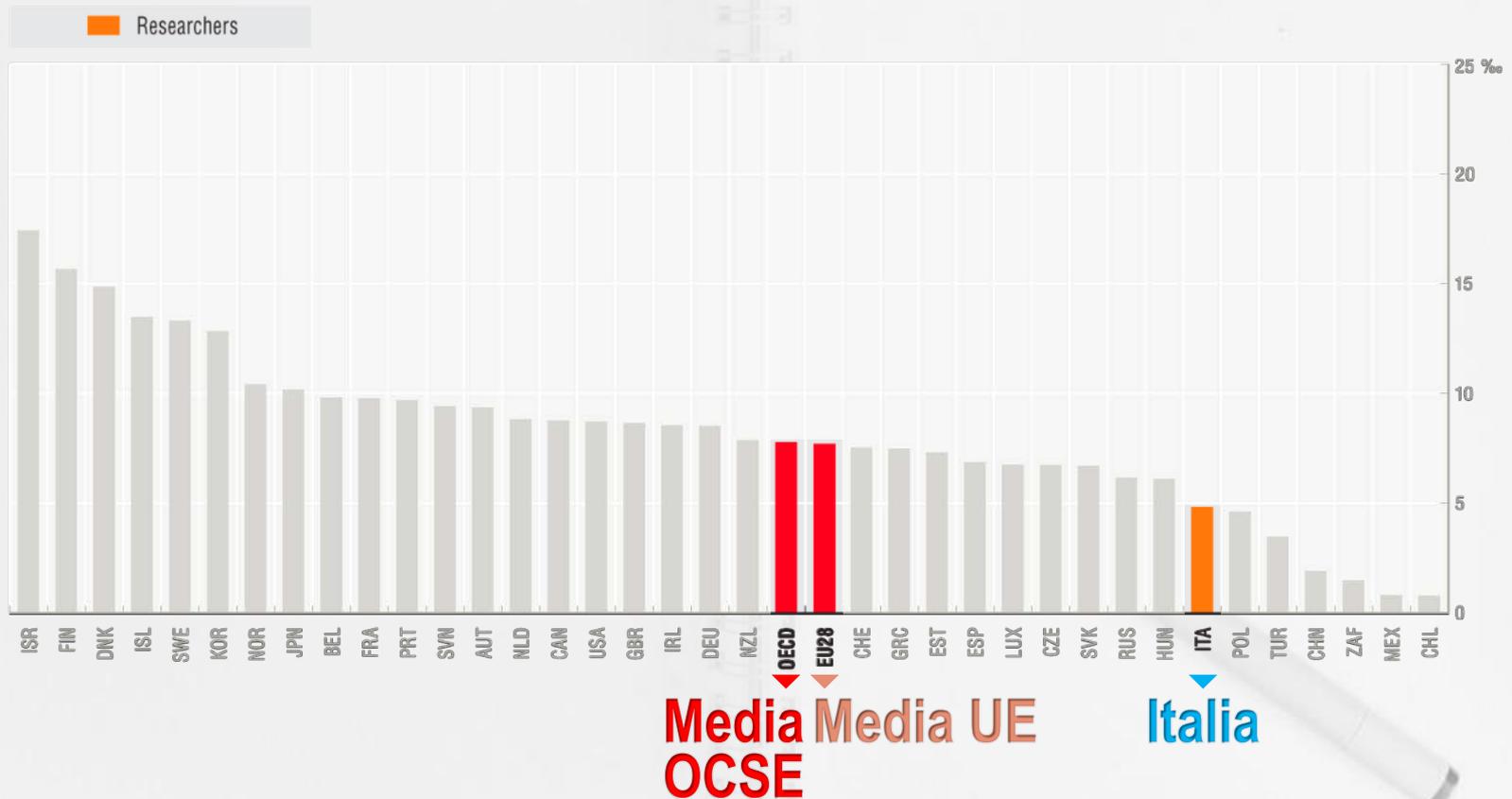


▶ Media OCSE 1,5 PIL



# Ricercatori

R&D personnel, 2013  
Per thousand employment



## Spesa totale per studente nelle università italiane (migliaia di euro 2012 costanti)

	2000	2004	2008	2012
NORD-OVEST	8,8	9,1	10,1	8,7
NORD-EST	7,3	7,9	9,8	8,7
CENTRO	8,6	8,2	9,1	8,0
SUD	6,6	5,9	6,6	5,7
ISOLE	7,2	6,6	7,6	6,9
ITALIA	7,7	7,5	8,6	7,6

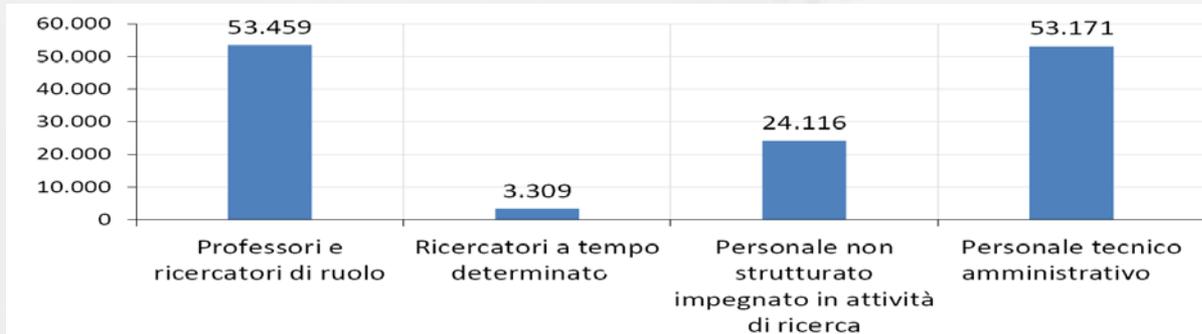
Elaborazioni su dati Anvur (2014)

## Evoluzione del fondo di finanziamento ordinario

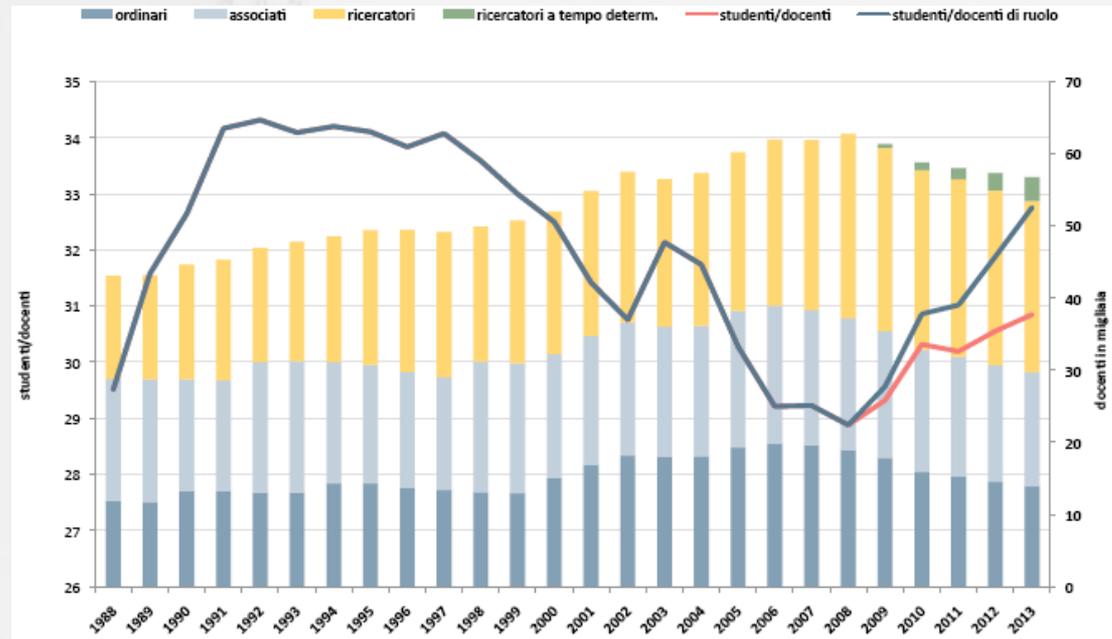


Fonte: CUN 2013

## Personale impegnato nelle Università (2013)



Evoluzione dei docenti  
e del rapporto  
studenti/docenti



1. Piano straordinario per 861 Ricercatori in *Tenure Track* per ora limitato all'anno 2016
2. Previsione di 500 posizioni per Professori esterni
3. Esclusione dai vincoli di turnover dei Ricercatori di tipo A (attivabili su risorse di bilancio)
4. Sblocco degli scatti stipendiali per il personale docente a partire dal 1/1/2016



→ Significativo incremento del Fondo di Finanziamento Ordinario, che ne ripristini almeno il valore degli anni 2008/2009.

In particolare appare necessario riattivare uno specifico filone di finanziamento per l'edilizia universitaria e l'ampliamento degli spazi e dei laboratori destinati agli studenti



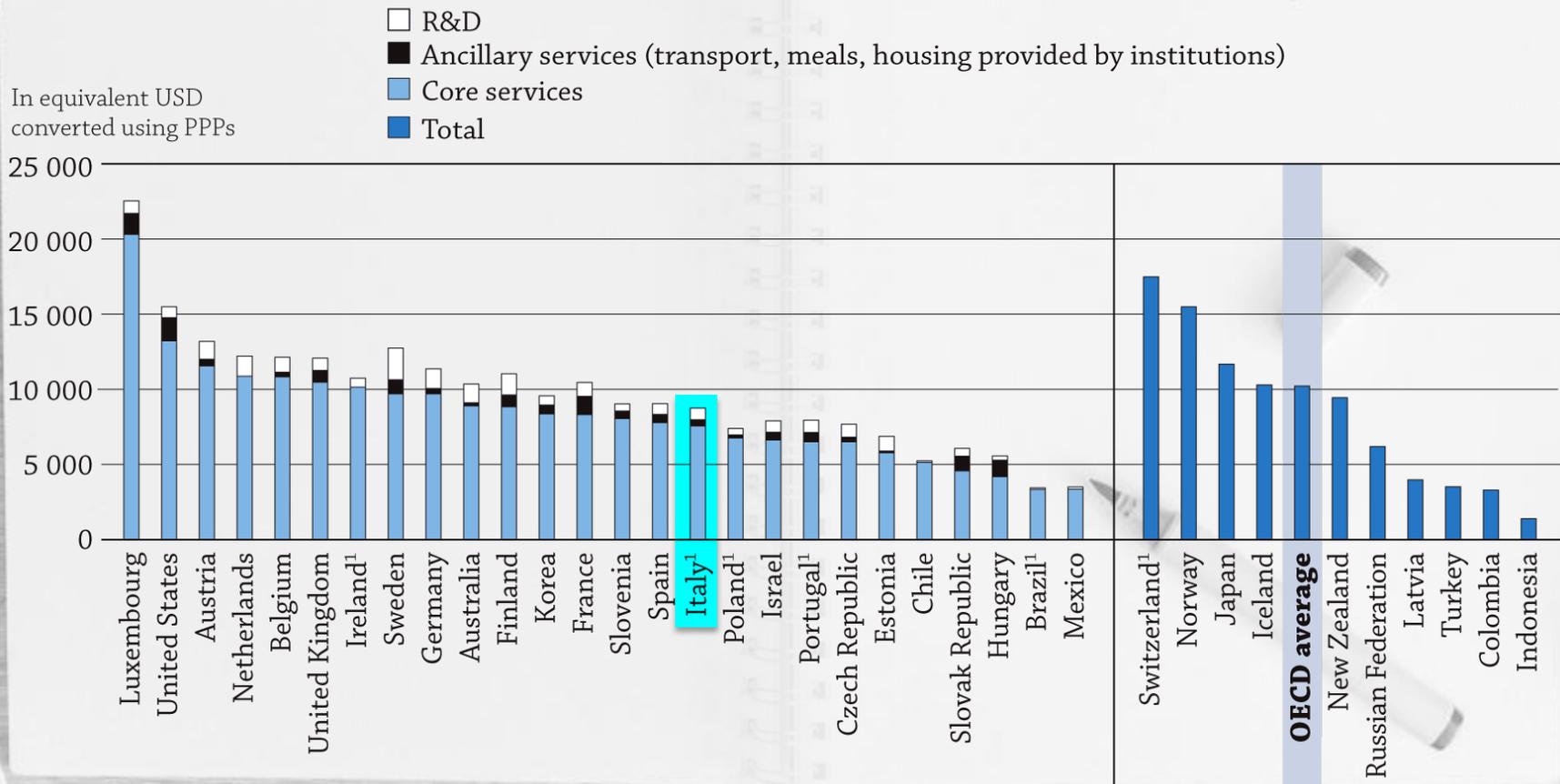
- 
- **Rimozione dei vincoli di turn-over**  
(per consentire agli Atenei di riportare il rapporto docenti/studenti a valori ragionevolmente in linea con gli standard europei)
  - **Attuazione di un piano pluriennale per il reclutamento di un consistente numero di giovani ricercatori in tenure-track**  
(con l'obiettivo da un lato di elevare la numerosità del corpo docente, dall'altro di abbassarne sensibilmente l'età media)

# Formazione terziaria



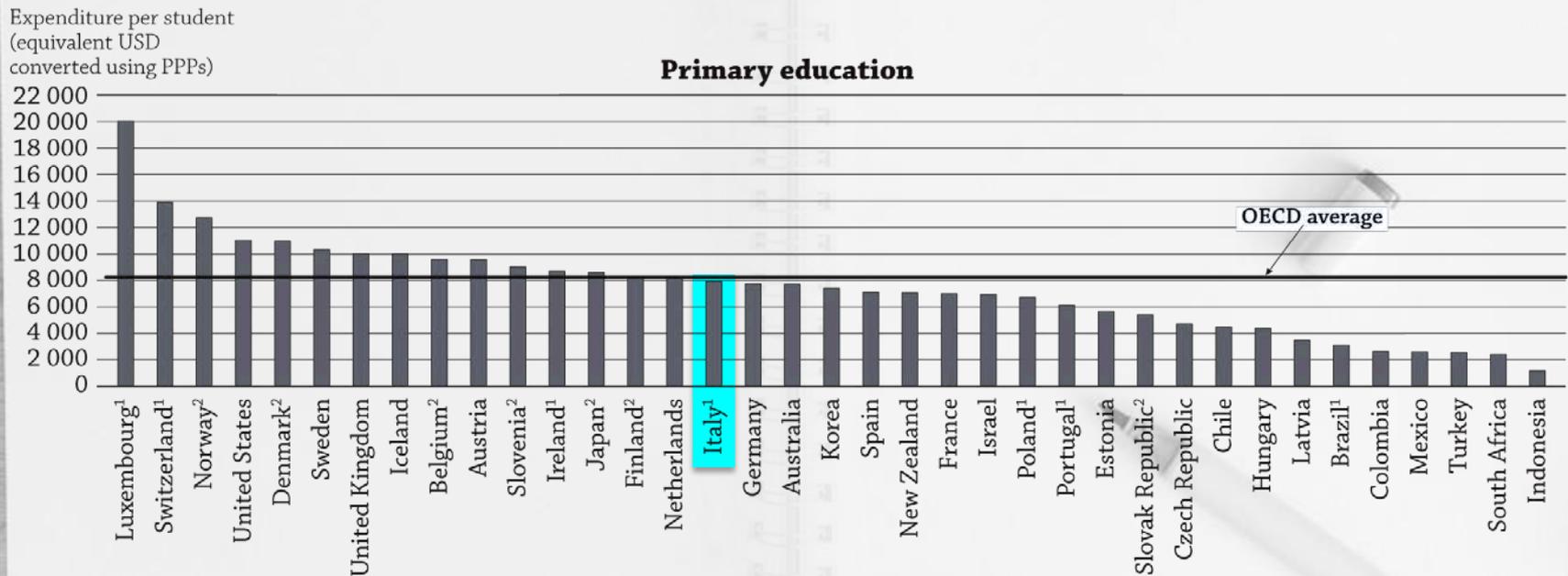
## Annual expenditure by educational institutions per student, by types of service, from primary to tertiary education (2012)

*In equivalent USD converted using PPPs, based on full-time equivalents,  
for primary through tertiary education*



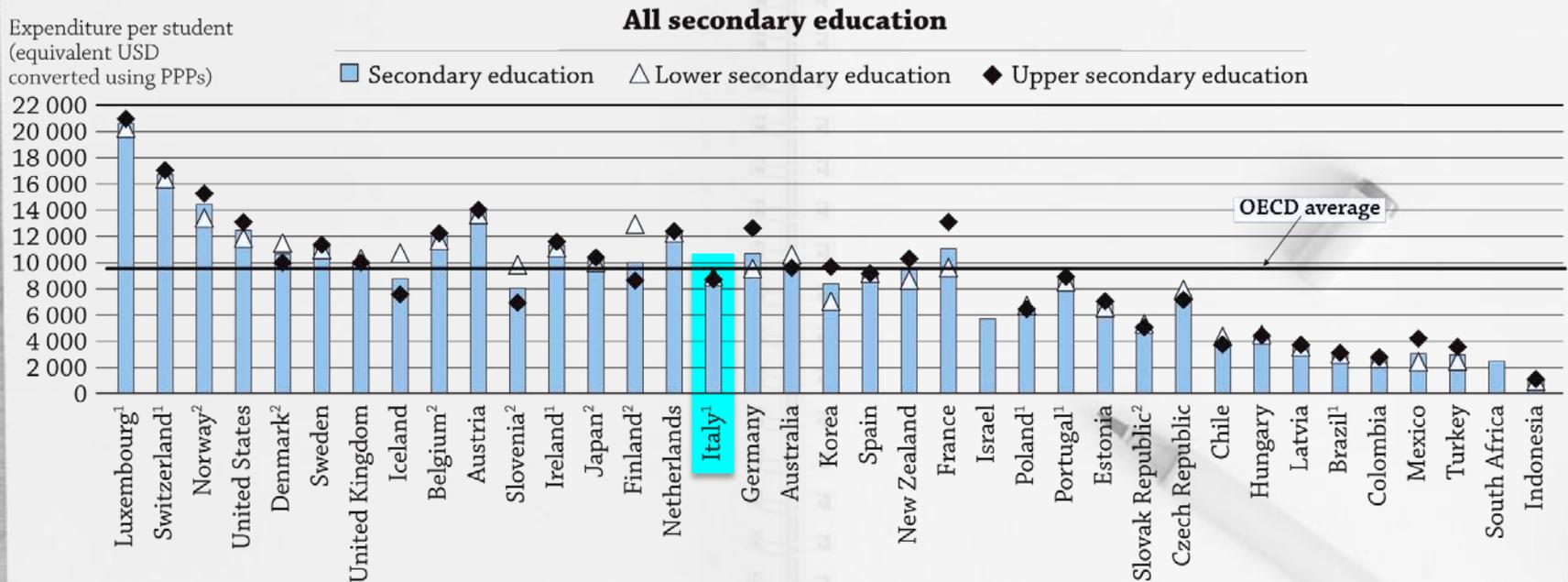
## Annual expenditure per student by educational institutions for all services, by level of education (2012)

*Expenditure on core, ancillary services and R&D, in equivalent USD converted using PPPs,  
based on full-time equivalents*



## Annual expenditure per student by educational institutions for all services, by level of education (2012)

*Expenditure on core, ancillary services and R&D, in equivalent USD converted using PPPs, based on full-time equivalents*

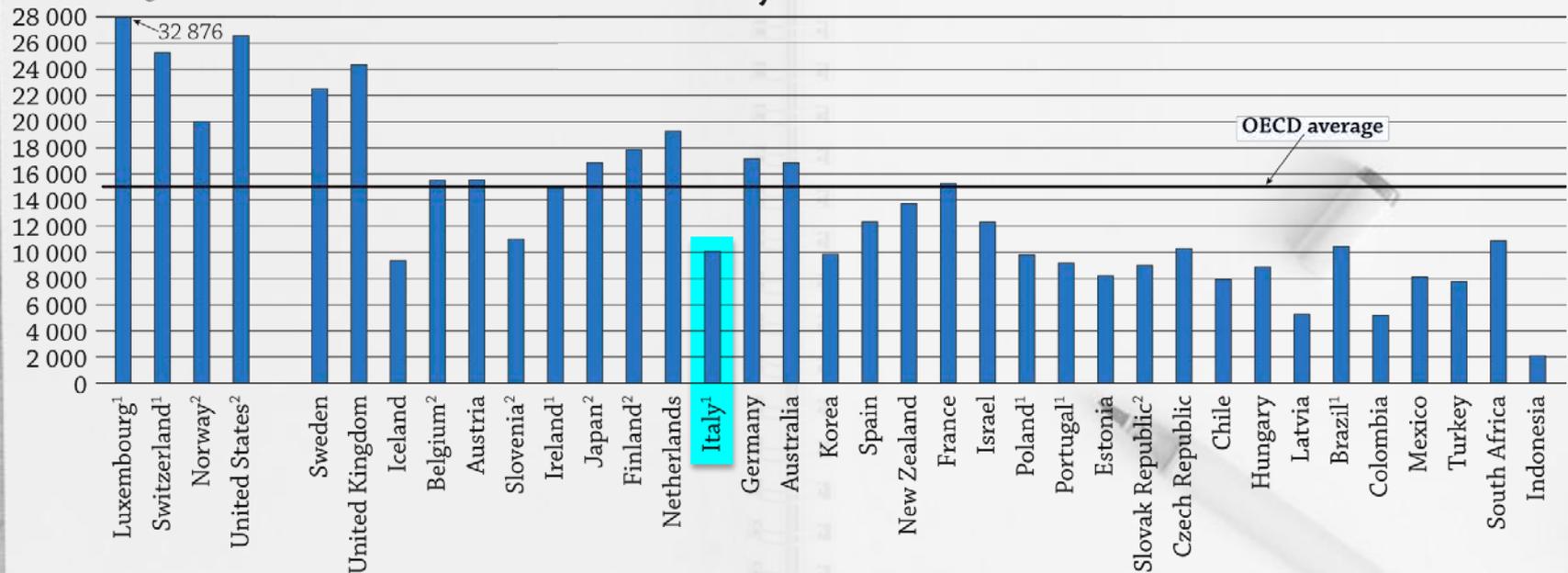


## Annual expenditure per student by educational institutions for all services, by level of education (2012)

*Expenditure on core, ancillary services and R&D, in equivalent USD converted using PPPs,  
based on full-time equivalents*

Expenditure per student  
(equivalent USD  
converted using PPPs)

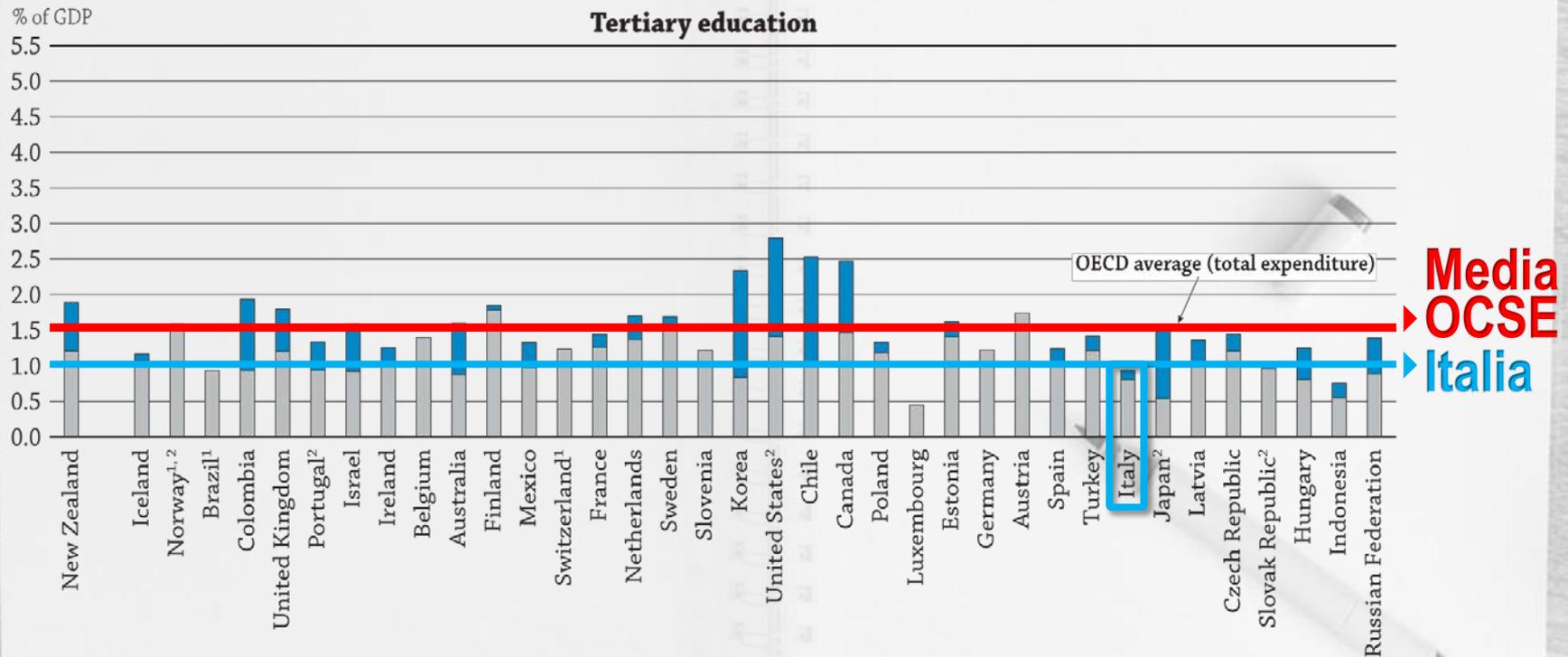
### Tertiary education



# Formazione terziaria

## Expenditure on educational institutions as a percentage of GDP (2012)

From public and private sources, by level of education and source of funds



Spesa italiana sotto 1%

# Formazione terziaria età 25-34

Percentage of adults who have attained tertiary education, (2014)

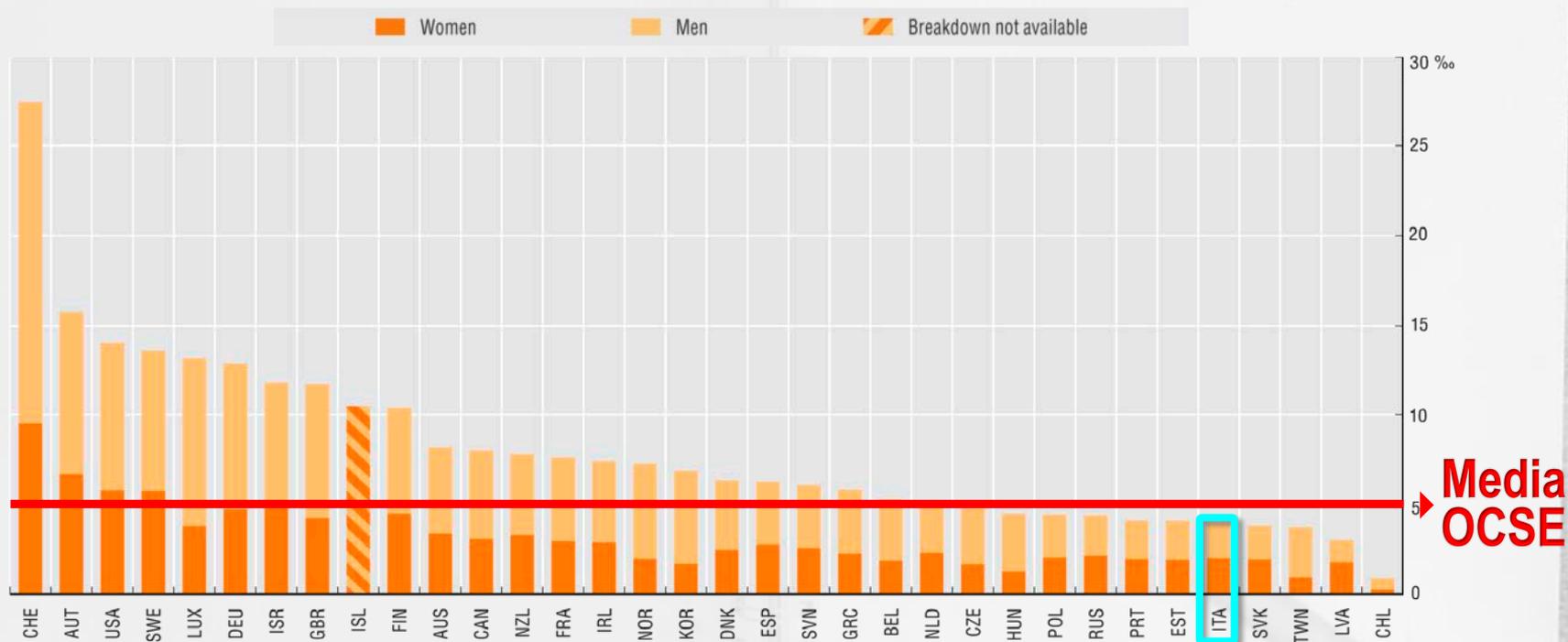
		Total tertiary
		25-34 year-olds
		(27)
OECD	Australia	48
	Austria	38
	Belgium	44
	Canada	58
	Chile <sup>1</sup>	27
	Czech Republic	30
	Denmark	42
	Estonia	40
	Finland	40
	France	44
	Germany	28
	Greece	39
	Hungary	32
	Iceland	41
	Ireland	51
	Israel	46
	Italy	24
	Japan	37
	Korea	68
	Luxembourg	53
	Mexico	25
	Netherlands	44
	New Zealand	40
	Norway	49
	Poland	43
	Portugal	31
	Slovak Republic	30
	Slovenia	38
	Spain	41
	Sweden	46
	Switzerland	46
	Turkey	25
	United Kingdom	49
	United States	46
	OECD average	41
	EU21 average	39

Italia 24%

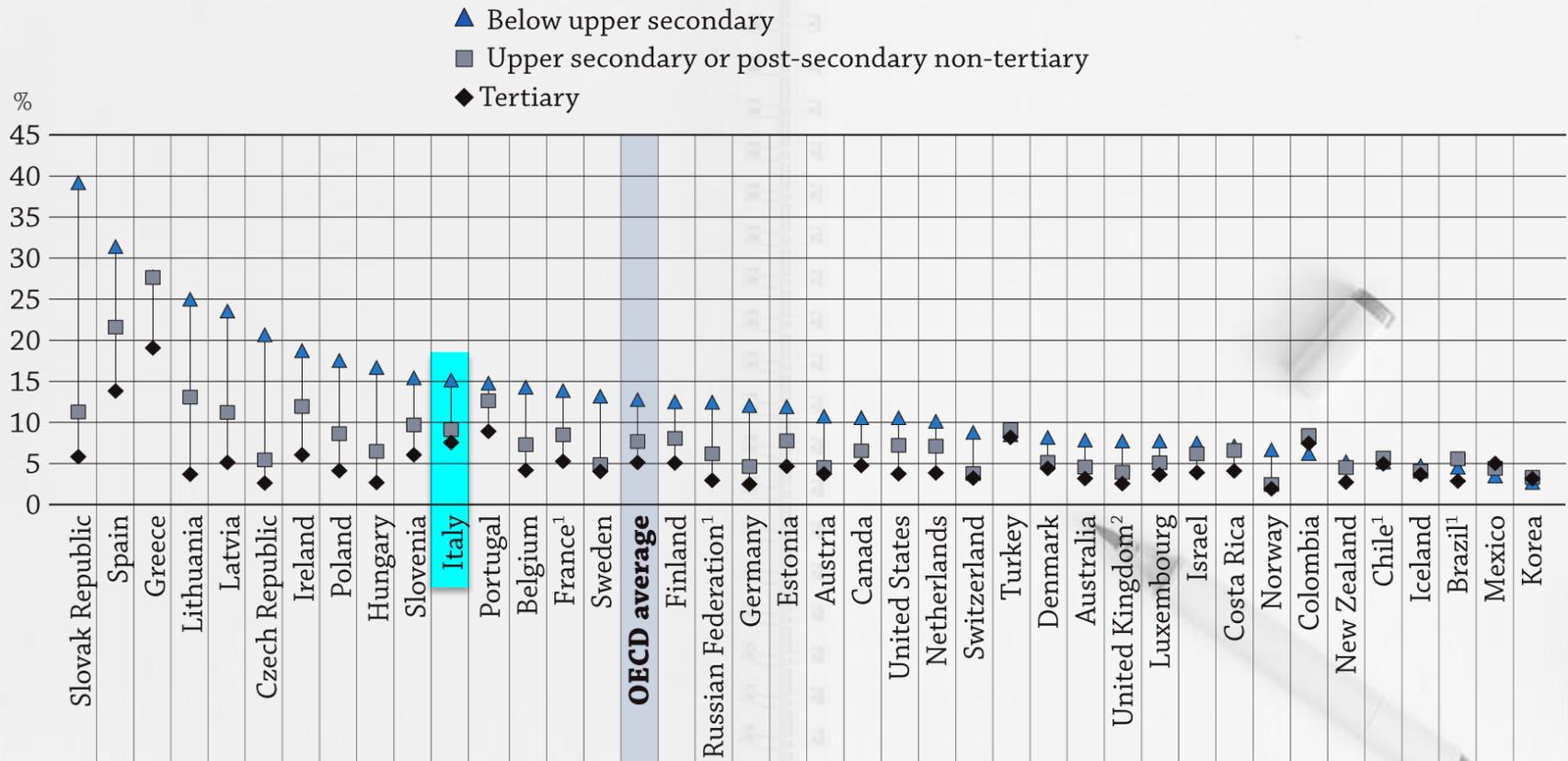
Media OCSE 41%

## Doctorate holders in the working age population, 2012

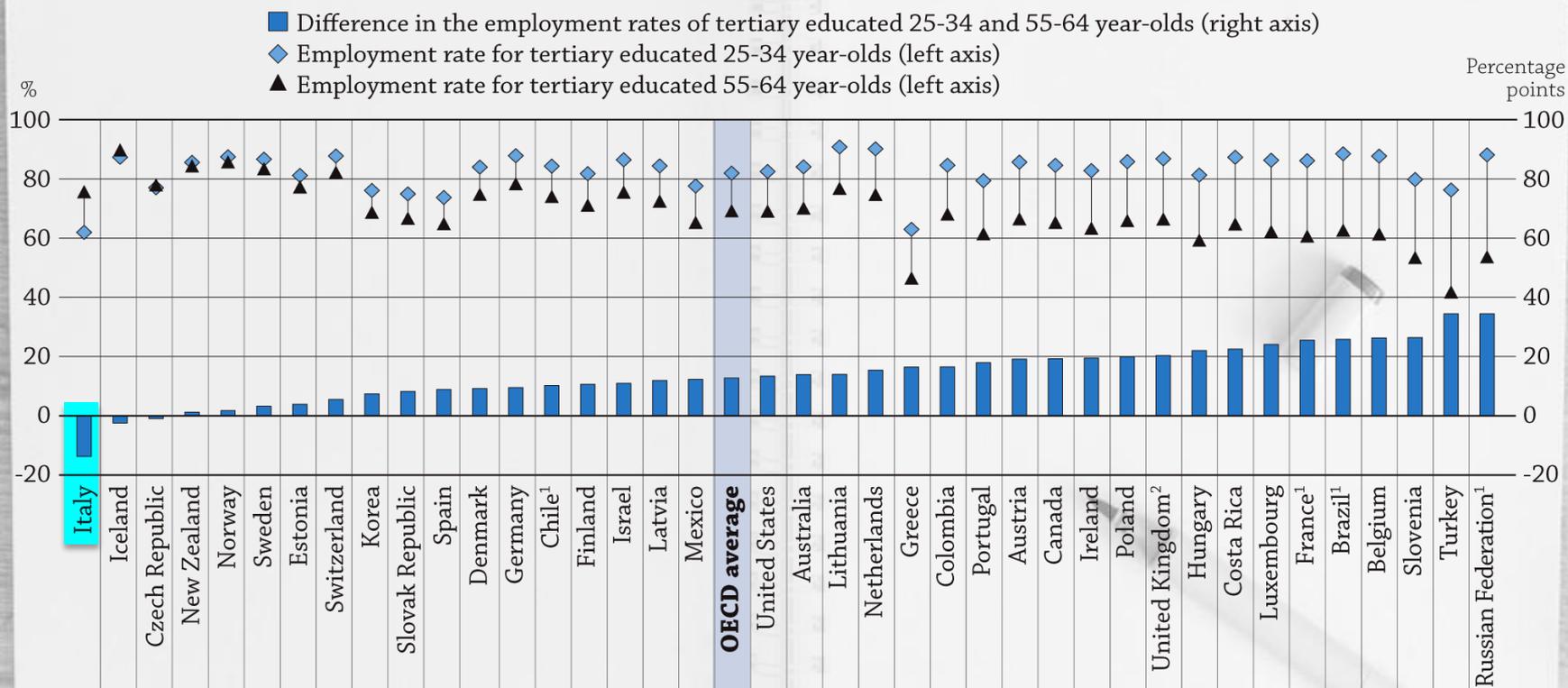
Per thousand population aged 25-64



## Unemployment rates, by educational attainment (2014) 25-64 year-olds



## Employment rates for younger and older tertiary-educated adults (2014) 25-34 and 55-64 year-olds, and percentage-point difference between these two groups



# Disoccupazione

Unemployment rates in the OECD, gap between younger and older workers 2008-14 and differences by country in 2014

Percentage points

Disoccupazione (aprile 2015)  
6,9% nei paesi OCSE 10% in Europa

Disoccupazione giovanile (dai 15 ai 24 anni)  
in Italia, Spagna, Grecia oltre il 40%



# Formazione terziaria

- 
- A photograph of two students in a classroom setting. The student in the foreground is a man with a beard and glasses, wearing a maroon and grey long-sleeved shirt, sitting at a desk and typing on a laptop. Another student is visible behind him, also working on a laptop. The room has large windows in the background and rows of wooden chairs in the foreground.
- Sensibile incremento delle risorse per il Diritto allo Studio (aumento della numerosità delle borse, e aumento del loro valore utilizzando strumenti differenziati e superando una certa confusione di ruoli, seguita alla riforma del titolo V della Costituzione)
  - Coraggiosa riforma degli ITS (sul modello degli Istituti Europei di formazione terziaria professionalizzante)



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