EU policy on School Education and PISA

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*Education
and Training`l.;*

EU policy on School Education

European Commission

3 pillars

1. acquisition of key competences

- o Key competences
- o Basic skills – Reading literacy
- o Basic skills - Mathematics, Science and Technology

2. Equitable education systems

- o Early School Leaving
- o Students with migrant backgrounds
- o Early Childhood Education and Care

3. Supporting high-quality staff

- o Teachers, School Leaders, Teacher Educators

Education and Training

Key Competences

European Framework of Key Competences

The key competences are	They consist of	and are underpinned by
Mother Tongue		**critical thinking**
Foreign Languages	**Knowledge**	**creativity**
Mathematical competence and basic competences in science and technology		**problem solving**
Digital Competence	**Skills**	**initiative & risk assessment,**
Learning to Learn		
Social and Civic Competence	**Attitudes**	**decision-taking**
Sense of initiative and entrepreneurship		**management of one's own feelings**
Cultural awareness and expression		

Key Competences
in School Curricula

- 2010 Communication

  '*Key Competences for a Changing World*'

  – Key competences are well represented in national curricula, but more work is needed to:

    - focus on skills and attitudes

    - integrate learning across all subjects

    - use assessment in the learning of Key Competences.

Basic skills:
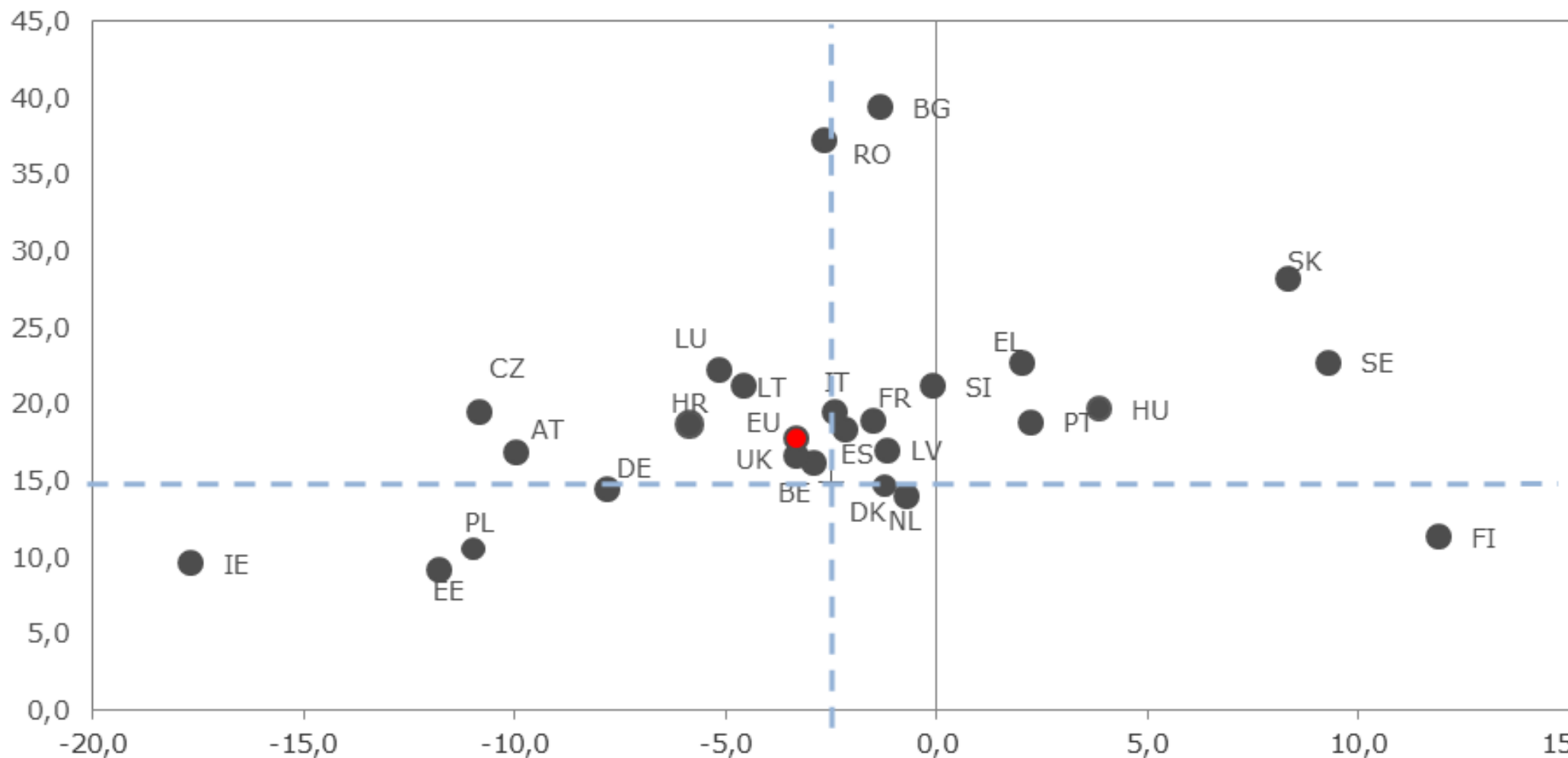# Reading literacy

Early school leaving rate (%) 2012

Minimum progress needed

Getting better ⟷ Getting worse

Europe 2020 headline target
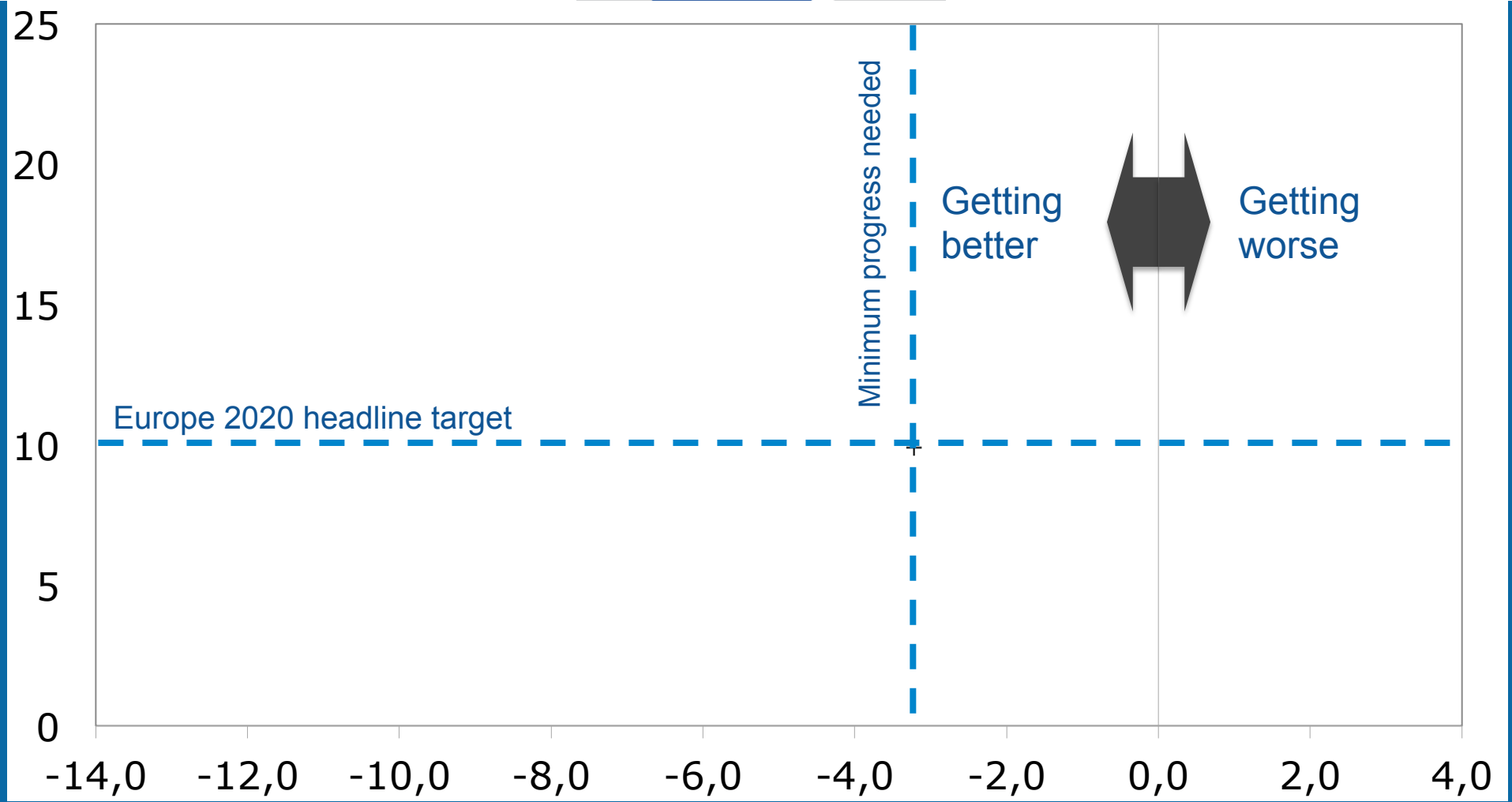
Average annual change in early school leaving rate (%) over the period 2009-2012

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Reading
Share of low achievers and annual change

Reading literacy

High Level Group on Literacy:

- has examined how to **support literacy** throughout lifelong learning

- has identified common **success factors** in literacy programmes and policy initiatives

- **made proposals** to improve literacy among both school students and adults (Sept. 2012).

Objectives of ELINET:

- Carry out country specific analysis of MS's performance in reading literacy
- Organise awareness raising campaigns
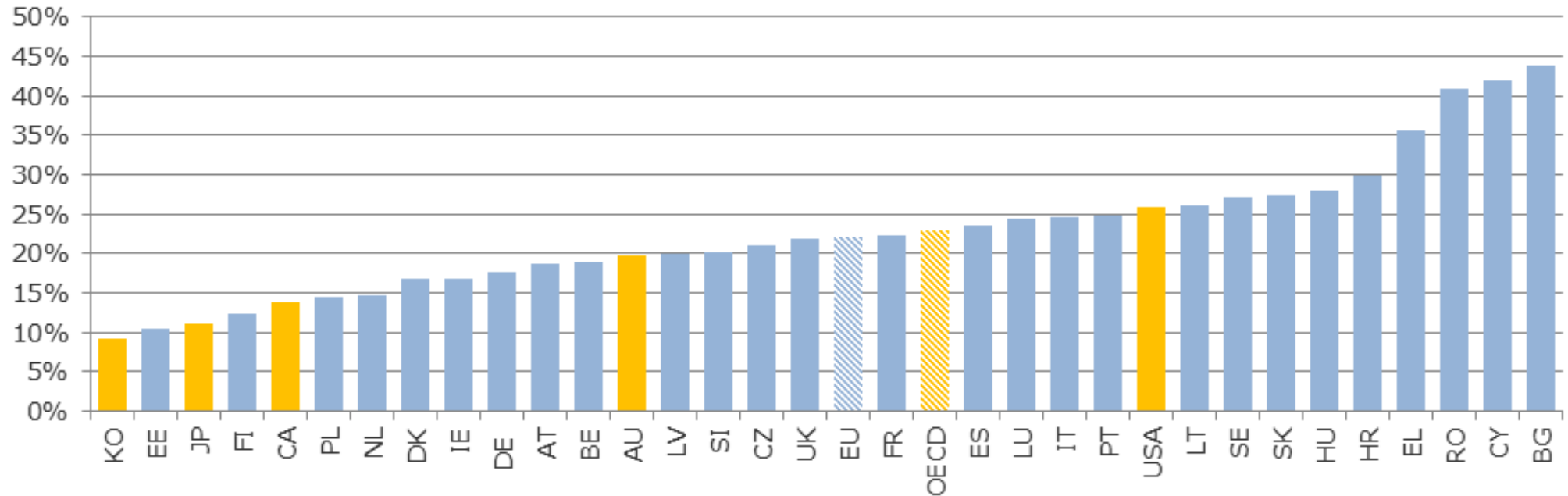- Develop a European Framework of Good Practice and a Communication platform

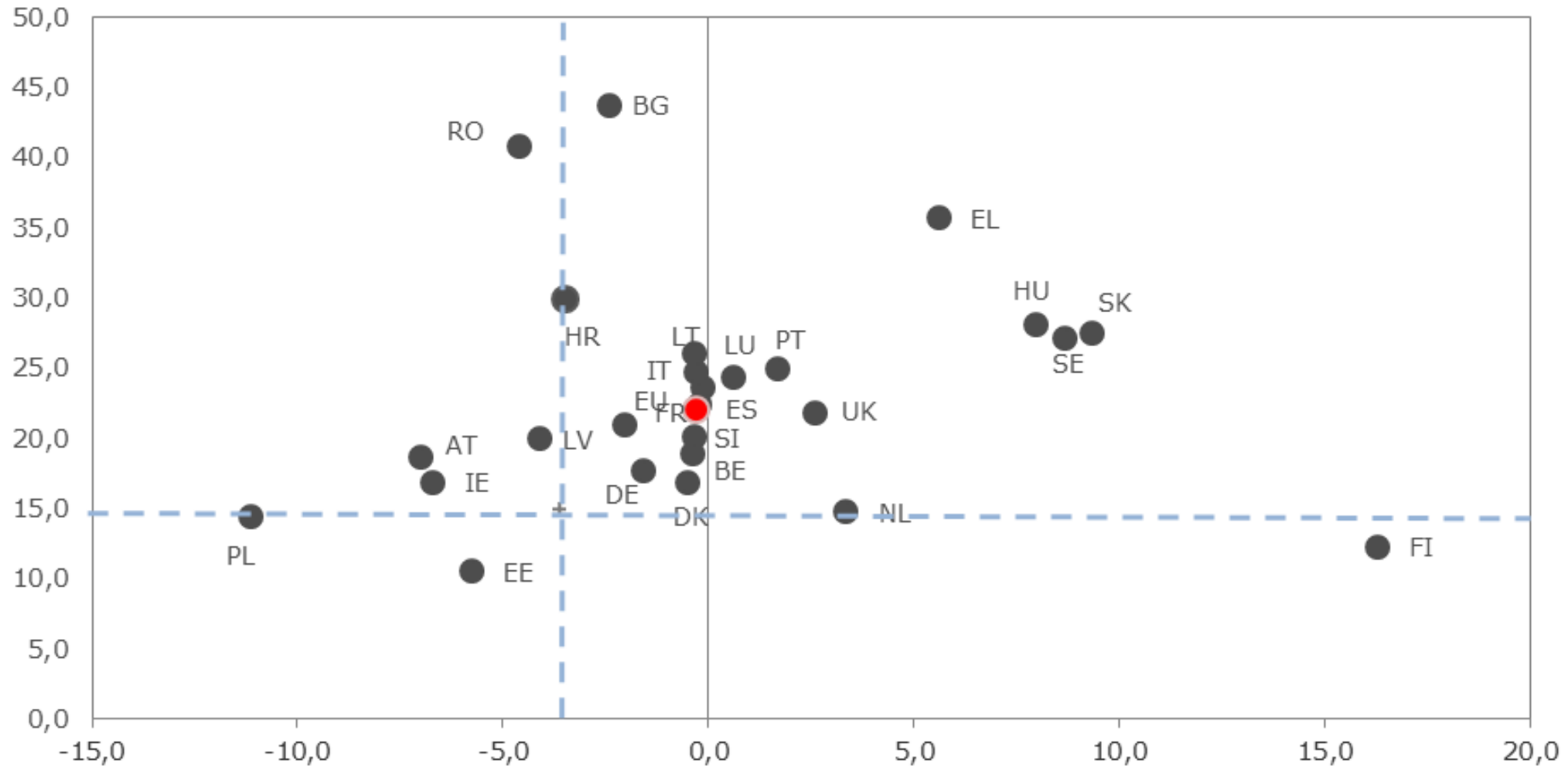# Basic skills: Mathematics, Science, and Technology

Global comparisons

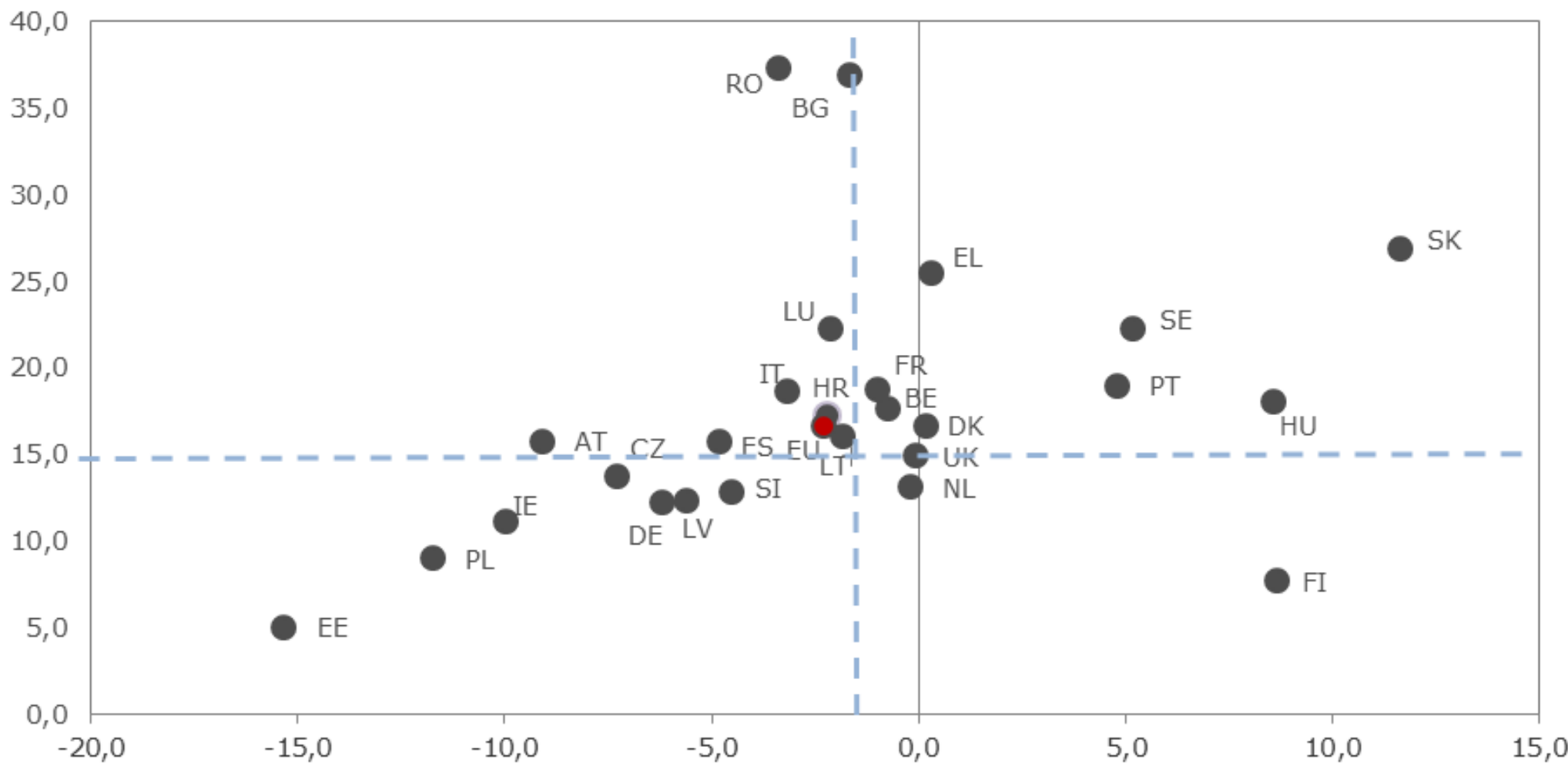## Percentage of low achieving students in mathematics

Mathematics
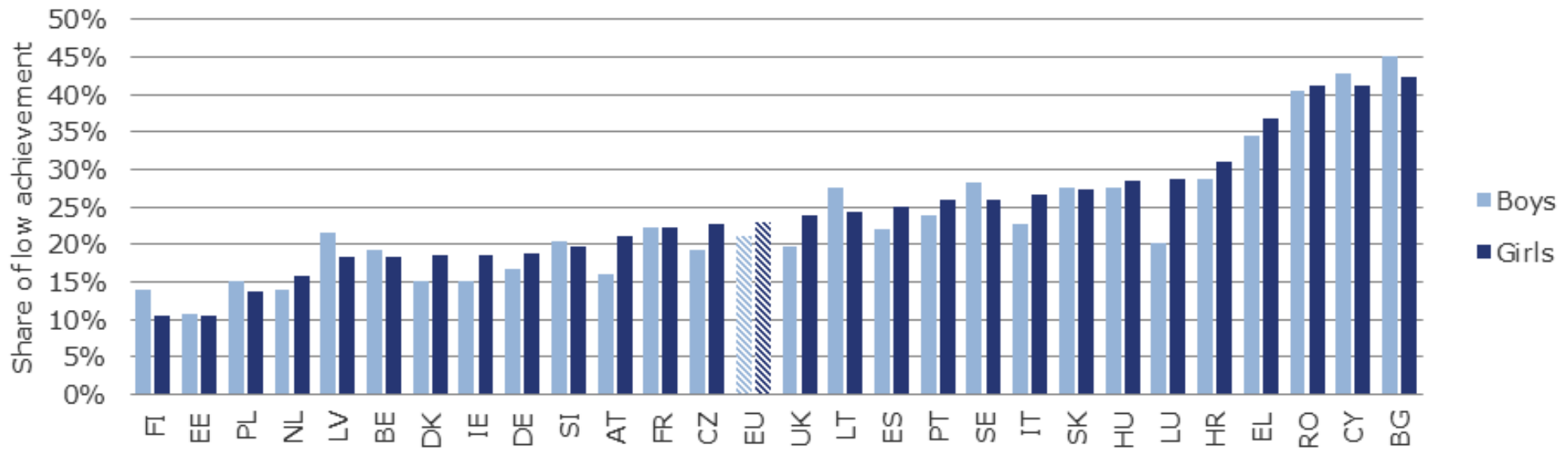## Share of low achievers and annual change

Science

Share of low achievers and annual change

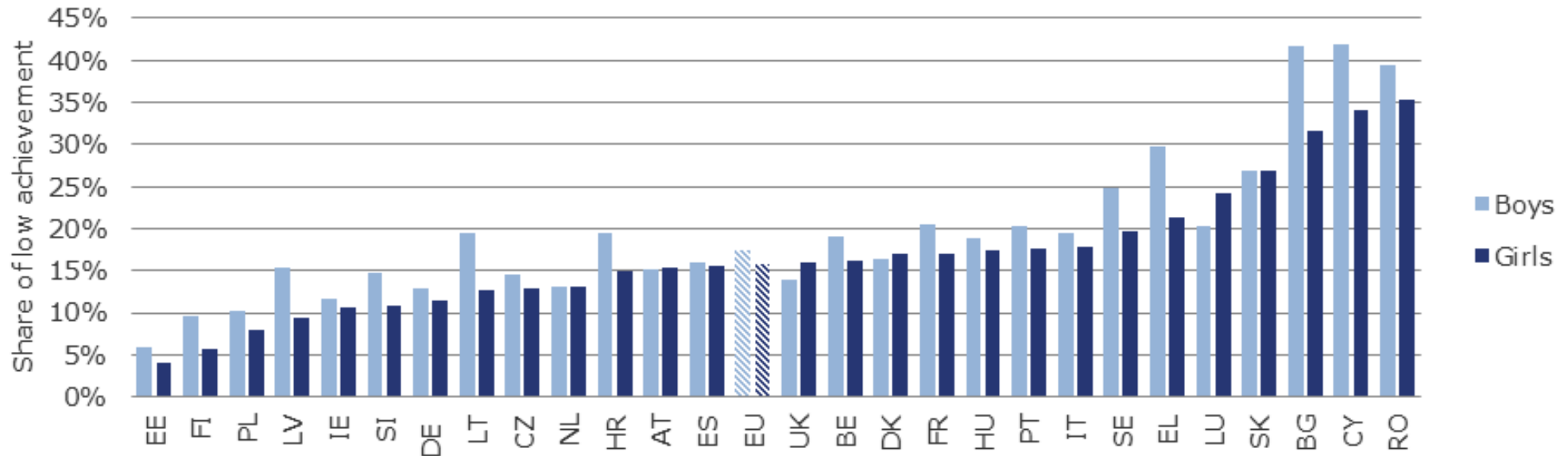# The gender factor in Mathematics

Percentage of low achieving boys and girls
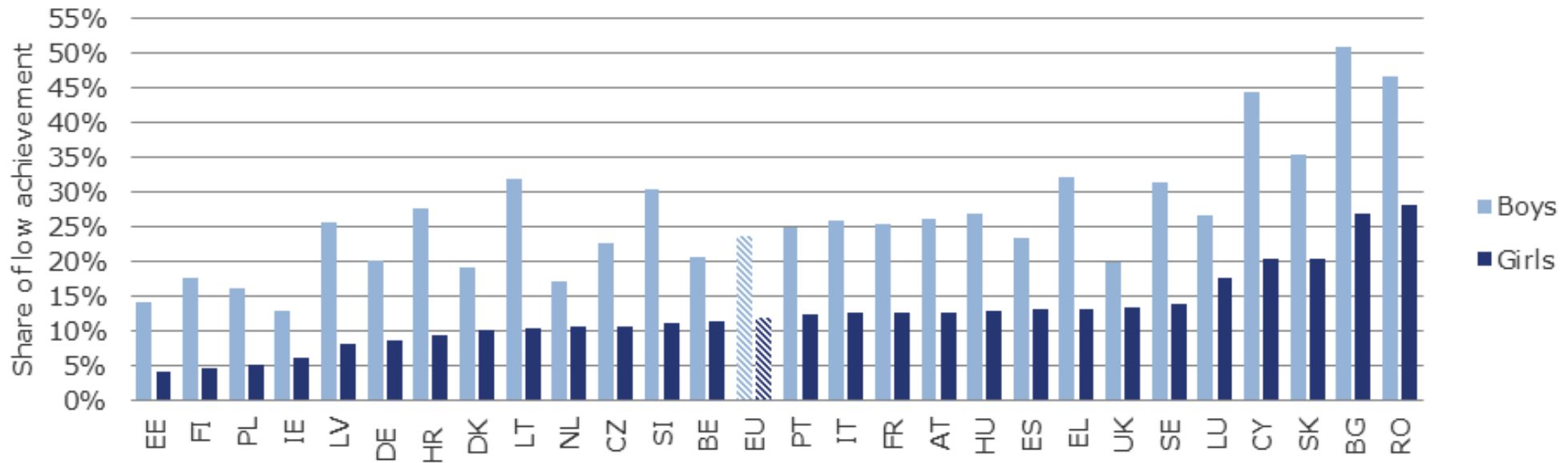
The gender factor in Science

Percentage of low achieving boys and girls
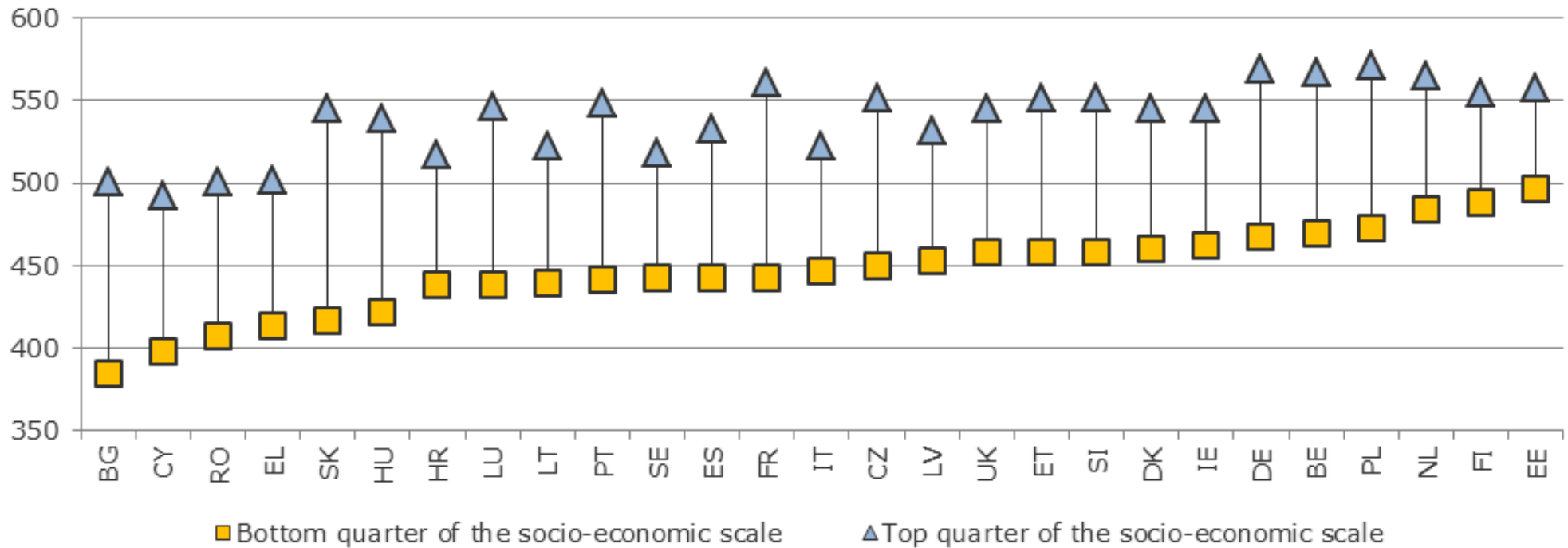
The gender factor in Reading

Percentage of low achieving boys and girls

The Socio-economic factor

Difference in achievement in maths between the bottom and the top 25% of the socio-economic scale

The Migrant factor

Percentage of low achievers in maths

	EE	FI	NL	DK	DE	PL	AT	BE	LU	IE	FR	SI	LV	UK	ES	CZ	SE	IT	PT	LT	SK	HU	HR	EL	CY	RO	BG
% 2nd	7.2	1.5	8.2	6.2	10.3	0.1	10.9	8.0	29.3	1.7	10.0	6.4	4.1	5.6	1.5	1.4	8.9	2.0	3.2	1.3	0.4	0.9	8.4	4.3	1.8	0.0	0.2
% 1st	0.7	1.9	2.6	3.1	2.8	0.0	5.6	7.4	17.7	9.0	5.0	2.2	0.4	7.3	8.5	1.8	6.2	5.5	3.7	0.2	0.3	0.8	3.8	6.3	6.9	0.1	0.2

■ non-migrant pupils　　● first-generation migrant pupils　　△ second-generation migrant pupils

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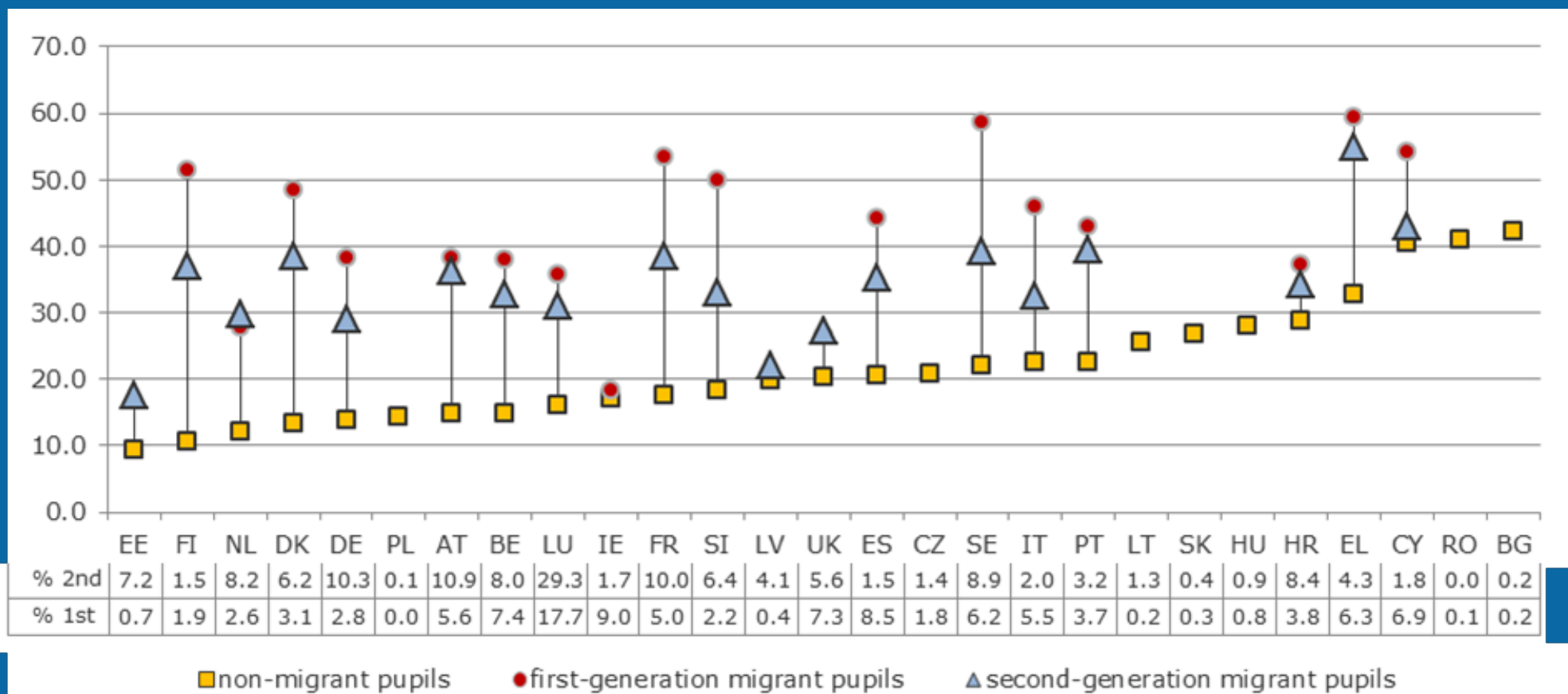
The ECEC factor (1)

Percentage of low achievers in maths by participation in pre-primary school

Chart legend:
- ■ No pre-primary school
- ● 1 year of pre-primary school
- ▲ More than 1 year of pre-primary school

Countries (x-axis): SK, EL, BG, RO, FR, CY, IT, CZ, ES, SE, UK, DK, AT, BE, LU, HR, LT, PT, DE, PL, FI, NL, SI, LV, IE, EE, HU
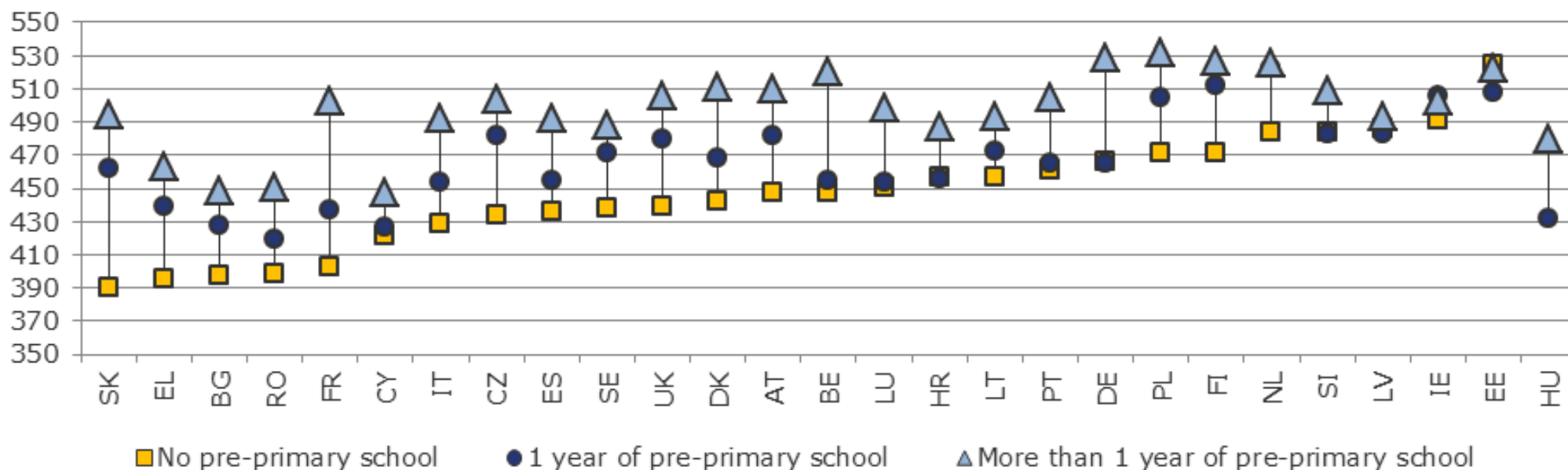
The ECEC factor (2)

Level of participation in pre-primary school

Legend: ■ More than one year ■ One year ■ No pre-primary school attendance

Countries (left to right): IE, HR, PL, LT, FI, PT, EL, UK, SE, SI, CY, LV, BG, DK, SK, LU, EE, DE, ES, RO, IT, AT, CZ, FR, BE, NL, HU

Maths, Science and Technology
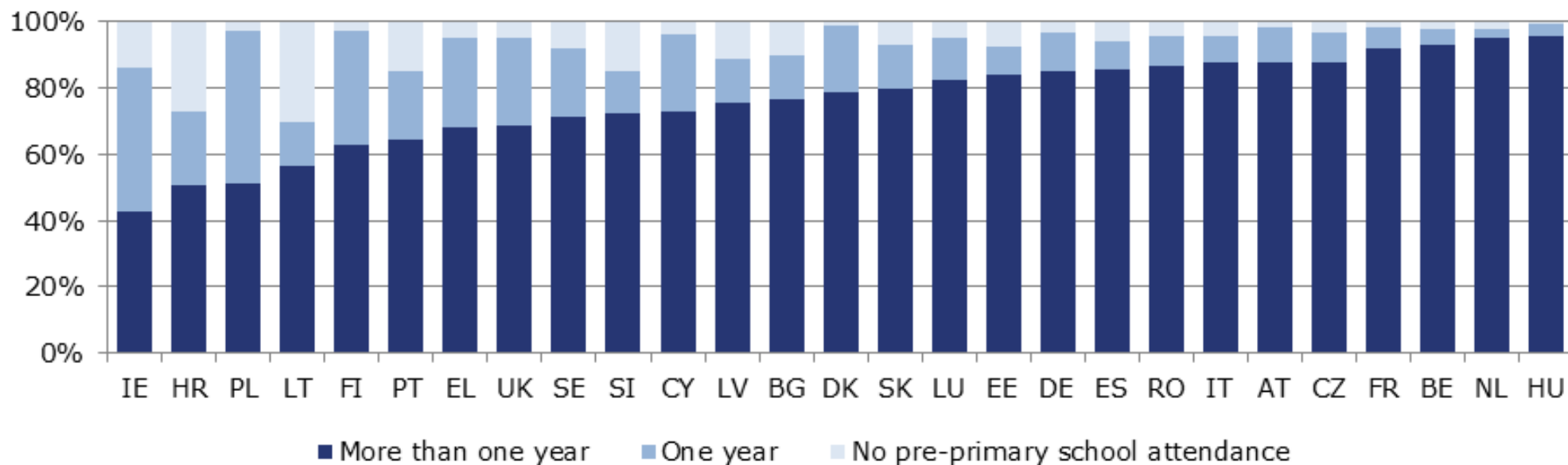
The challenges:

- More than 20% of 15 year-olds lack basic skills
- Affects economic growth and social stability
- Education as an investment – 21 trillion euros by 2020 or 87 trillion by 2090
- The scientific way of critical questioning is needed for democratic forms of governance
- Unlike literacy programs, policies tackling Low Achievement in Maths and Science barely exist.
- May 2009 Council conclusions on a framework ("ET2020") – low achievement below 15% by 2020

Maths, Science and Technology

European Commission

Thematic Working Group, 23 countries, 2010-2013

- peer-learning
- best practices
- research
- literature

review

- presentations
- discussions
- stakeholders

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- **Identify students in need of support early on.**
- **Provide immediate and integrated support.**

- **Provide** *both*

- **Set explicit**

curricular

Policies tackling low achievement (2)

- Motivate teachers (recognition, pay scale)

- Promote <u>collaborative</u> teaching and networking between teachers and schools.

- Teach social-emotional literacy, *not* self-esteem.

Policies tackling
low achievement (3)

European Commission

- Promote student-centred learning with projects, ICT tools
- Main... ...urricula.

- Teach in a multidisciplinary manner
- Use formative and diagnostic assessment

Policies tackling low achievement (4)

- Include science in the definition of basic skills + awareness that the scientific way of thinking does *not* come naturally to

- Use science literacy to combat technophobia.

- Teach science in context and science appreciation

- Increase parental involvement.

- Connect schools with the local community.
- Emphasize <u>equity cooperation</u>, *not*

(the Finnish

Thank you

Questions?