



REVES, 2016

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Assessing the contribution of poverty to educational differentials in disability in 26 European countries

Work in progress

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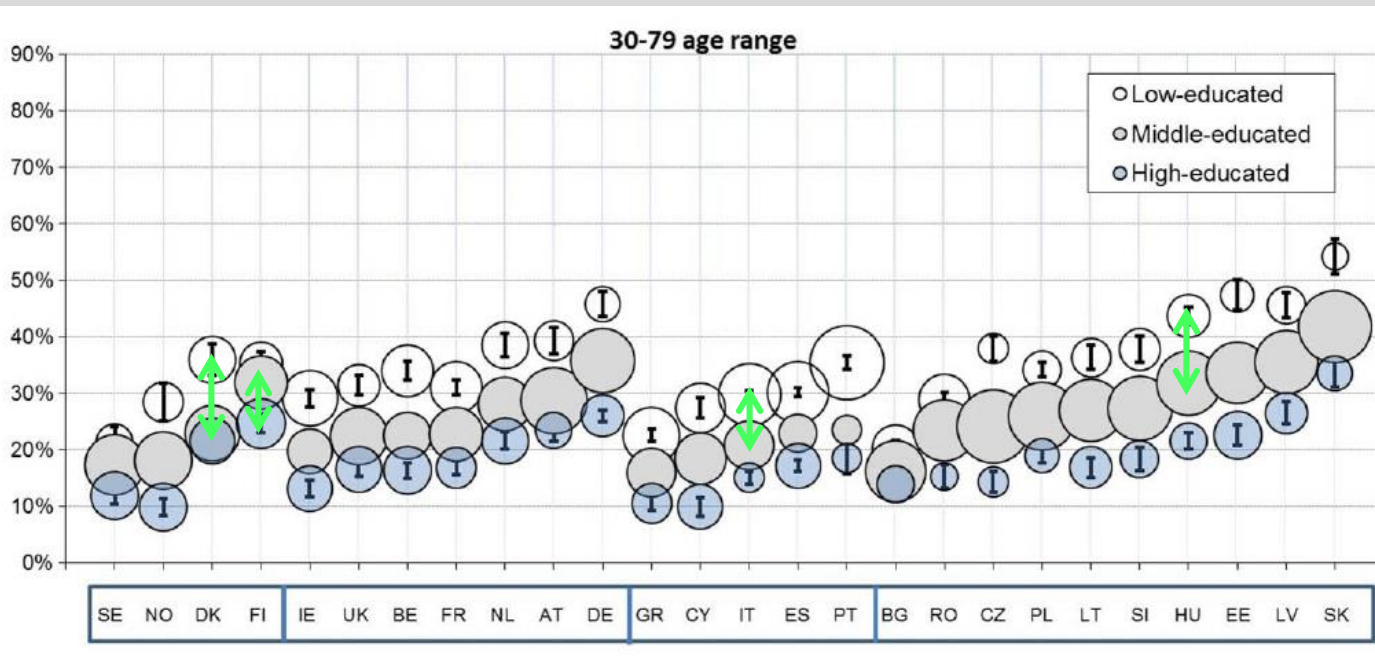
University Pompeu Fabra, Barcelona Spain

INSERM Montpellier / INED Paris, France

Large social inequalities in health in Europe

Reducing SES differentials to improve population health

★ Variation in their magnitude across European Member States



➔ Disadvantage of the low-educated (LED)

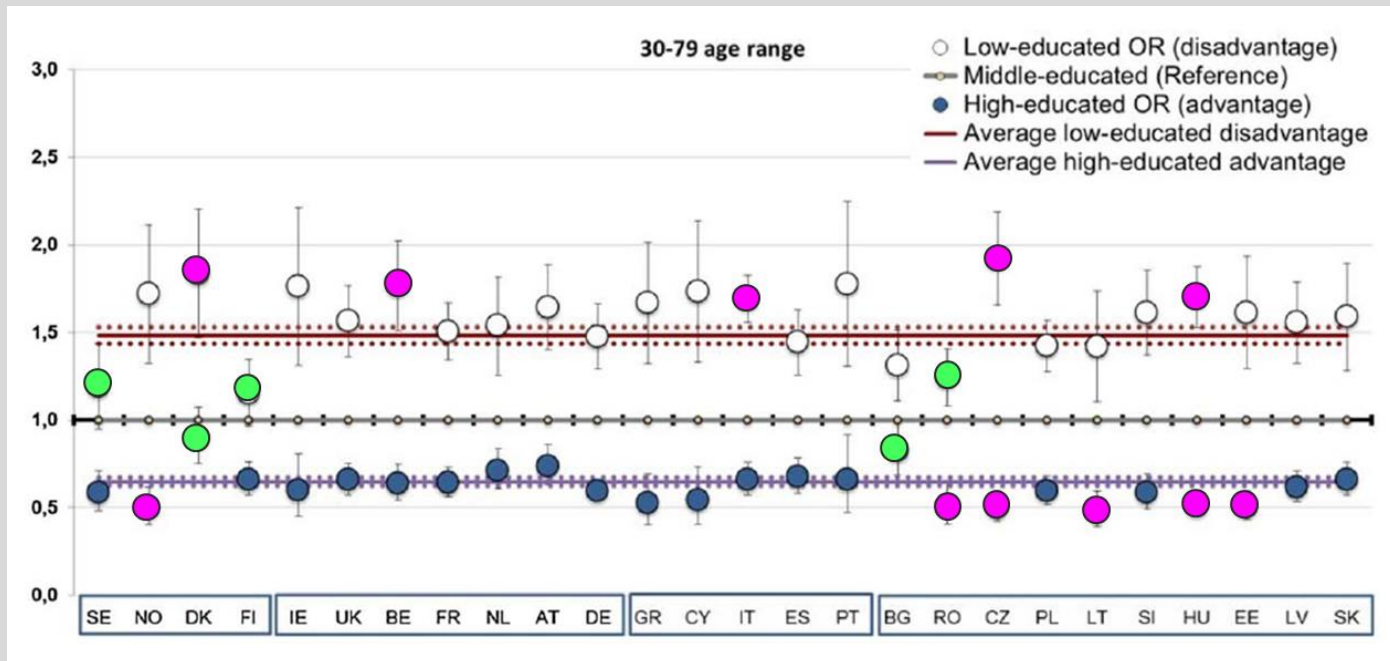
➔ Advantage of the high-educated (HED)

➔ Varying structure advantage/disadvantage

Large social inequalities in health in Europe

Reducing SES differentials to improve population health

★ Variation in their structure across European Member States



➔ *Low-educated group lag behind (DK, BE, IT, CZ, HU)*

➔ *High-educated group run forward (NO or E-B MS)*

Variation in the disability disadvantage across European educational groups

Challenges:

★ How much of the (dis)advantage **modified by the social protection?**

(Mackenbach et al. 2008; Eikeimo et al., 2008; Avendano et al. 2009; Huijts et al, 2009; Jutz, 2015)

★ Would a **reduction in poverty** differentials reduce inequalities in disability?

- ✓ Poverty => limited access to elementary goods and services
- ✓ Could policies against poverty (or its consequences) reduce disability differentials?

Research question:

★ To what extent **poverty mediates** disability inequalities across countries?

- ✓ Different risks and differentials across countries (# level of social protection)
- ✓ Different distribution across determinants related to education (care, behaviours, work,...)

Variation in the disability disadvantage across European educational groups

Data and measures

- ★ **EU-SILC 2009** in 26 European countries (30-79 years old, N=289,816)
→ *Welfare regime groups: Nordic /Western /Southern /Eastern-Baltic MS*
- ★ **Disability: Global activity limitation indicator (GALI)**
- ★ **Education (ISCED): 0-2=low (LED) 3-4=middle-educated; 5-6=high (HED)**
- ★ **Poverty: as a mediator of the education-AL association**
Economic Hardship* (EH) = subjective indicator

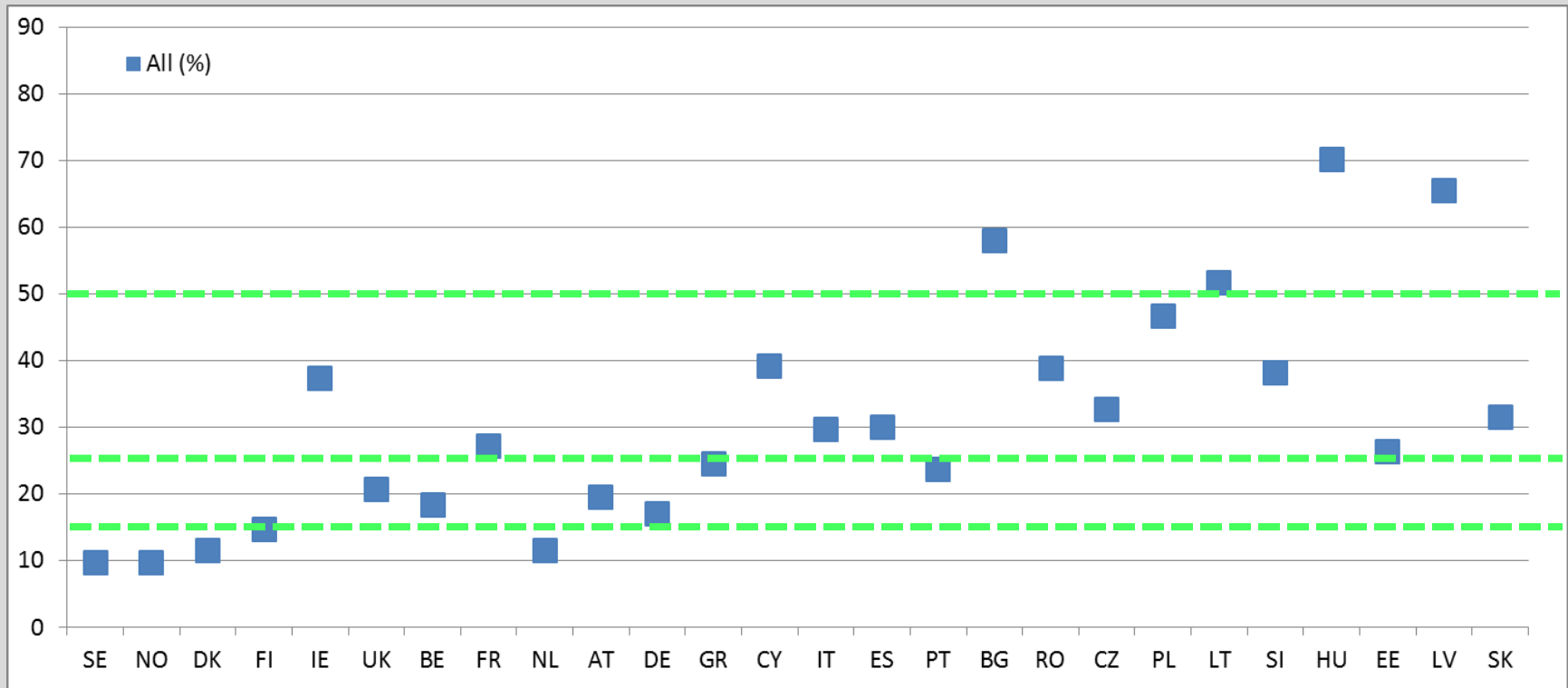
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“Difficulties in making both ends meet” + “unable to face unexpected expenses”

* Whelan C, Maître B. Material Deprivation, Economic Stress, and Reference Groups in Europe: An Analysis of the EU-SILC 2009. *European Sociological Review*. 2013;29(6):1162-74.

Economic hardship across educational groups in 26 EU countries by region-2009

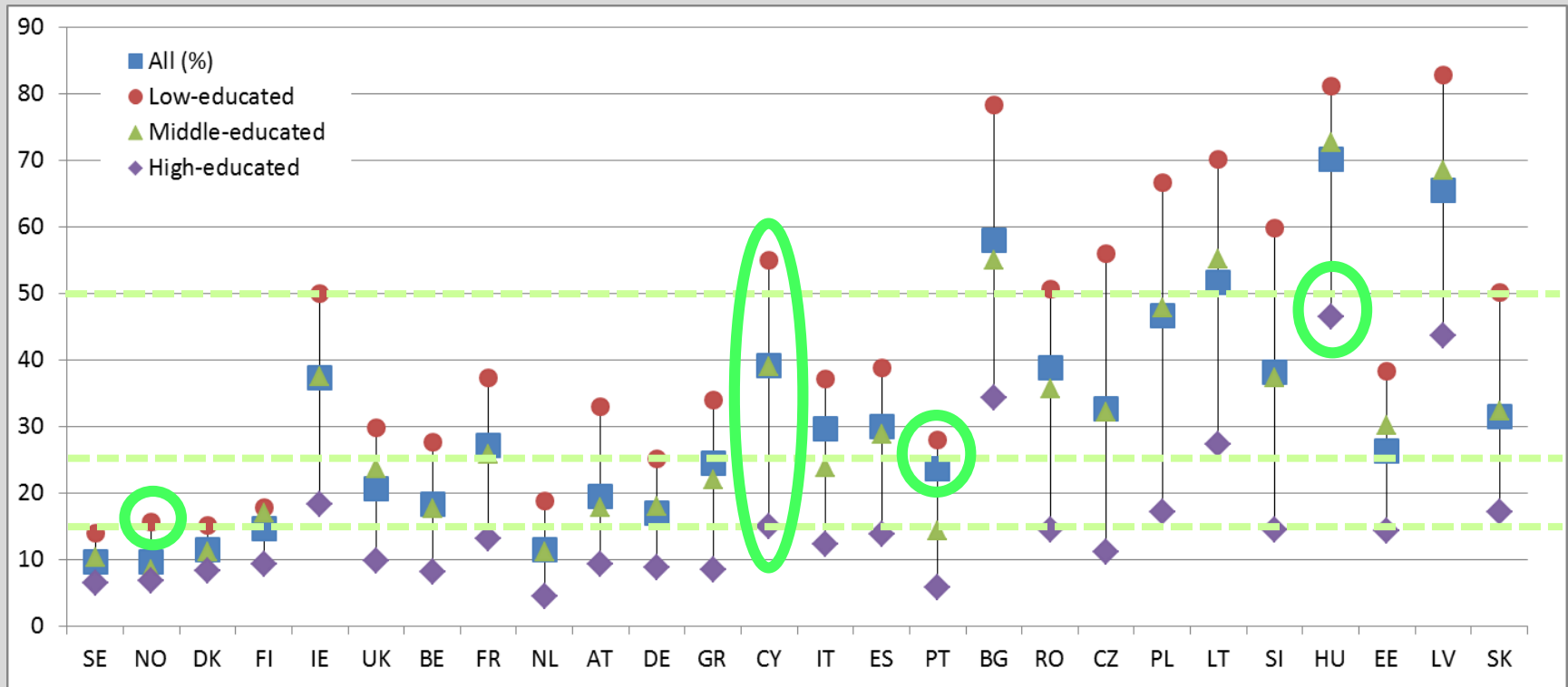
★ Large variation in the level of reported economic hardship



- ➔ Lowest levels (<15%) in Nordic MS + NL
- ➔ Highest levels (>50%) in Eastern-Baltic MS => BG, LT, HU, LV.
- ➔ Above 25% in IE, FR, CY, IT, ES, RO, CZ, PL, SI, EE, SK

Economic hardship across educational groups in 26 EU countries by region-2009

★ Large variation in economic hardship within countries



- ➡ Systematic protection of the high-educated compared to low-educated
- ➡ But, variation in the differentials and relative position of education groups

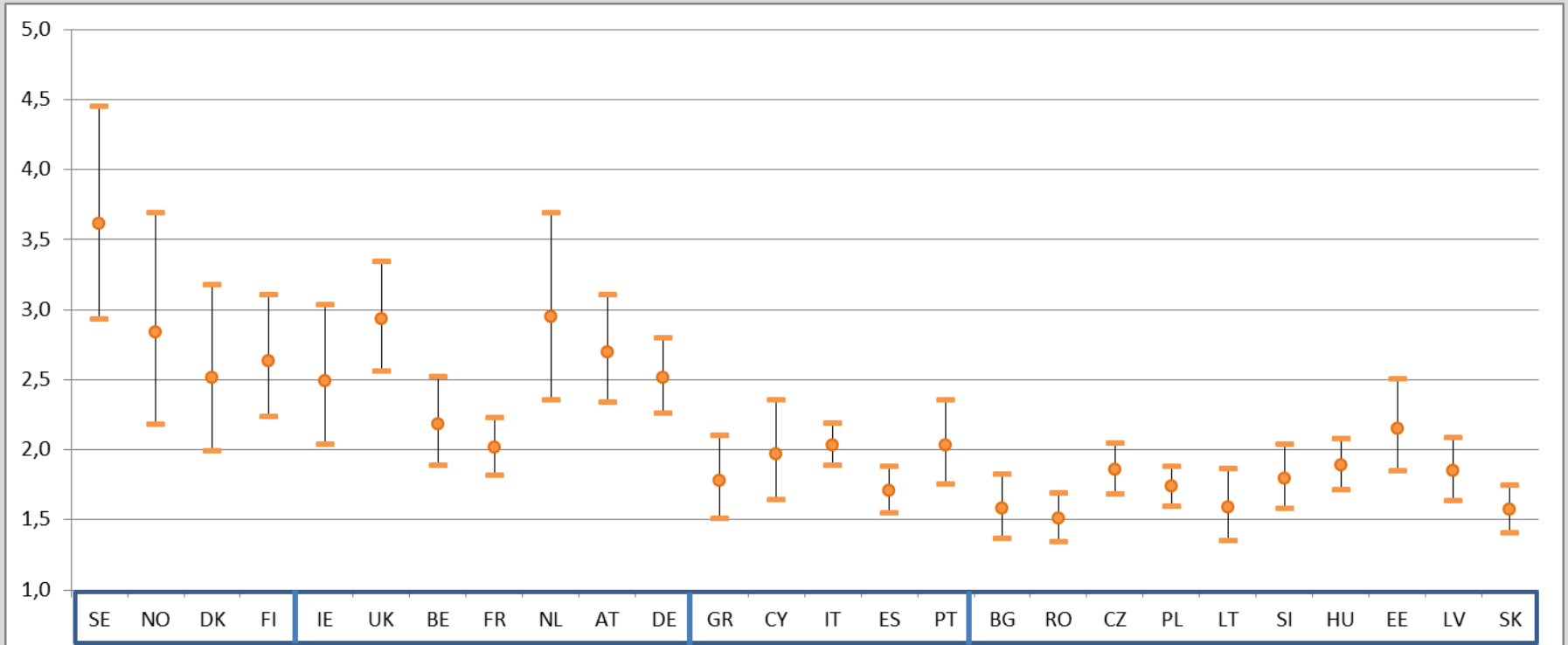


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ORs of AL associated with *country*economic hardship* controlling for age, sex and education -2009

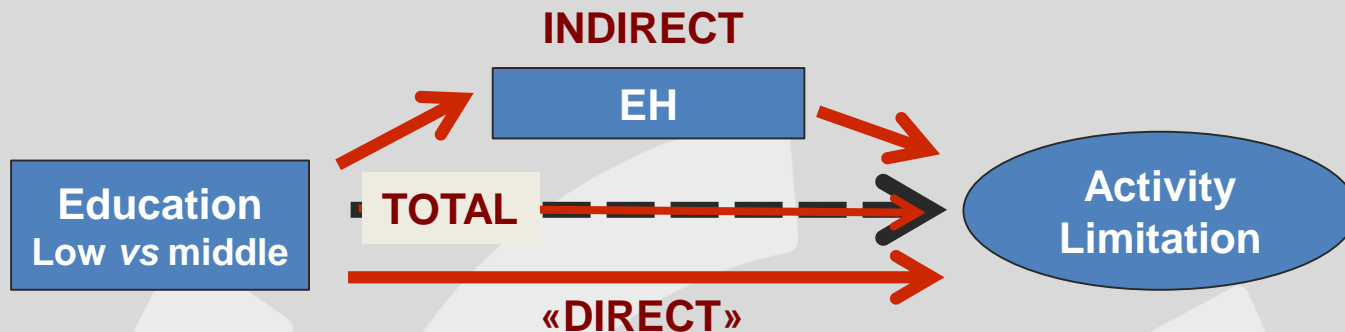
★ Economic hardship is significantly associated with disability



Assessing the disability disadvantage across European educational groups

Methods

- ★ **Logistic regressions using nested models “KHB” for each country**
AL for low-educated vs middle-educated (controlled for age, age², sex)
- Total effect of education: Education (control + residuals)
- Indirect effect mediated by EH
- Direct effect (net of the indirect effect mediated by EH)

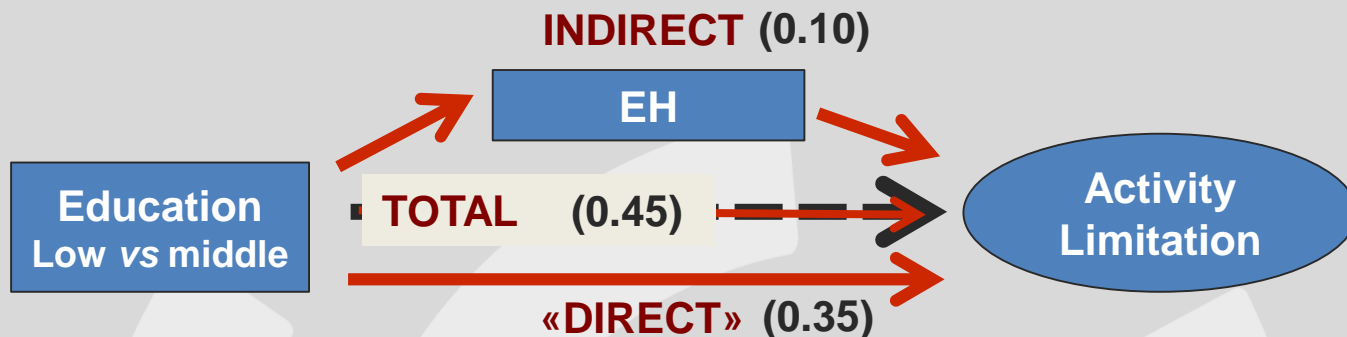


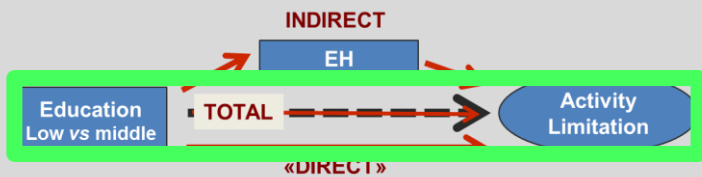
Assessing the disability disadvantage across European educational groups

Methods

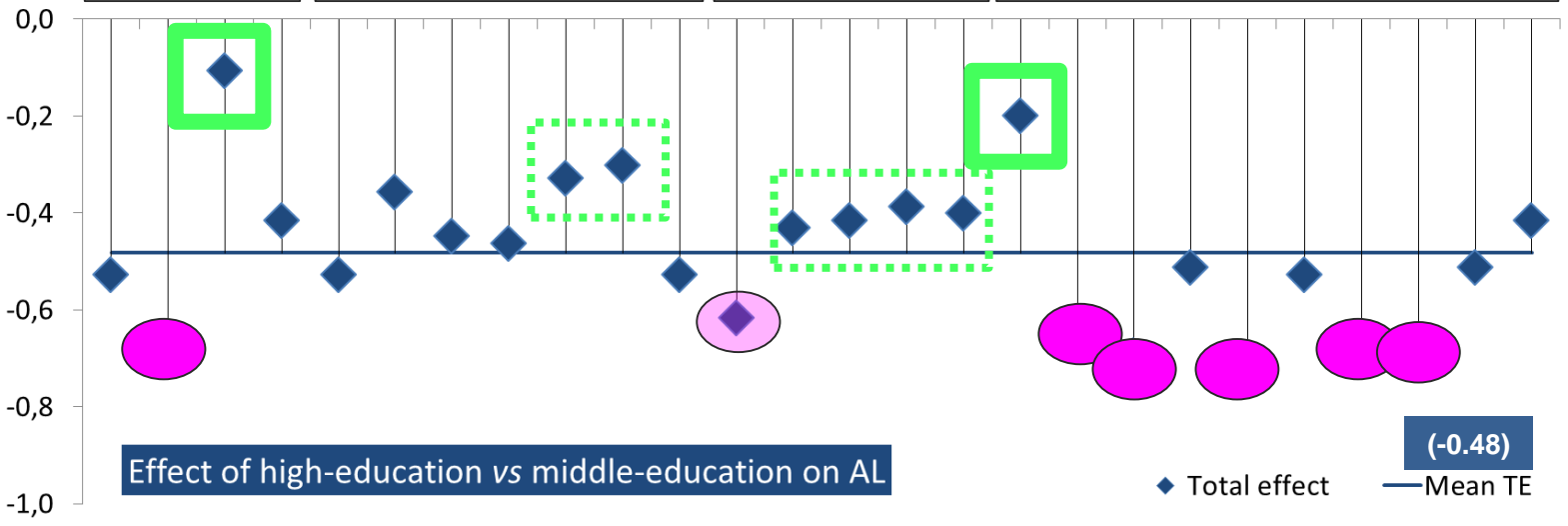
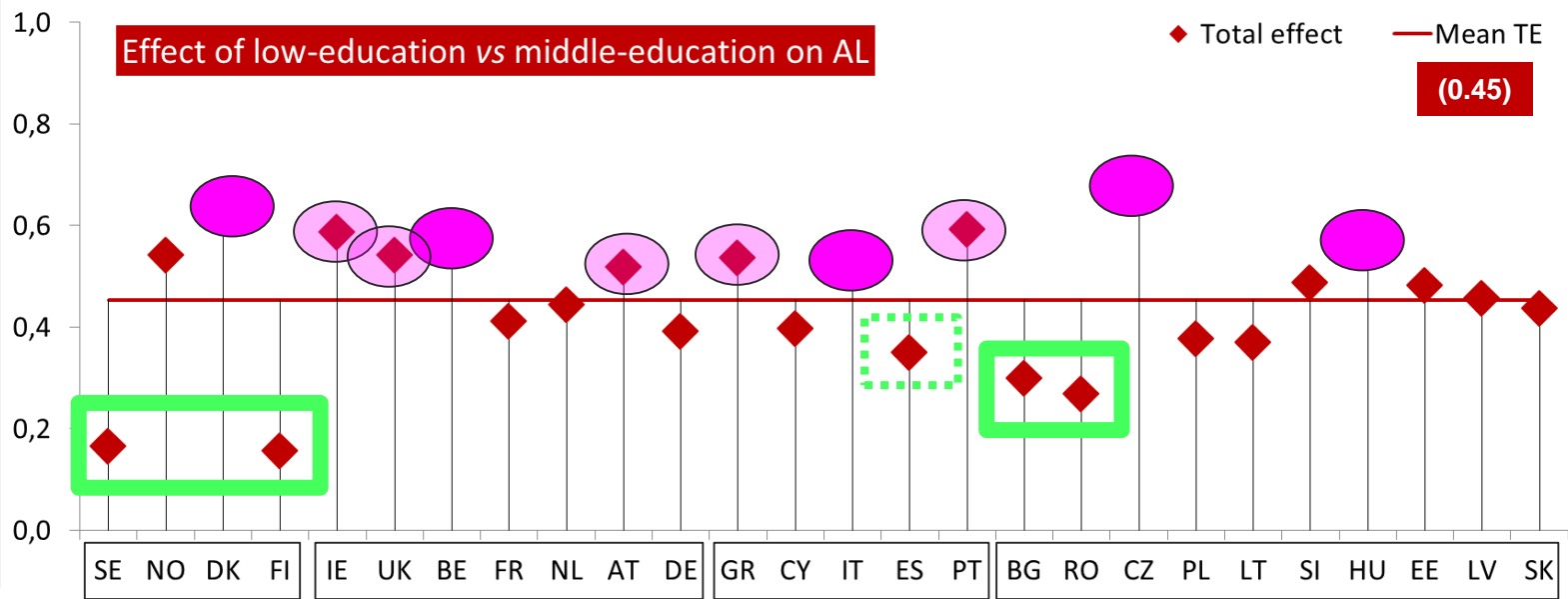
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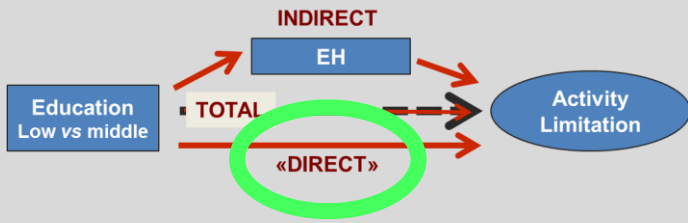
- Total effect of education: Education (control + residuals)
- Indirect effect mediated by EH
- Direct effect (net of the indirect effect mediated by EH)
- Mean effects (average of the country specific effects)



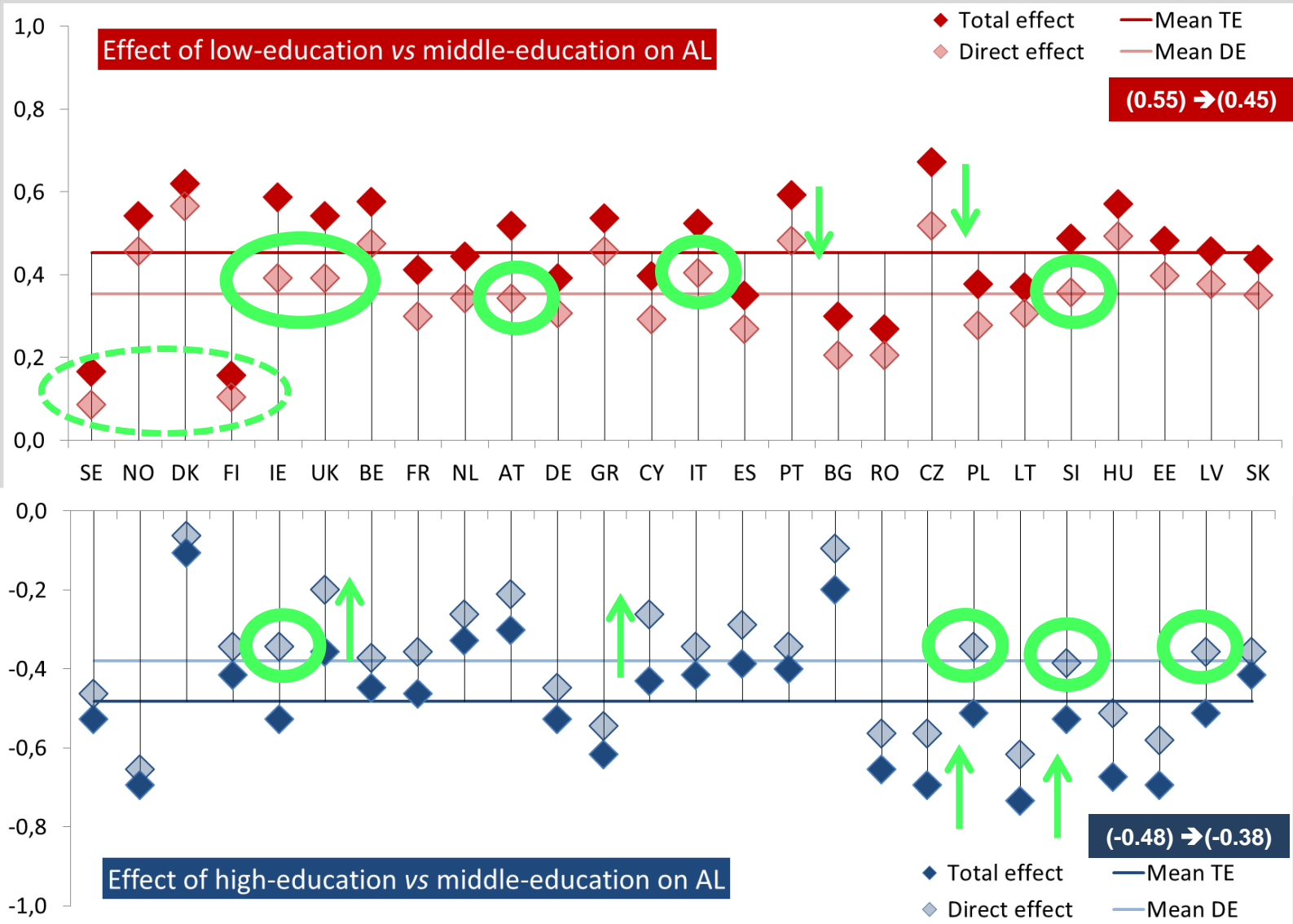


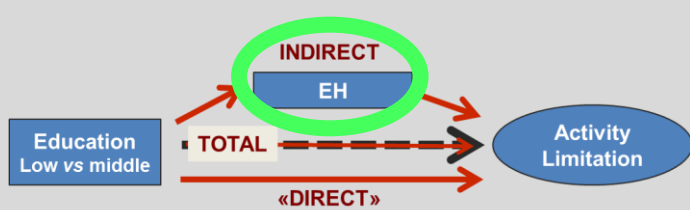
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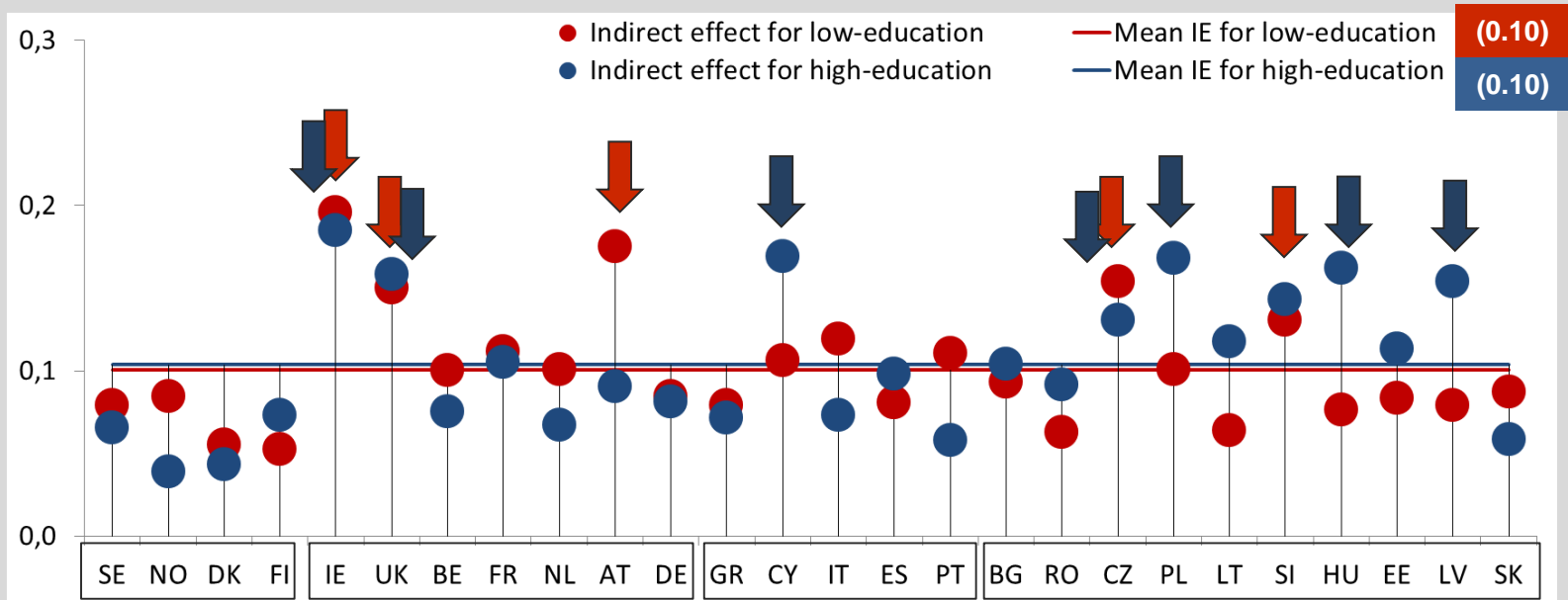


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- 1) The size of the effect depends on the size of the total effect, frequency/effect of EH:
 - ✓ Smaller indirect effect for the HED in general, and in the Nordic countries
 - ✓ Large indirect effect for LED in IE, UK, AT, IT, CZ, SI: over-exposure to EH => extra-disadvantage in disability)
 - ✓ Large indirect effect for HED in IE, UK, CY + E&B: over-protected from EH => extra-advantage in disability)
- 2) But also depends on the educational distribution of poverty (large/polarized/...)
- 3) Need also to consider the % contribution (among other social determinants)



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Summary of the results

⇒ Nordic MS

- SE & FI: a reduced disability disadvantage which focused on (few) situations of EH
A small EH effect but a large contribution to the disadvantage (50% SE / 35% in FI) => selection?
- DK & NO: large disability disadvantage, few EH which contributes moderately
Other determinants: behaviors, care, work ...? => *due to the unusual tobacco in DK ?*

⇒ Western and Southern MS

- BE, AT, IE, UK, PT, CY, GR & IT: large AL disadvantage for LED
EH explains the extra-disadvantage in IE, UK, AT and IT
EH contributes for > 25% in IE, UK, AT, CY **=> Large gains expected**
EH explains also a large part of the extra-advantage of HED
- Elsewhere relatively small contribution => other determinants related to education matter

⇒ Eastern and Baltic MS

- Larger LED disadvantage HU & CZ and larger HED advantage in RO, CZ, LT, HU, EE
EH is frequent and contributes to some extent (15 - 25%) at both ends of the gradient
EH contributes > 25% in BG, PL and SI



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Discussion

⇒ Limits

Comparability of measures?

Differences in what level of education means?

What is behind economic hardship: access to elementary goods, housing, behaviors...?

⇒ First highlights

1. EH contribute to the variation in disability educational differentials / extra-(dis)advantage
2. Improvement in the situation related to EH should help reducing disability differences:
western and southern MS are concerned (IE, UK, AT, IT, CY) + BG, PL, SI
3. In other countries, other social determinants contribute to the LED disadvantage

⇒ Next steps

- Men & women differences
- Trends in the contribution using more recent data
- Understanding the situations of economic hardship



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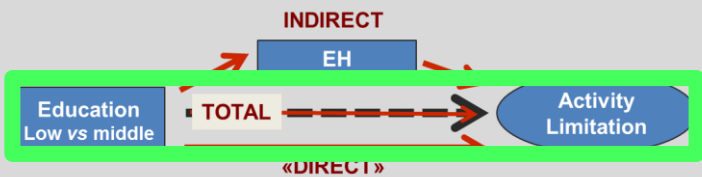
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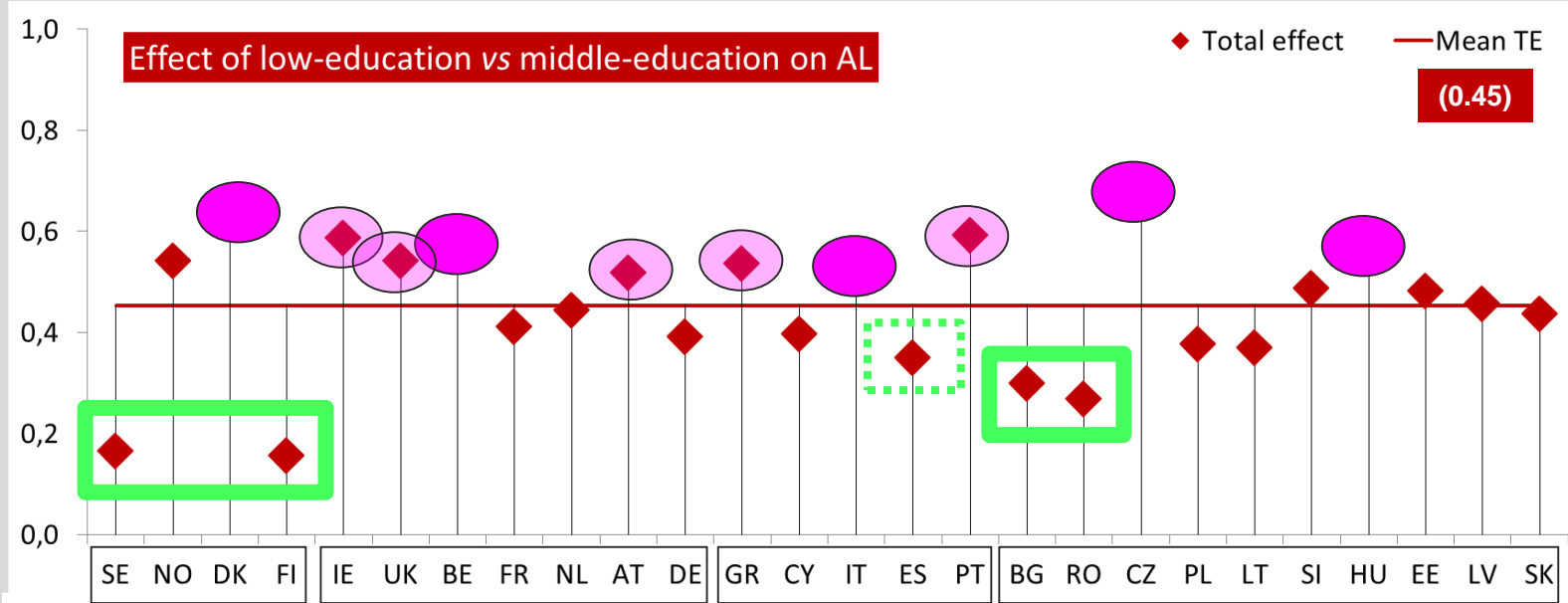
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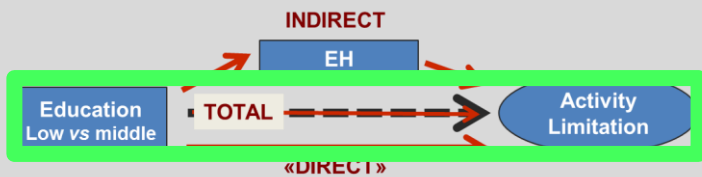


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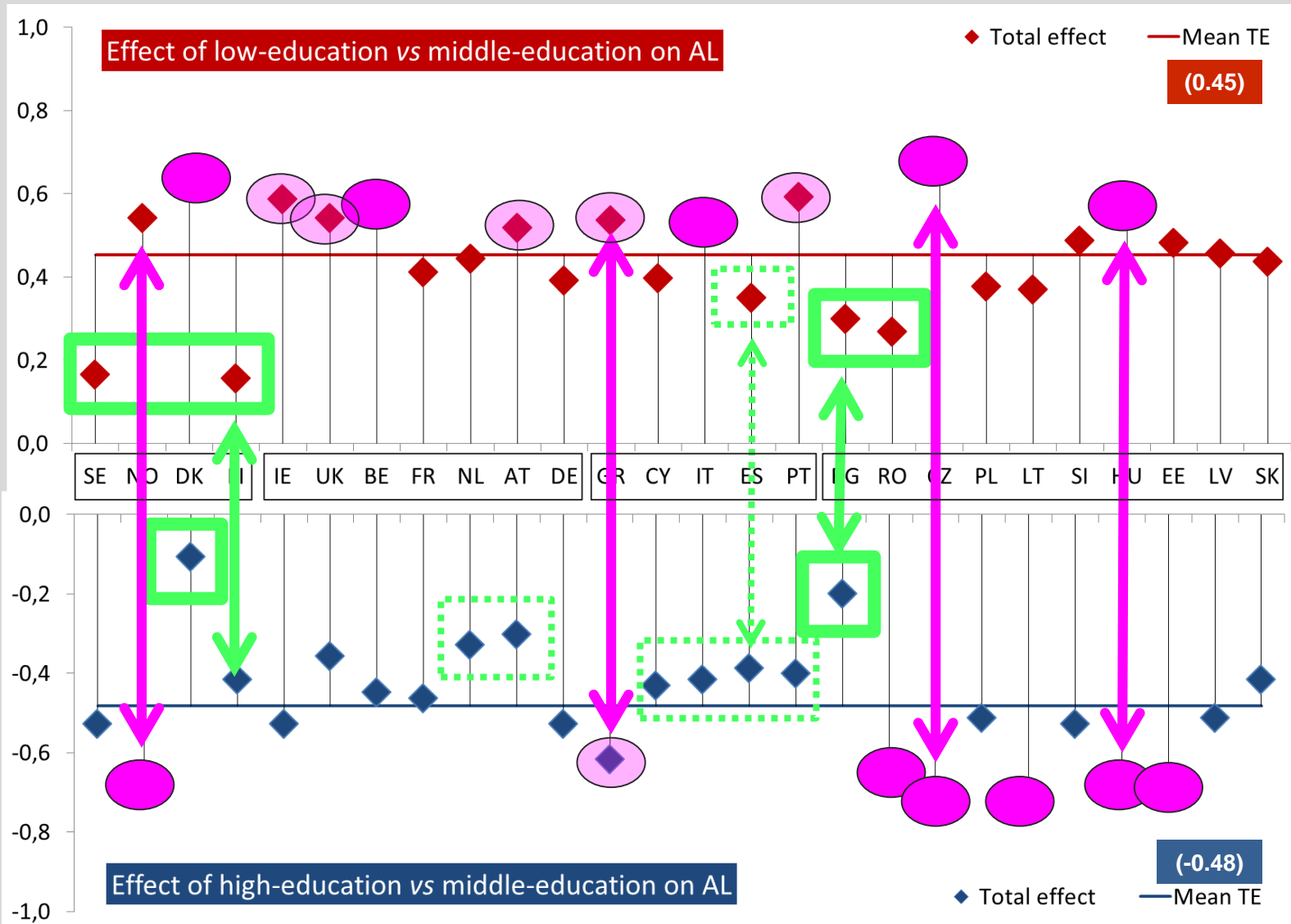


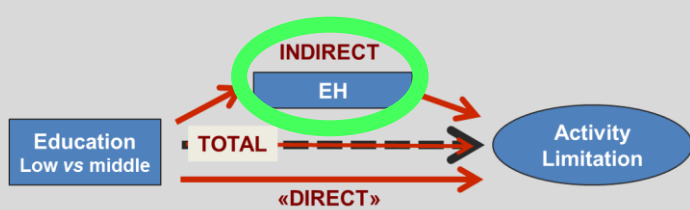
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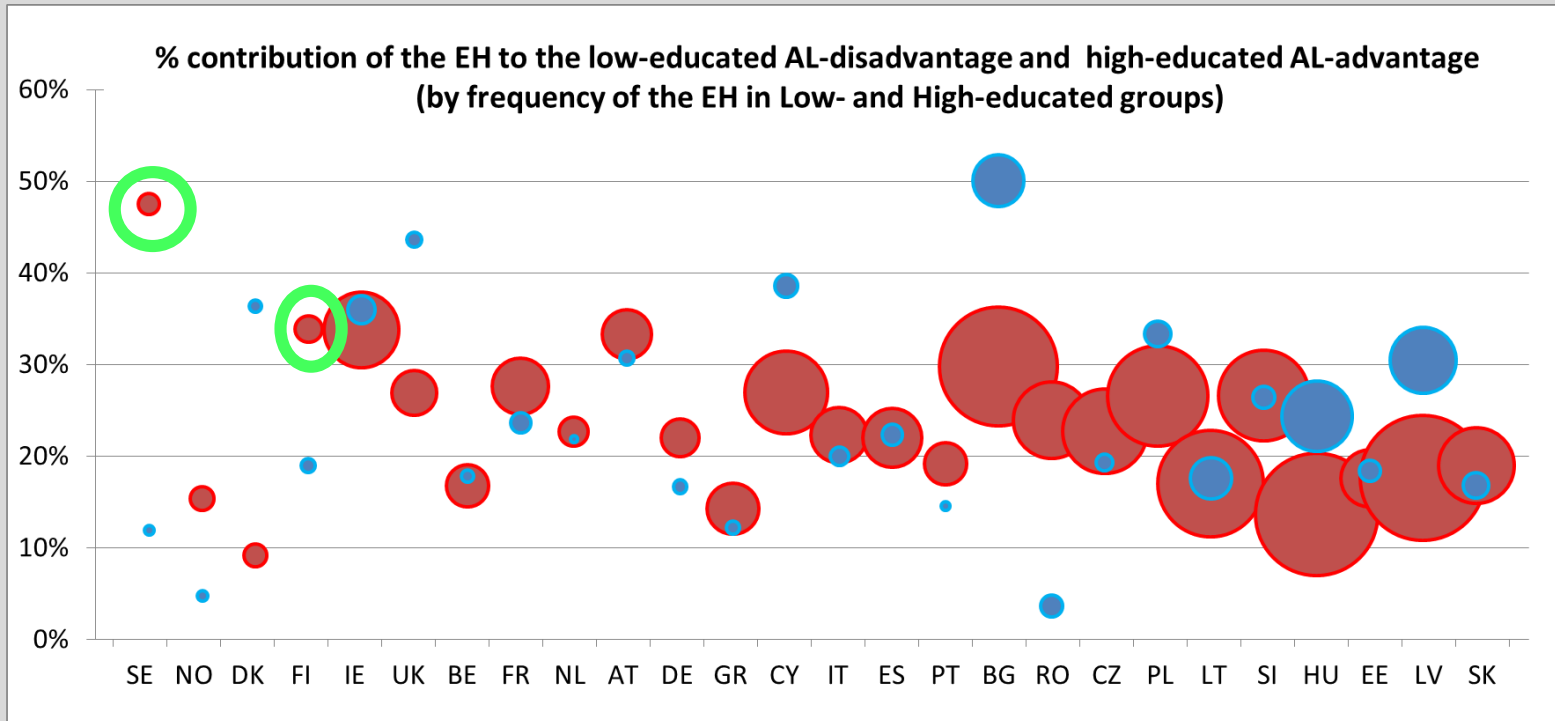


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➔ Contribution of EH among the determinants of the LED disadvantage:

- ✓ in SE, EH is scarce explains half of the very small disadvantage: who are they (selection)?
- ✓ Large contribution in a number of countries such as IE, UK, AT, CY => room for progress and in countries where EH is frequent (at both ends of the gradient) but with a smaller %
- ✓ In DK, NO, GR and some E-B MS: smaller contribution. What else matter?