

The International Standard Classification of Education 2011 and its application in the European Social Survey

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Overview

1. Introduction: education in comparative research
2. ISCED 2011
3. Educational attainment in the ESS
4. Evaluation of new education measures in the ESS
5. Conclusions

Introduction: education in comparative surveys

The concept of educational attainment

- Amount and type of education successfully completed
 - Indicated by highest educational qualification
- Related but different concepts:
 - investment in education (time spent)
 - actual knowledge, skills and competences
- Educational attainment core social background variable in social research: predictor, mediator and control variable

Measurement in cross-national surveys

- Cross-national research continuously grapples with the comparable measurement of educational attainment.
- Main limitations of available measures:
 - Years of education: limited validity/reliability, only time invested in education. No effects of types or certification assumed.
 - CASMIN: restricted scope of countries, documentation lacking
 - ISCED: usually only levels implemented, then no effects of types assumed; inconsistent implementation in different surveys
 - Test scores: different concept; actual competences in some specific area, e.g. literacy; limited data (PISA etc.)

What is ISCED 2011,
and how does it work?

ISCED 2011

- International classification for education-related data developed and used by official bodies (UNESCO, OECD, Eurostat)
- Earlier versions from 1978 and 1997
- Originally developed for administrative data, not survey micro data
- Units of classification: educational programmes and (since 2011) qualifications
- No standard coding system or coverage of qualifications prior to 2011 version; now 3-digit

1st digit: Level of education

Levels of education revised with ISCED 2011

- 0 = Less than primary
- 1 = Primary
- 2 = Lower secondary
- 3 = Upper secondary
- 4 = Post-secondary non-tertiary
- 5 = Short-cycle tertiary
- 6 = Bachelor or equivalent
- 7 = Master or equivalent
- 8 = Doctoral or equivalent

2nd digit: mostly orientation

- Level 0 (new in ISCED 2011):
 - 1 = no education
 - 2 = some early childhood education
 - 3 = some primary education
- Level 1 (like before):
 - 0 = not further defined
- Levels 2-5(/8) (revised in ISCED 2011):
 - 4 = general/academic
 - 5 = vocational/professional
 - 6 = orientation unspecified

3rd digit: completion, destination

- Levels 0-1 and 5-8 (part revised):
 - 0 = not further defined
- Levels 2-4 (revised for ISCED 2011):
 - 2 = partial (?!?) level completion, no access
 - 3 = level completion, no access
 - 4 = level completion, access

Educational attainment in the ESS

ESS rounds 1-4

- Educational attainment measured for respondent, partner, father, mother
- Country-specific data collection instruments and education variables (CSEVs)
- Ex-ante specified harmonised target variable: ISCED 97 main levels
- Harmonisation by country teams
- Provision of both variables in data sets

Harmonised variable: edulvla

edulvla	ISCED 97	Description
1	0, 1	less than lower secondary
2	2	lower secondary
3	3	upper secondary
4	4	post secondary non-tertiary
5	5, 6	tertiary

Problems in ESS rounds 1-4

- Country-specific items often too crude to be properly recoded into ISCED 97 levels (thus further aggregation of levels 0/1 and 5/6)
- Lots of deviations from official mappings, misclassifications
- Comparisons with distributions of e.g. the Labour Force Surveys displayed at times problematic deviations
- Explanatory power of ISCED levels often substantially lower than that of country-specific variables
 - This differs across countries, thus impairing comparability (Müller & Klein 2008; Schneider 2009)
- Limited conceptual usefulness of ISCED 97 levels

Review process

1. Quality enhancement meeting 2009, report
2. Specification of more detailed output harmonised ISCED variable
3. Consultation with country teams and experts
 - Revision of country-specific educational attainment questions and response categories; fairly simple data collection instruments (one or a few questionnaire items)
 - Ex-ante bridging to 3-digit adapted ISCED 2011 ("edulvlb")
 - Deviations from official mappings documented
4. Collapse "edulvlb" into analytical variable with higher predictive power than ISCED levels, but not too many categories ("eisced") conceptually similar to CASMIN
5. Evaluation of data before release

Adapting ISCED 2011

- Fix lack of important distinctions for social science research
- Adaptation of 3rd digit for secondary education: differentiate, within code xx4, qualifications giving access to higher ISCED levels, between
 - qualifications giving access to vocational programmes at higher level only: code 2
 - qualifications giving access to general/academic or all programmes at higher level: code 3
- Use 2nd digit for tertiary education:
 - lower tier \sim vocational/professional, code 1
 - upper/single tier \sim general/academic, code 2
- Ensure "official" ISCED can be derived from adapted version
- But: ISCED still moving target during consultation, thus final codes differ (but can be converted)

"edulvlb" 0-3xx

edulvlb	ISCED	Description
0	0	Not completed ISCED 1
113	100	ISCED 1
129	100	Vocational ISCED 2 < 2 years, no access ISCED 3
212	244	General/pre-vocational ISCED 2, access ISCED 3 vocational
213	244	General ISCED 2, access ISCED 3 general/all 3
221	253	Vocational ISCED 2 \geq 2 years, no access ISCED 3
222	254	Vocational ISCED 2, access ISCED 3 vocational
223	254	Vocational ISCED 2, access ISCED 3 general
229	254	Vocational ISCED 3 < 2 years
311	343	General ISCED 3, no access ISCED 5/6
312	344	General ISCED 3, access ISCED 5/lower tier 6
313	344	General ISCED 3, access upper tier ISCED 6/all 6
321	353	Vocational ISCED 3 \geq 2 years, no access ISCED 5/6
322	354	Vocational ISCED 3, access ISCED 5/lower tier 6
323	354	Vocational ISCED 3, access upper tier ISCED 6/all 6

"edulvlb" 4xx-800

edulvlb	ISCED	Description
412	444	General ISCED 4, access ISCED 5/lower tier 6
413	444	General ISCED 4, access upper tier ISCED 6/all 6
421	453	Vocational ISCED 4, no access ISCED 5/6
422	454	Vocational ISCED 4, access ISCED 5/lower tier 6
423	454	Vocational ISCED 4, access upper tier ISCED 6/all 6
510	510	General/academic ISCED 5
520	520	Vocational/professional ISCED 5
610	660	Lower tier ISCED 6
620	660	Upper/single tier ISCED 6
710	760	Lower tier ISCED 7
720	760	Upper/single tier ISCED 7
800	800	ISCED 8

Analytical variable: ES-ISCED

ES-ISCED	Description	edulvlb
I	less than lower secondary	0, 1xx
II	lower secondary	2xx, 3x2
IIIb	upper secondary, no access to VI	3x1, 3x2
IIIa	upper secondary, access to VI	3x3
IV	post-secondary, less than Bachelor's degree	4xx, 5xx
VI	Bachelor's degree level	6x0
V2	Master's degree level and higher	7x0, 800

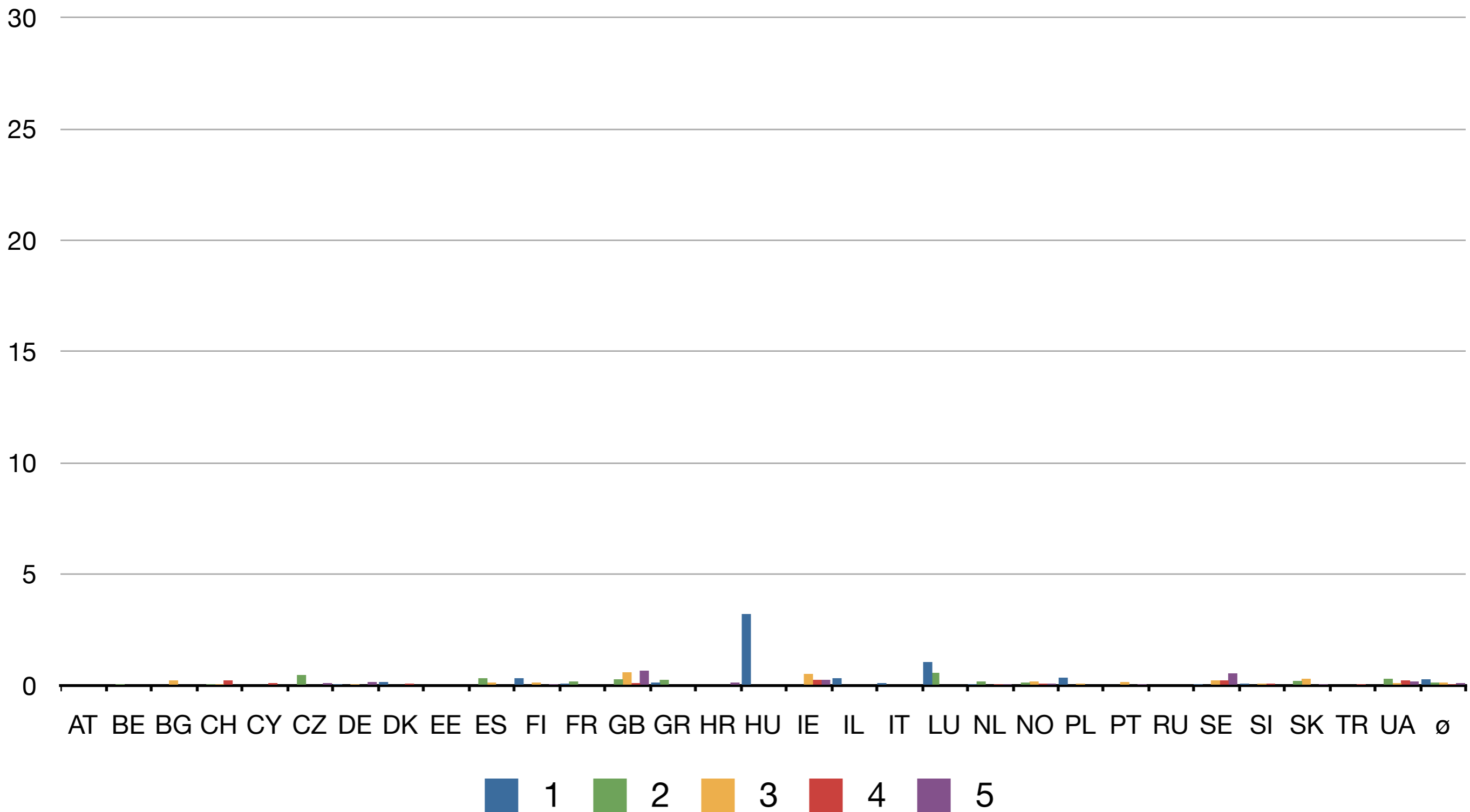
Evaluation of new education measurement in ESS round 5

Evaluation steps (selection)

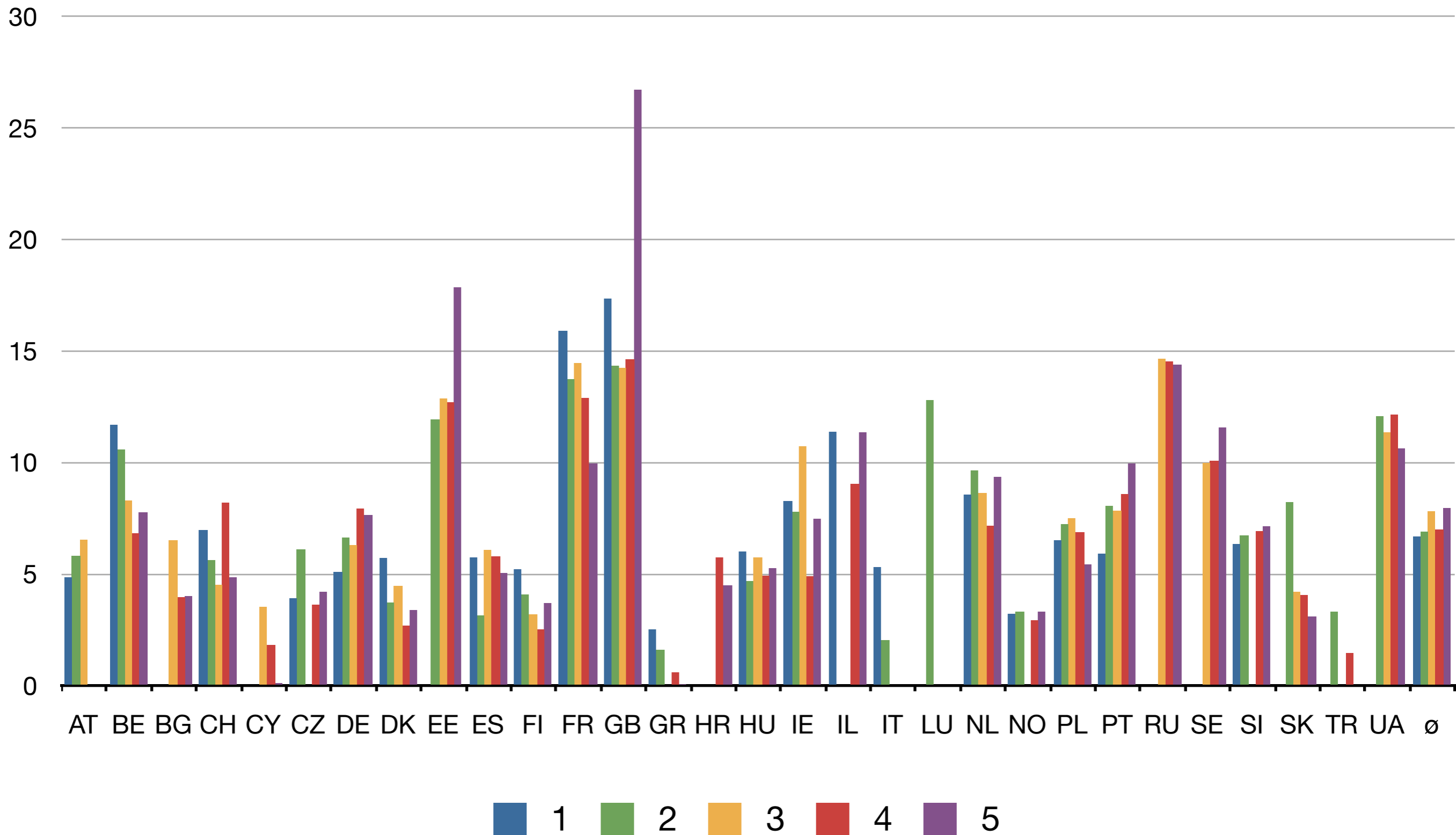
Evaluation of the resulting data

- Check non-informative data
- Comparison across ESS rounds
- Comparison with official data (EAG)
- Information content: construct validation

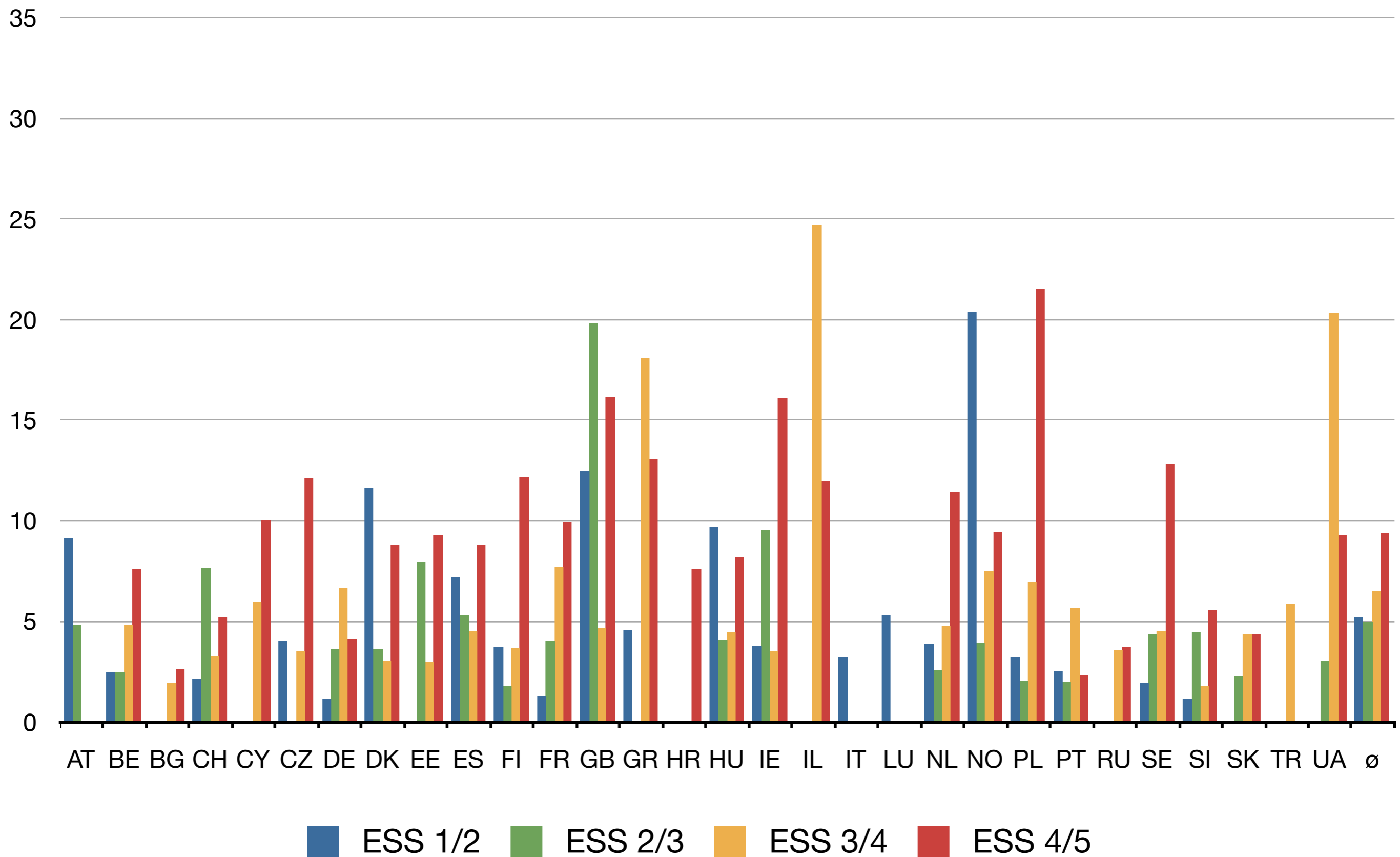
Non-informative data: Respondent



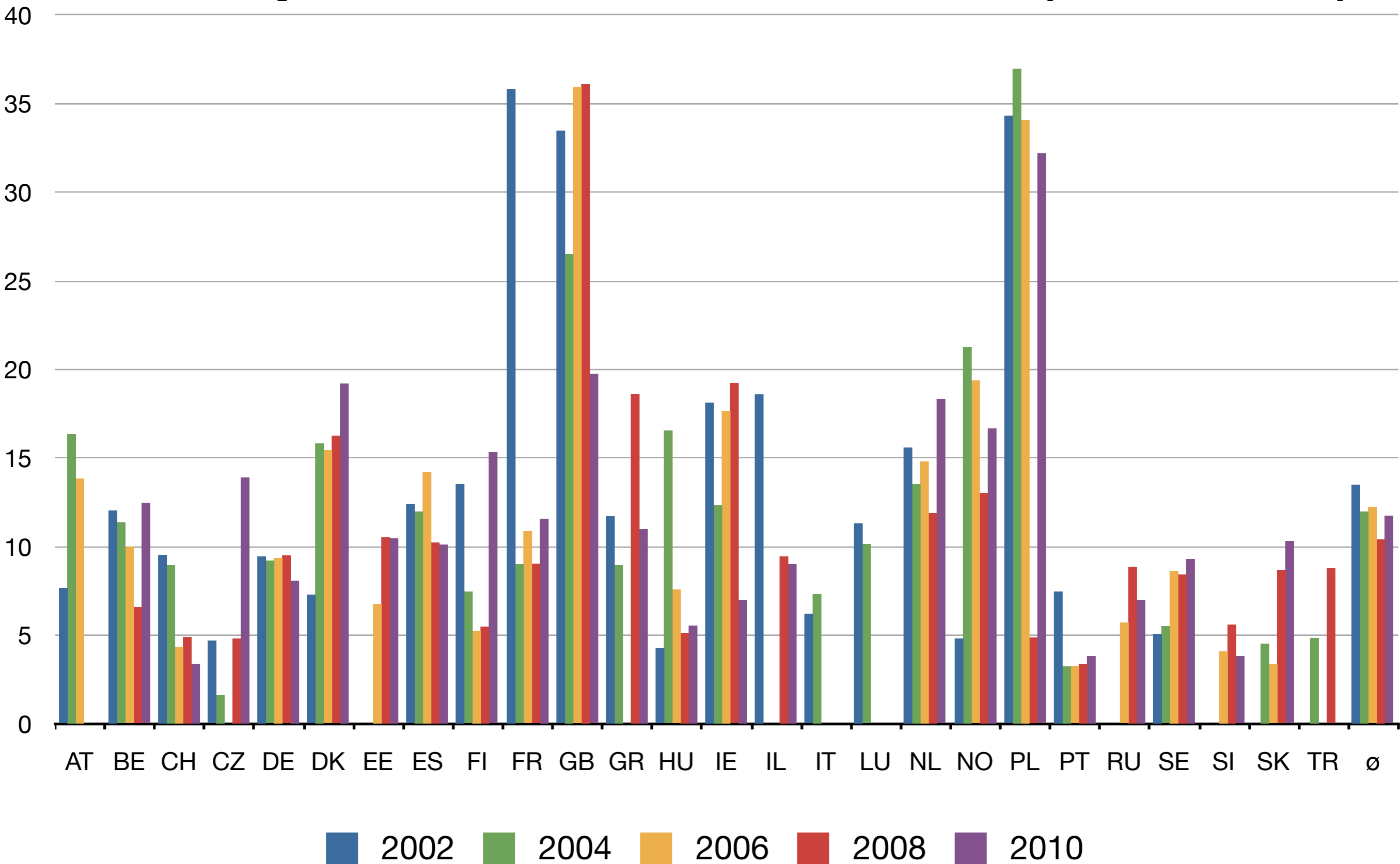
Non-informative data: Father



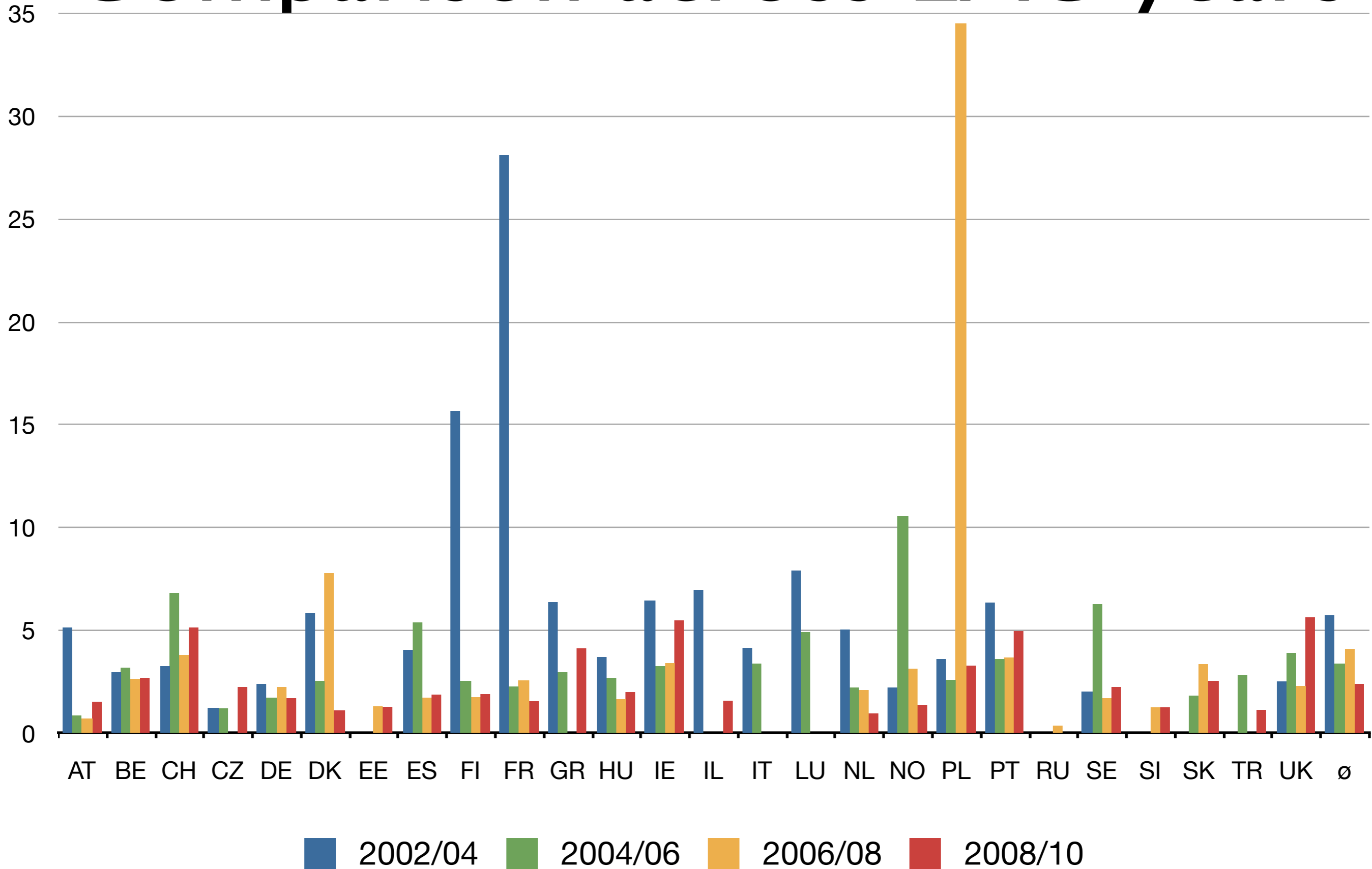
Comparison across ESS rounds (edulvla)



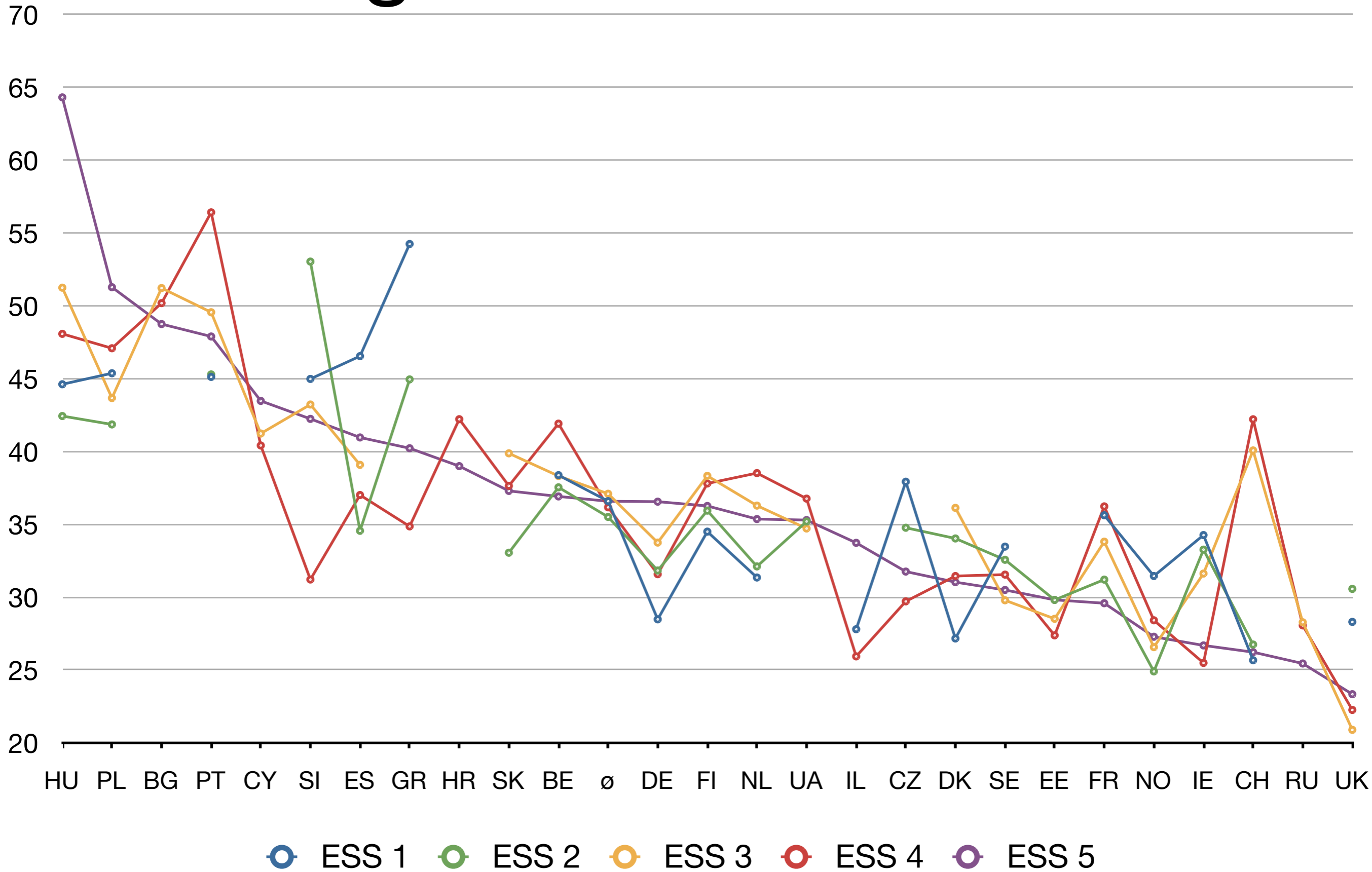
Comparison with EAG (edulvla)



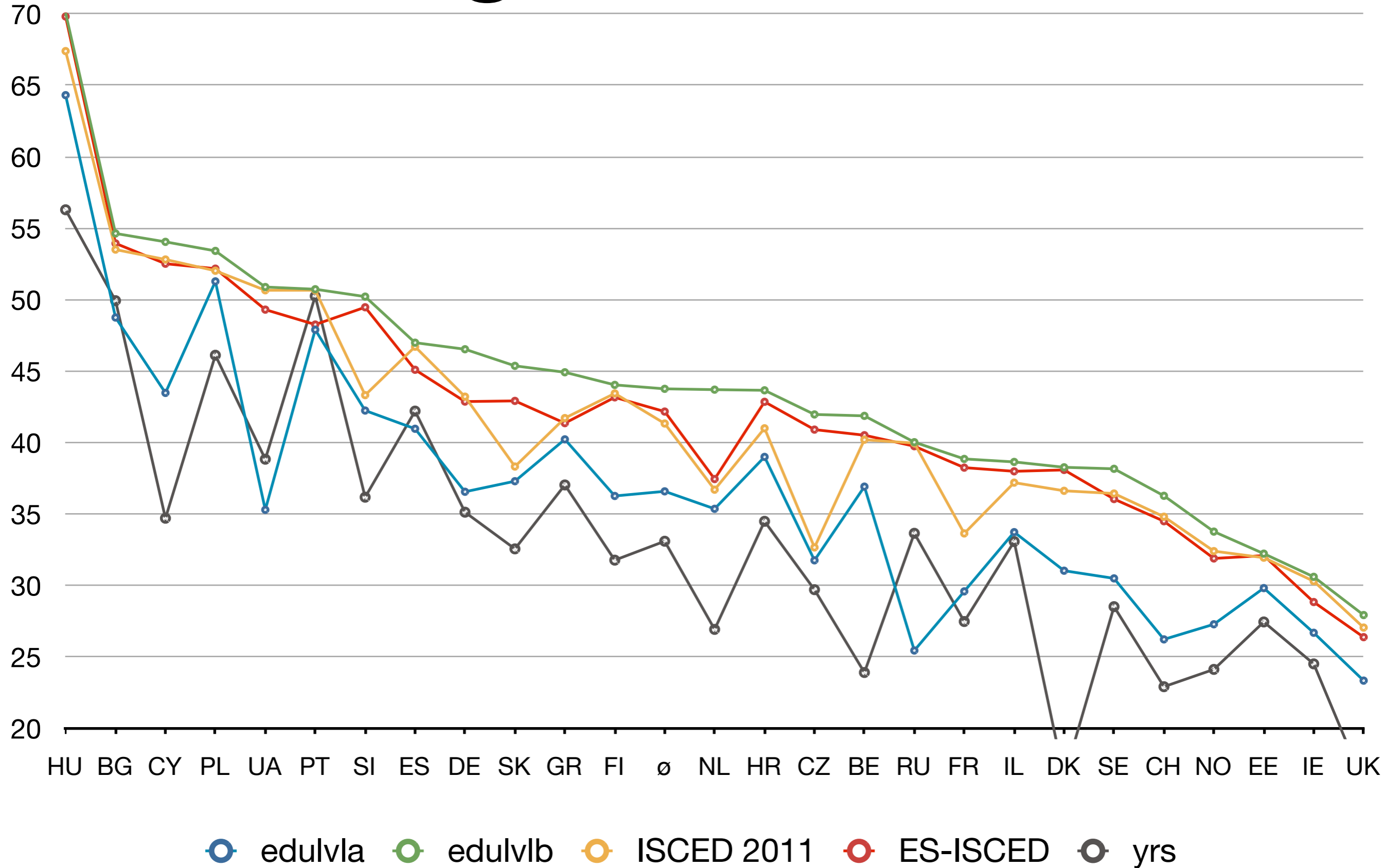
Comparison across EAG years



aR2, reg ISEI on edulvla, ESS 1-5



aR2, reg ISEI on ..., ESS 5



Conclusions for the ESS

- Central overview and compliance checks improve comparability
- Purpose-built variables can be derived from "edulvlb"
- Less variation lost by harmonisation into ES-ISCED than ISCED 97/edulvla
- ISCED 1997 levels and detailed 2011 can also be derived

Challenges

- Proxy-reporting sometimes problematic
- Strategy for foreign qualifications (but: IL)
- Changing nature and distribution of qualifications: empirical question
- Different drop-out across countries
- Social desirability bias

Benefits of using ISCED

- *Standardisation*: standard coding across data sources, possibility of developing standard coding routines
- *Transparency*:
 - fairly transparent review process
 - development of ISCED mappings since ISCED 1997 will continue; use of 'peer reviews'
 - implementation manuals to be published
- *Availability*: coverage of almost all countries in the world; maintained by UNESCO Institute for Statistics (UIS)
- *Relevance*: educational attainment explicitly covered; information richer than with common alternatives

Risks in using ISCED

- Degree to which ISCED criteria lead to comparability?
- Classification developed for official statistics
 - adopted to by UNESCO general conference
 - some mappings doubtful, politically motivated
- Distinctions that are relevant to social scientists not covered (e.g. between academically selective and non-selective programmes/qualifications at level 2)
- Lacking coverage of mappings for outdated qualifications
- Review process institutionally driven, not much input from research community