

A comparative analysis of NEETs' profiles and their determinants in Europe in the years of the crisis: a longitudinal perspective

The role of education on women's NEET status

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The EEA and Norway Grants for Youth Employment, project *Youth Employment PartnerSHIP, evaluation studies in Spain, Hungary, Italy and Poland*, are kindly acknowledged for financial support.

NEETs: a heterogeneous group

- Relevance: EU policies, such as Youth Guarantee, target them explicitly.
 - Many dimensions of vulnerability
 - School dropouts, long-term unemployed, discouraged, inactive due to family responsibilities
 - Analytical concept based on:
 - Age
 - Labour market status
 - Education or training
 - Duration
 - Eurofound (2012, 2016)
- Useful concept as it reduces the complexity of the condition to a simple but powerful concept, **human capital**, and its process of **depreciation**, with large empirical and theoretical base in labour economics literature.

Longitudinal data to identify NEETs: EU-SILC

Contini, Filandri, Pacelli (2019): persistence in the NEET state

Each individual in the longitudinal survey of EU-SILC is asked the monthly activity (11 categories) in previous year (PL2011A-L) → 48 observations of self-declared status.

PL2011A-L : From 11 to 2 categories: Student or Employed, NEET.

Ex-ante **classification** based on the **persistence** in the condition:

- 0-11 months NEET → Never or Episodic NEET
- 12-35 months NEET, 1 period → One long NEET
- 12-35 months NEET, 2+ periods → Frequent NEET
- 36-48 months NEET → Always NEET

Data and sample selection

1. Data

EU-SILC waves 12-18 (years 2008-2017)

2. Selection

2.1 Countries

EU-27, excluding Romania, Malta, Germany and Slovakia and including Norway and UK (2008-2017). AT, BE, BG, CY, CZ, DK, EE, EL, ES, FI, FR, HR, HU, IE, IT, LT, LU, LV, NL, NO, PT, SE, SI, UK.

2.2 Individuals

Age 19-29 years old in the first wave – focus on labour market issues

Completeness all 48 months with valid observation (4886, 3.54% of the population)



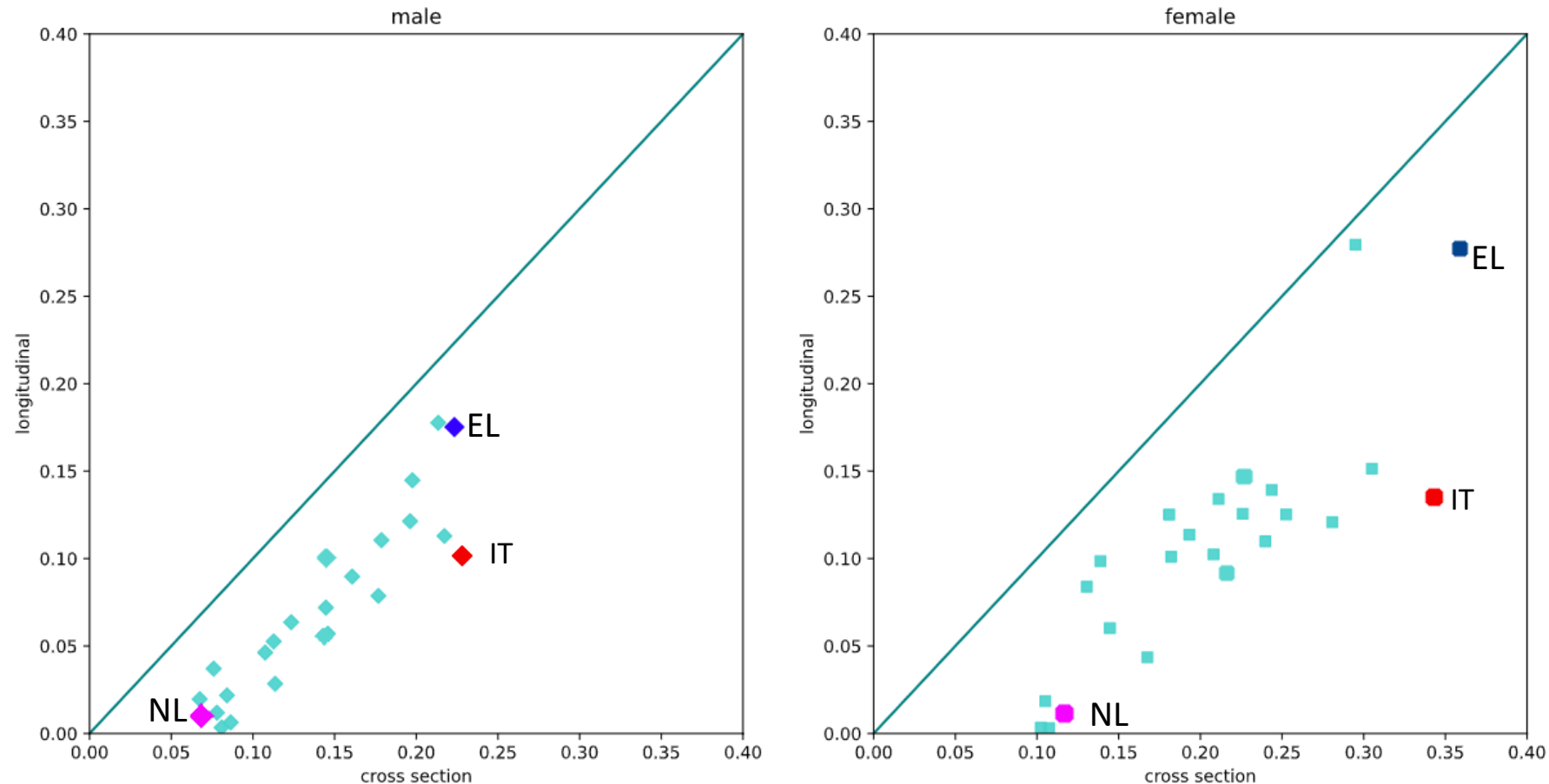
64,998 records

Sample

| wave | years | n | | | N | | |
|--------------|------------------|--------|--------|--------|------------|------------|------------|
| | | Male | Female | Total | Male | Female | Total |
| 12 | 2008-2011 | 4,924 | 5,035 | 9,959 | 20,236,862 | 20,637,131 | 40,873,993 |
| 13 | 2009-2012 | 4,766 | 4,535 | 9,301 | 20,265,010 | 20,225,190 | 40,490,200 |
| 14 | 2010-2013 | 4,903 | 4,731 | 9,634 | 20,224,795 | 19,526,909 | 39,751,704 |
| 15 | 2011-2014 | 4,475 | 4,391 | 8,866 | 19,822,862 | 20,283,186 | 40,106,048 |
| 16 | 2012-2015 | 4,727 | 4,375 | 9,102 | 20,963,750 | 20,615,765 | 41,579,515 |
| 17 | 2013-2016 | 4,448 | 4,357 | 8,805 | 19,678,908 | 19,849,593 | 39,528,501 |
| 18 | 2014-2017 | 4,752 | 4,579 | 9,331 | 18,943,852 | 19,321,750 | 38,265,602 |
| Total | | 32,995 | 32,003 | 64,998 | | | |

Source: authors' calculation on EU-SILC data (November 2020 release). For each wave, interviews are made on a yearly basis in March and items are retrospective on the whole previous year. Therefore, *year* here refers to the time period the information is referred to, while it is gathered in March *year +1*.

Longitudinal v cross-section



The NEET status is more diverse than cross-section estimates suggest.

- ◆ Exclusion → High persistence (e.g. EL)
- ◆ Participation and inactivity are compatible → low persistence, relatively higher cross-section (e.g. NL)
- ◆ Exclusion and participation → high cross-section and relatively lower persistence (e.g. IT)

Research question

We study the trajectories identified with the above-mentioned classification for men and women with different levels of education.

How does education relate to participation in employment or education/training activities?

Which level of education is necessary for women to have a relative performance similar to men, given the trajectory of belonging?

Sample characteristics: gender and trajectories

| | Male | | Female | | Total | |
|----------------------|------------|--------|------------|--------|------------|--------|
| | Average N | % | Average N | % | Average N | % |
| Episodic NEET | 15,461,734 | 77.3% | 14,078,727 | 70.1% | 29,542,857 | 73.7% |
| One Long NEET | 524,579 | 2.6% | 563,440 | 2.8% | 1,088,019 | 2.7% |
| Frequent NEET | 2,645,784 | 13.2% | 3,125,060 | 15.6% | 5,770,844 | 14.4% |
| Always NEET | 1,387,173 | 6.9% | 2,298,419 | 11.5% | 3,685,592 | 9.2% |
| Total | 20,014,286 | 100.0% | 20,071,429 | 100.0% | 40,085,714 | 100.0% |

- Women are over represented in Always and Frequent NEET
- One Long NEET is a small group

Sample characteristics: gender and education

| | Male | | Female | | Total | |
|---------------------------------|------------|--------|------------|--------|------------|--------|
| | Average N | % | Average N | % | Average N | % |
| Lower secondary or lower | 3,886,515 | 20.1% | 2,809,709 | 14.4% | 6,696,224 | 17.3% |
| Higher secondary | 10,780,048 | 55.8% | 10,165,211 | 52.3% | 20,945,259 | 54.0% |
| Tertiary or higher | 4,647,712 | 24.1% | 6,470,076 | 33.3% | 11,117,788 | 28.7% |
| Total | 19,314,276 | 100.0% | 19,444,995 | 100.0% | 38,759,271 | 100.0% |

- Women are more educated than men on average.

Model

1. Multinomial logit regression • Separate models by country

For each individual with outcome trajectory $t \mid t \in T = \{ \text{Episodic NEET}, \text{One Long NEET}, \text{Frequent NEET}, \text{Always NEET} \}$

$$Z = \alpha + \sum_{c \in \{1, \dots, 6\}} \beta_c \text{Age}_c + \gamma \text{Female} + \sum_{e \in \{1, 2, 3\}} \delta_e \text{Education} + \sum_{f \in \{0, 1\}} \sum_{e \in \{1, 2, 3\}} \eta_{fe} \text{Female}_f * \text{Education}_e + \varepsilon$$
$$p_t = \exp(Z_t) / (1 + \sum_{k \neq t, k \in T} \exp(Z_k))$$

2. Results

Average marginal effects at mean age, by education, gender and country.

Odds-ratio with baseline category Episodic NEET.

For each country and trajectory, **pairwise significance test of the difference** between:

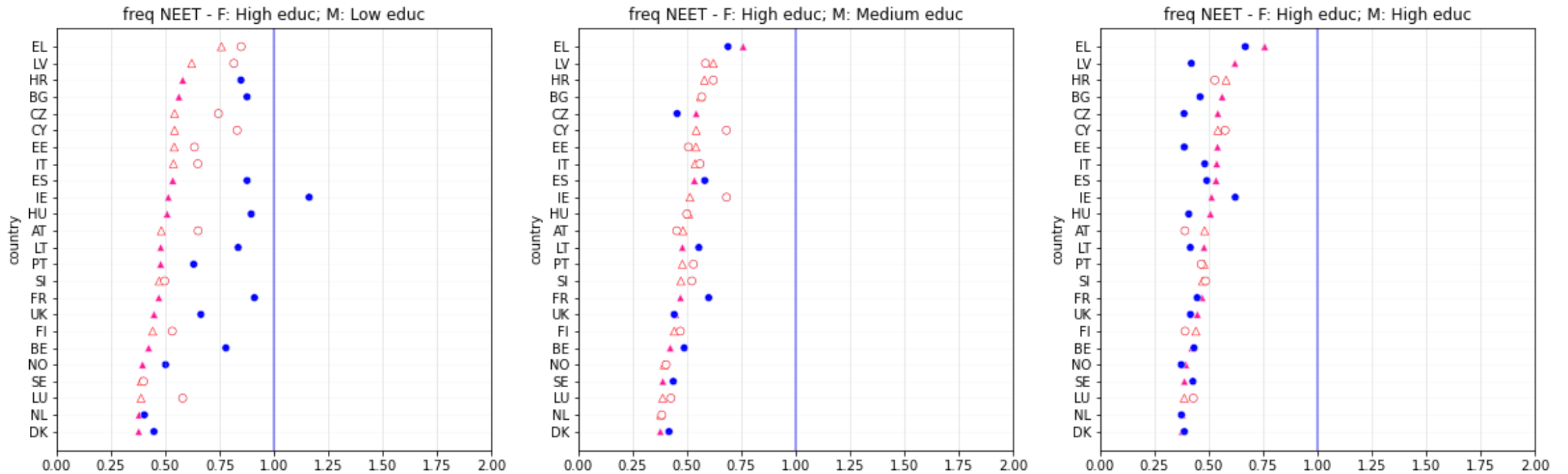
women with tertiary education (**F: High educ**)

- men with lower secondary or lower (**M: Low educ**)
- men with higher secondary education (**M: Medium educ**)
- men with tertiary education or higher (**M: High educ**)

Frequent NEET

12-35 months NEET, 2 or more episodes

AME at mean age, by education, gender and country. OR with baseline trajectory “Episodic NEET”.

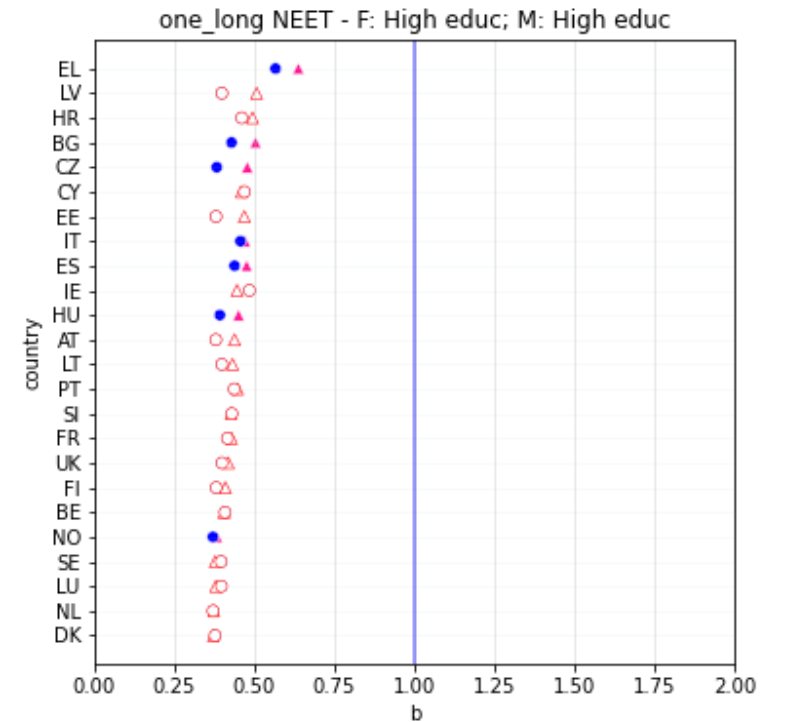
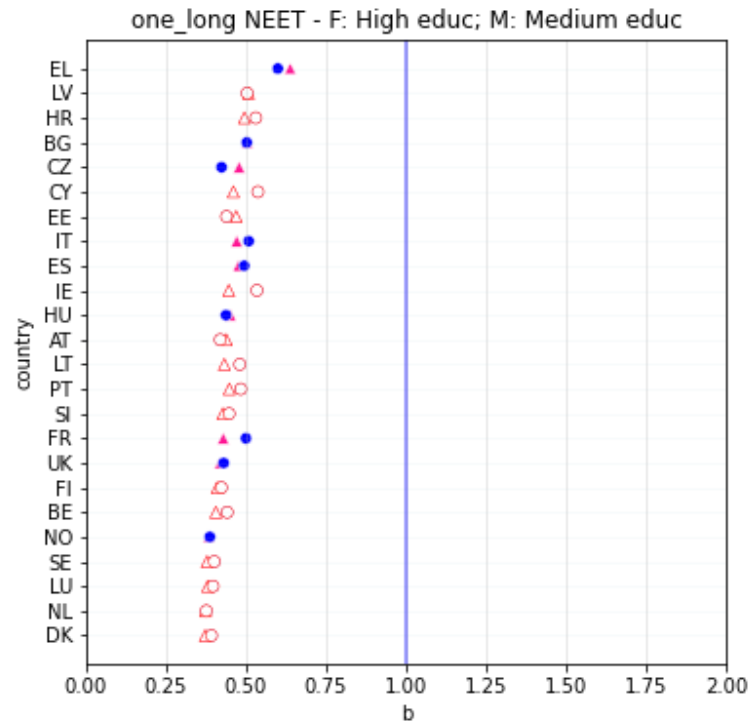
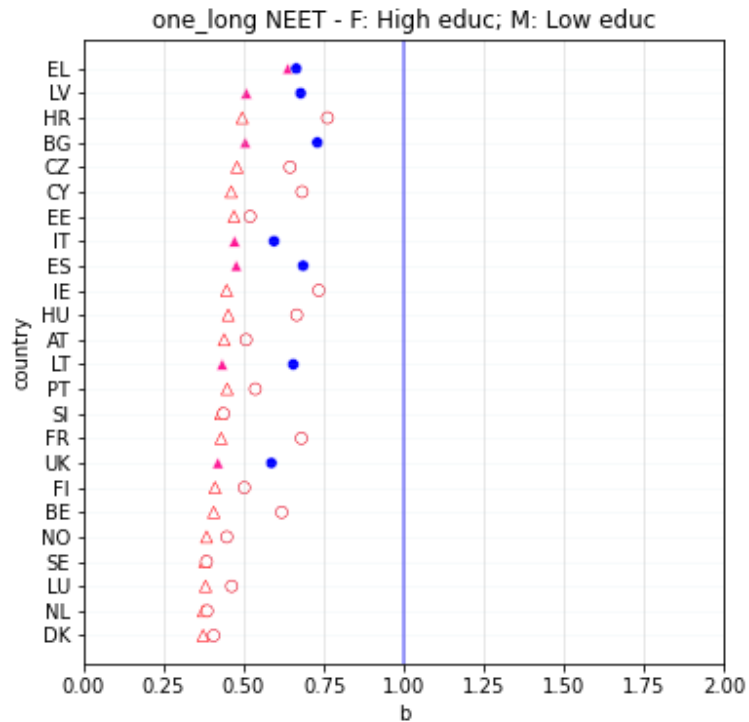


Women with tertiary education have higher probability of being employed or in education than **men with lower secondary** education but perform similarly to (worse than, in some cases) men with higher secondary.

One long NEET

12-35 months NEET, 1 episode

AME at mean age, by education, gender and country. OR with baseline trajectory “Episodic NEET”.



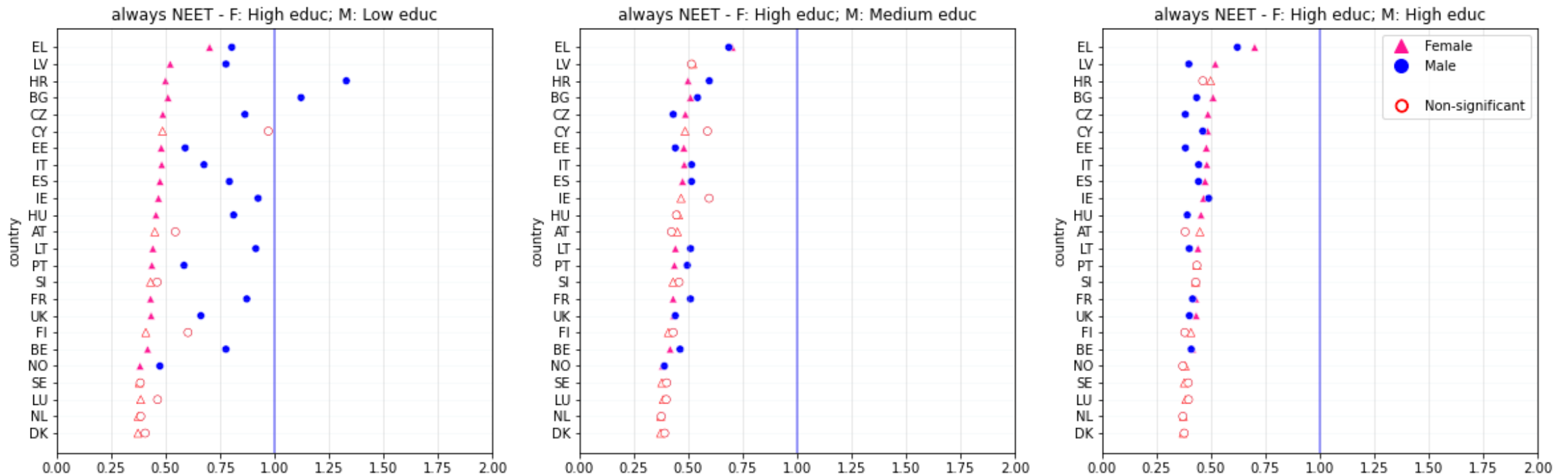
Few estimates are statistically different → small group

Lower dispersion

Always NEET

36-48 months NEET

AME at mean age, by education, gender and country. OR with baseline trajectory “Episodic NEET”.



Women with tertiary education are more protected than **men with secondary** education but perform worse than men with tertiary.

Discussion

The use of longitudinal data allows to include detailed duration in measures of NEET incidence.

Education increases participation in employment of education/training for both men and women but the investment in education fills the gender gap only partially.

Women with tertiary degrees perform similarly to men with higher secondary ones.

Limitations:

- Ex-ante categories are rigid.

Future research:

- Are compensatory policies in place? Are they effective?

References

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