Group of Experts on Gender Statistics
Palais de Nations, UNECE, 10 May 2023.

Gender Pay Gaps in the European Union

Marina Perez Julian

Denis Leythienne

(Eurostat - Labour Market and Lifelong Learning)

CONTENT

European
Commission

I. INTRODUCTION

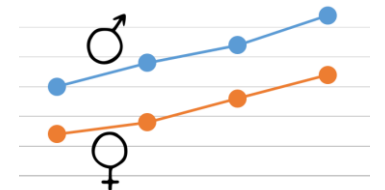## European Pillar of Social Rights

2. Equal treatment between women and men

Men and women must be treated in the same fair way in every part of life.

✓ Right of both women and men to EQUAL PAY FOR EQUAL WORK

✓ The unadjusted GPG is the leading indicator used to evaluate the progress in **reducing the gap.**
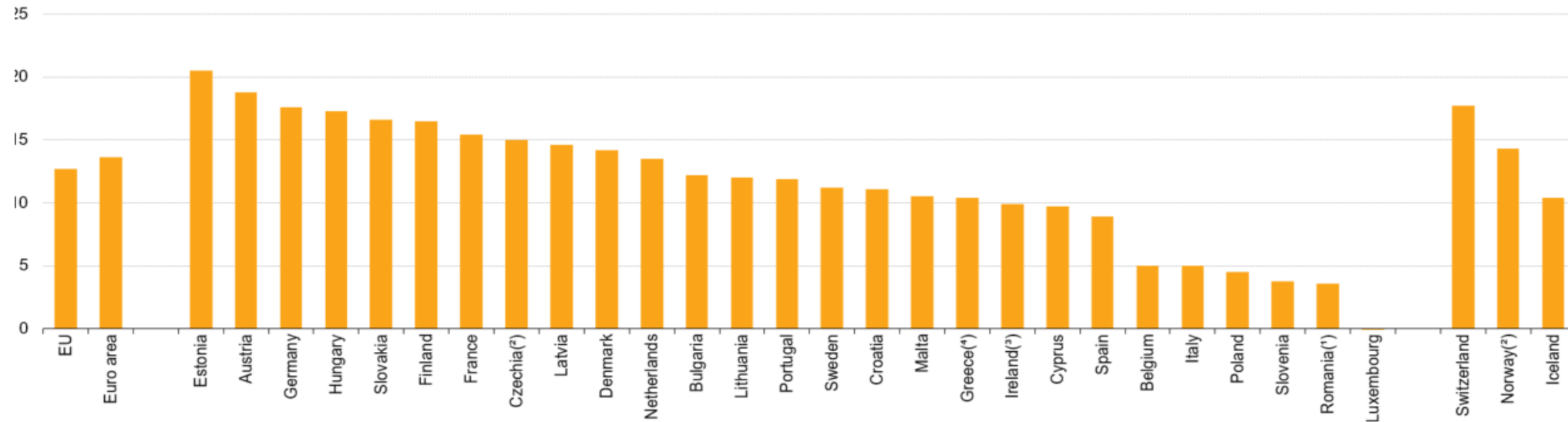
✓ It is calculated as:

$$\frac{\text{Mean hourly earnings of men} - \text{Mean hourly earnings of women}}{\text{Mean hourly earnings of men}}$$

European Commission

I. INTRODUCTION

The unadjusted gender pay gap, 2021
(difference between average gross hourly earnings of male and female employees as % of male gross earnings)

Note: For all the countries except Czechia and Iceland: data for enterprises employing 10 or more employees, NACE Rev. 2 B to S (-O);
Czechia: data for enterprises employing 1 or more employees, NACE Rev. 2 B to S; Iceland: NACE Rev. 2 sections C to H, J, K, P, Q.
Gender pay gap data for 2021 are provisional until benchmark figures, taken from the Structure of Earnings survey, become available in
December 2024

(¹) Estimated data
(²) Definition differs (see metadata)
(³) 2020 data
(⁴) 2018 data

Source: Eurostat (online data code: sdg_05_20)

eurostat

European Commission

I. INTRODUCTION

But… the Unadjusted Gender Pay Gap has limitations …

The unadjusted GPG <u>does not capture discrimination</u> in the sense of "equal pay for equal work or work of equal value"

BECAUSE it combines:

- the impact of differences in the average characteristics of men and women in the labour market

- possible differences in pay between men and women, for "equal work"

II. METHODOLOGY

✓ With **Structure of Earnings Survey 2018** data that covers two broad areas:

▪the earnings of individual employees

▪the observed characteristics of individual employees and their employers

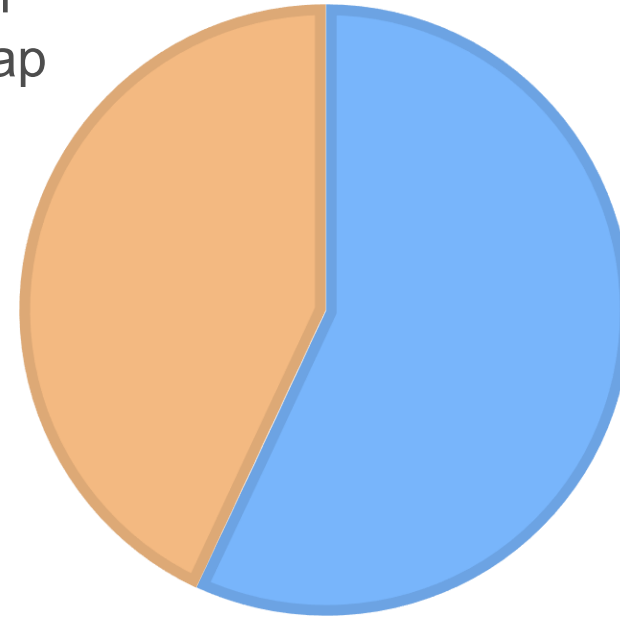✓We have measured the impact of differences in the average characteristics of men and women.

II. METHODOLOGY

Unadjusted Gender Pay Gap

Methodology based on Blinder Oaxaca decomposition

Unexplained Gender Pay Gap

Explained Gender Pay Gap

European Commission

II. METHODOLOGY

$$\ln y_i^M = \beta_0^M + \sum_{k=1}^{K} x_{ki}^M \beta_k^M + \varepsilon_i^M$$

$$\ln y_i^W = \beta_0^W + \sum_{k=1}^{K} x_{ki}^W \beta_k^W + \varepsilon_i^W$$

Where:

- $\ln y_i$ represents the natural log of hourly earnings for observation i;

- x_{ki}, from k=1 to k=K, are explanatory variables covering the observed personal, job and enterprise characteristics that may impact on the log hourly earnings of individual i;

- β_0 is a constant and β_k, from k=1 to k=K, are the parameters for the corresponding variables covering the observed characteristics;

- ε_i is a disturbance term for observation i, independent from each other and normally distributed with average zero and same variance (i.e. 'white noise').

II. METHODOLOGY

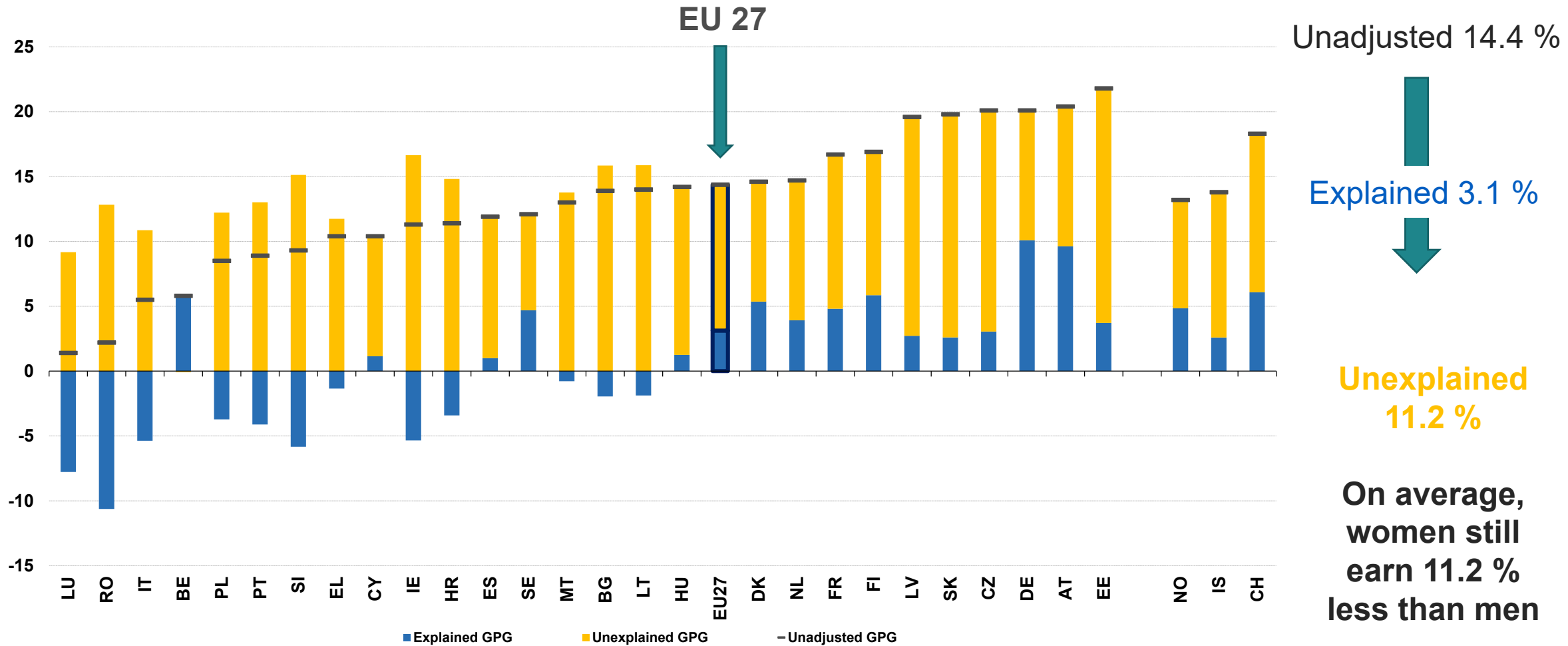The Oaxaca decomposition uses the following regression property for the means of log hourly earnings of men and women:

$$\overline{\ln y}^M = \hat{\beta}_0^M + \sum_{k=1}^{K} \bar{x}_k^M \hat{\beta}_k^M$$

$$\overline{\ln y}^W = \hat{\beta}_0^W + \sum_{k=1}^{K} \bar{x}_k^W \hat{\beta}_k^W$$

$$\overline{\ln y}^M - \overline{\ln y}^W = \underbrace{\sum_{k=1}^{K} \hat{\beta}_k^M (\bar{x}_k^M - \bar{x}_k^W)}_{\substack{\text{Different characteristics} \\ (E)}} + \underbrace{\sum_{k=1}^{K} \bar{x}_k^W (\hat{\beta}_k^M - \hat{\beta}_k^W)}_{\substack{\text{Different financial returns} \\ (U1)}} + \underbrace{(\hat{\beta}_0^M - \hat{\beta}_0^W)}_{\substack{\text{Residual} \\ (U2)}}$$

Where k=1 to k=K refers to the corresponding variables covering the observed characteristics

European Commission

III. RESULTS

Looking at the results of the GPG decomposition

III. RESULTS   The gender pay gap after adjusting

Unexplained gender pay gap

EU=11.2

< 10
10 – < 12
≥ 12

Belgium: -0.1

Administrative boundaries: © EuroGeographics © UN–FAO © Turkstat
Cartography: Eurostat – IMAGE, 03/2022
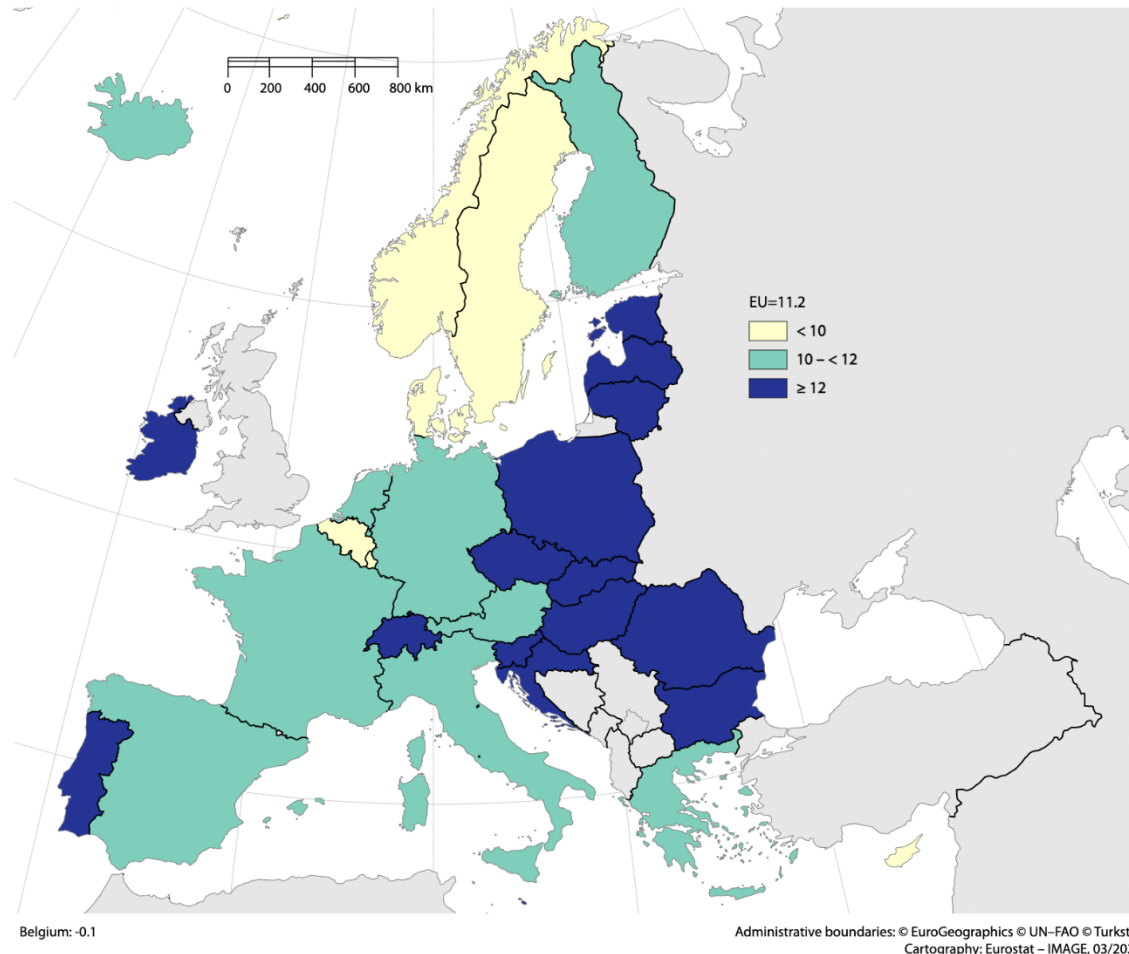
Lowest adjusted GPG: Belgium, Nordic countries and Cyprus.

The UGPG is adjusted downwards.

European Commission

III. RESULTS

How does each factor contribute to explaining the gap?

Economic activity

Part-time

Occupation
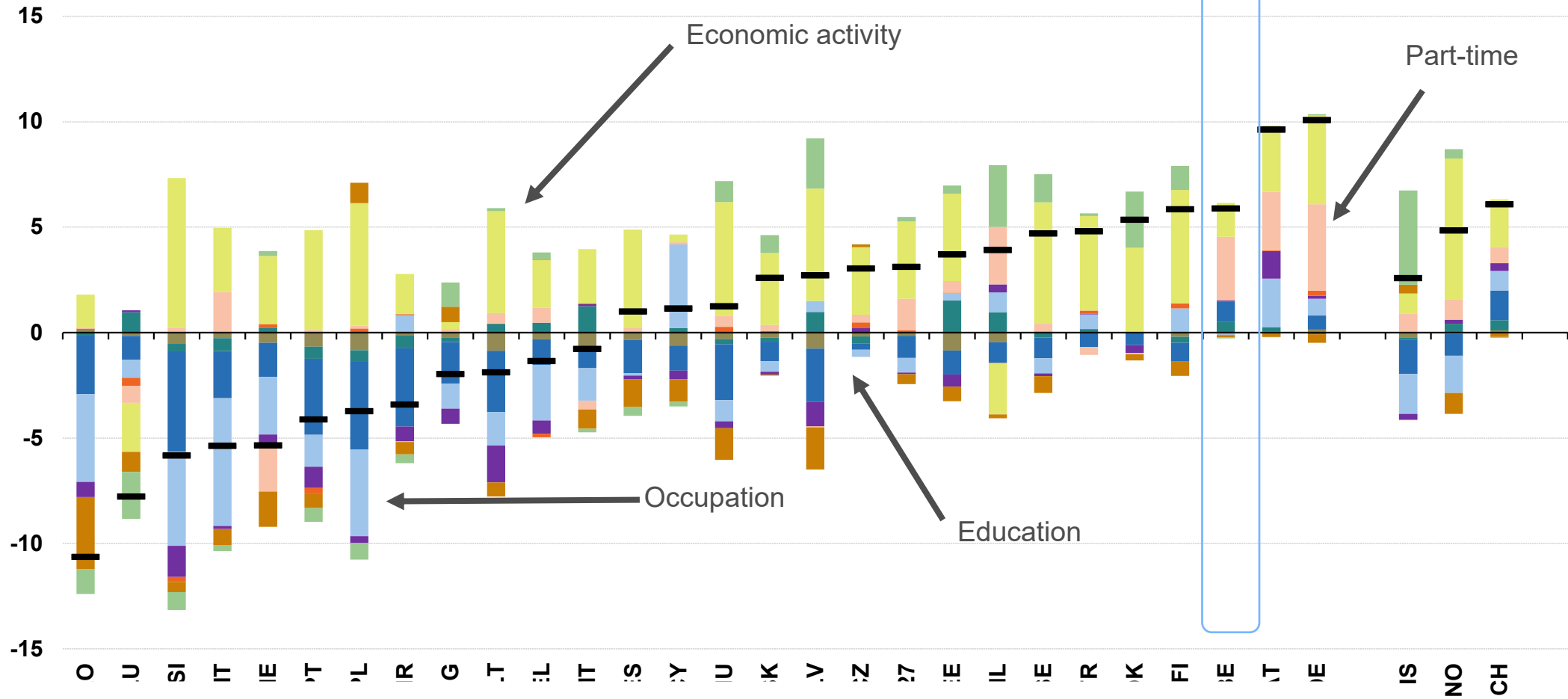
Education

Legend:
- Residual
- Age
- Education
- Occupation
- Job experience
- Employment contract
- Working time
- Economic activity
- Enterprise size
- Overall explained gap
- Enterprise control

European Commission

III. RESULTS

Why using the Unexplained Gender Pay Gap?
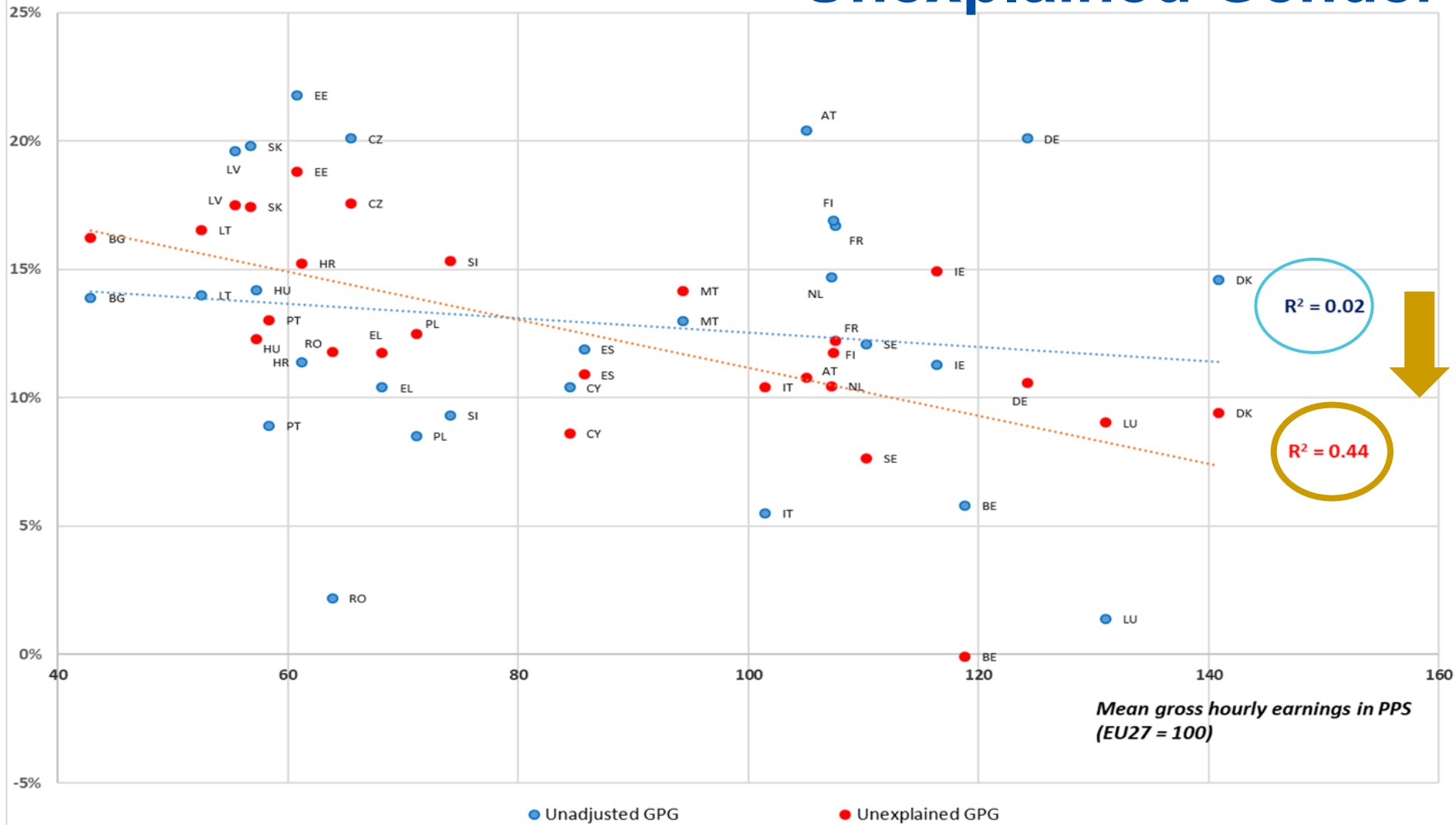
III. RESULTS

Are they differences in returns?

Effect of *age* :

- lower returns for women (impact of career breaks).

- higher returns for women at the end of their careers compared with men.

Family   Career

**Difference of men and women financial returns by age -
GPG Adjustment 2018**

European Commission
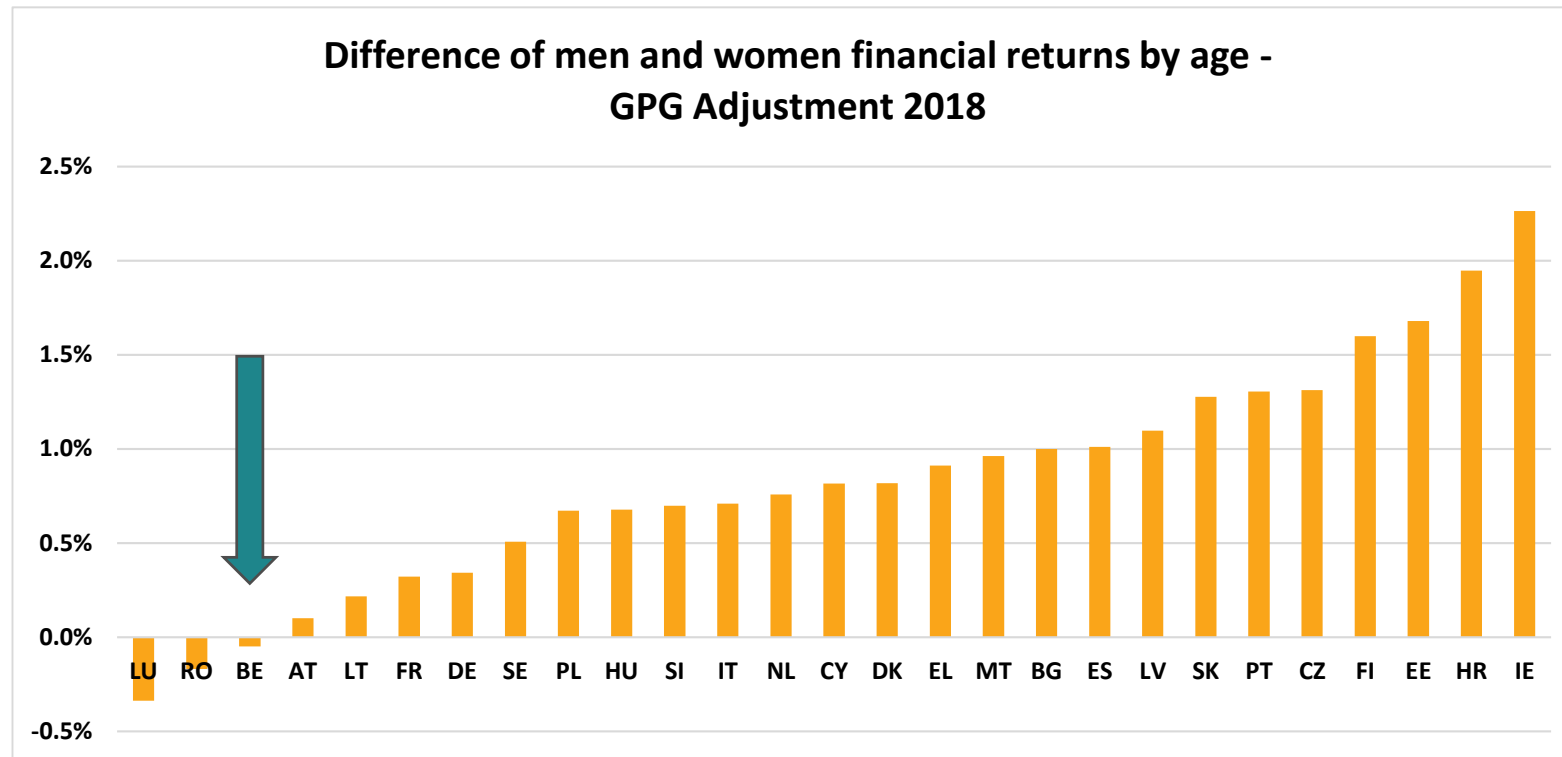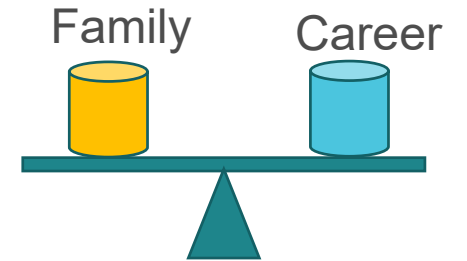
IV. OTHER SEGREGATION EFFECTS

Hourly earnings do not tell the full story…
… there are other segregation effects

Lower employment rate of women

Lower number of hours worked

Gender segregation effects

Sectoral and occupational segregation

Unadjusted gender pay gap

Unequal pay for equal work
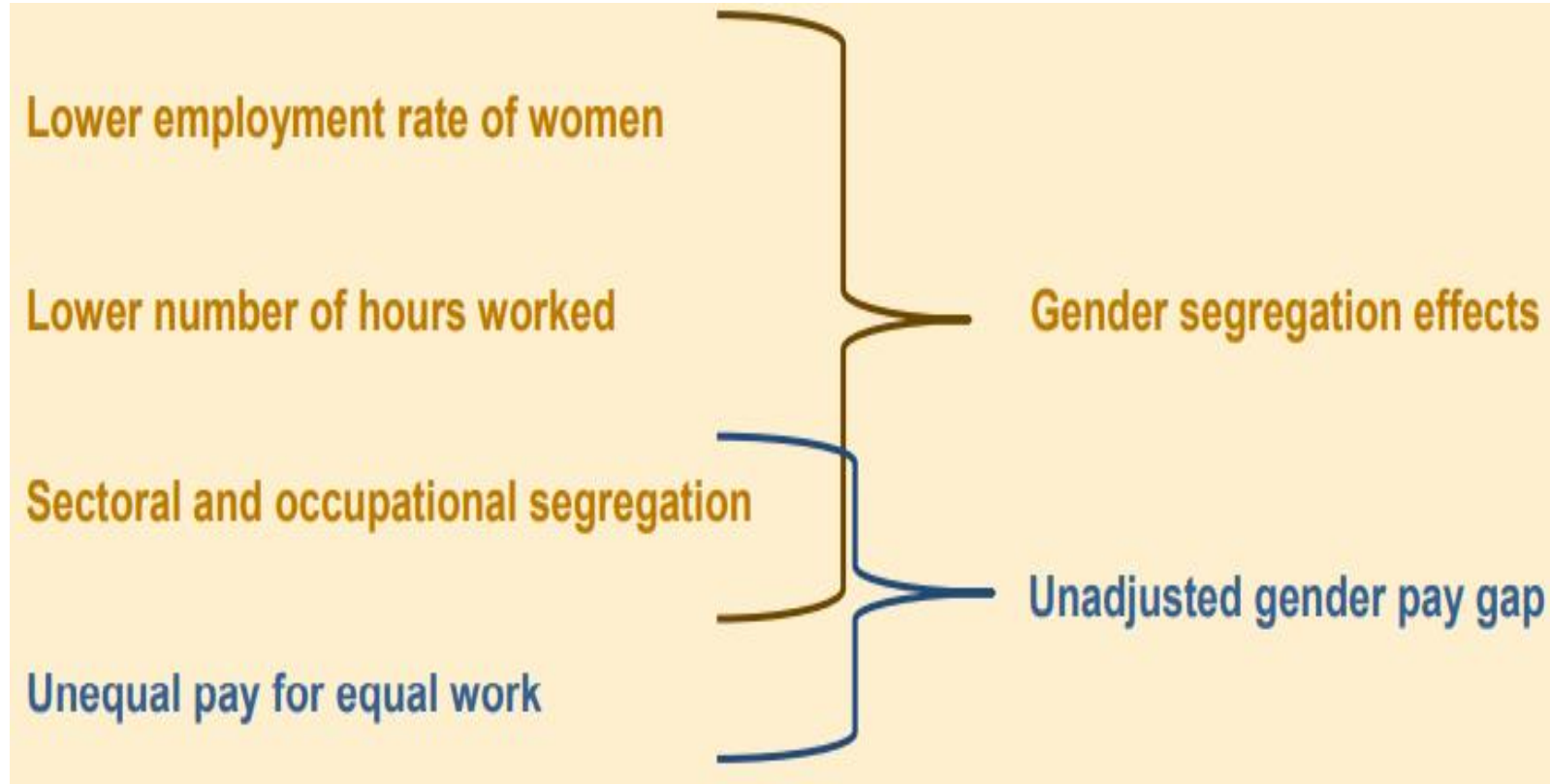
IV. OTHER SEGREGATION EFFECTS

✓ Unadjusted gender pay gap

✓ Gender hours worked gap

✓ Gender employment rate gap

⇒ Combined into the
Gender Overall Earnings Gap
(GOEG)

36%
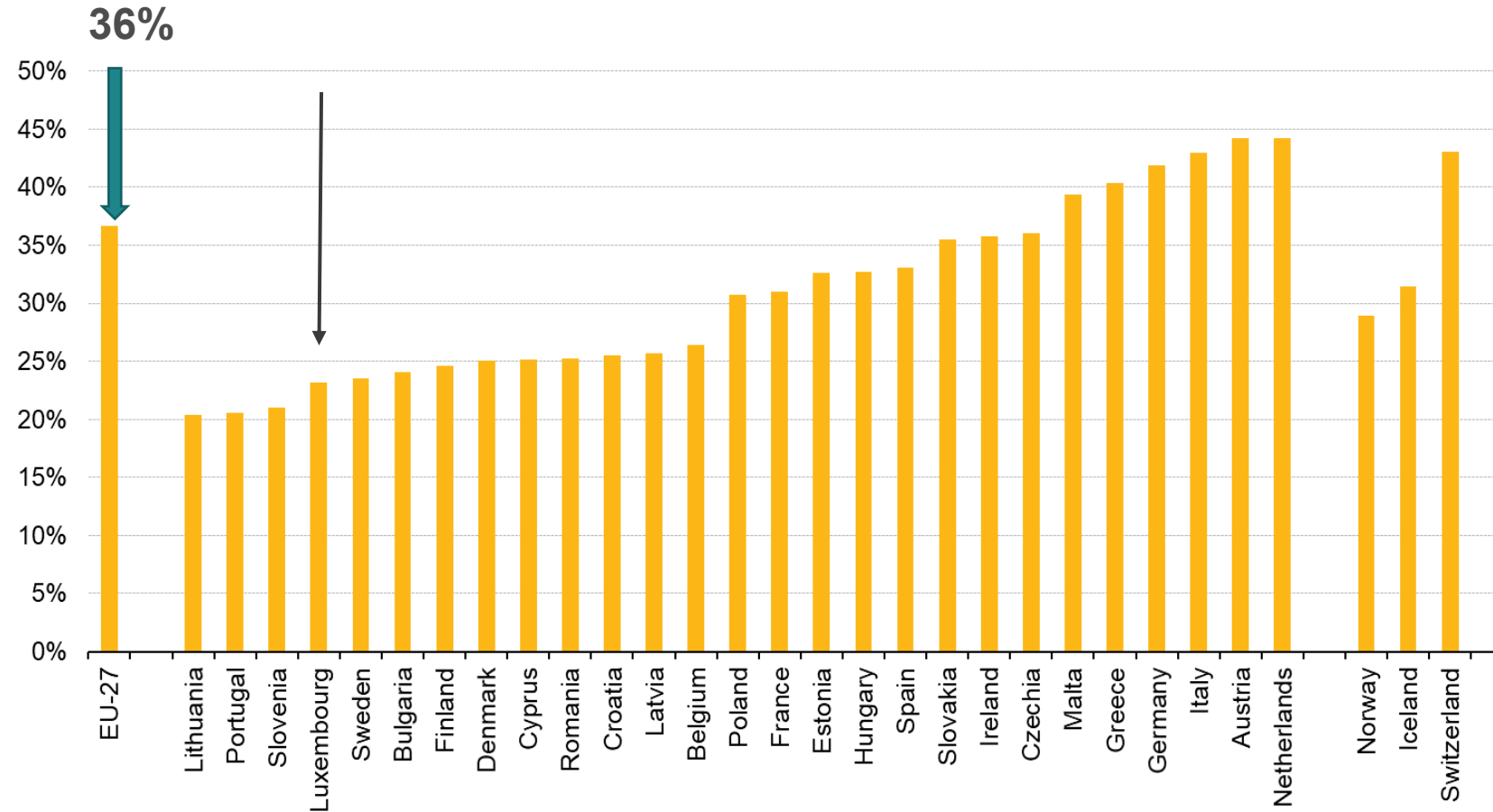
Source: Eurostat (online data code: teqges01)

V. CONCLUSIONS

- There are clear policy and statistical reasons to decompose the unadjusted GPG.

- The unexplained GPG and the gender overall earnings gap provide useful indicators to complement the unadjusted GPG.

- Explanatory factors and returns allow for a better identification and interpretation of the causes behind the gender pay gap.

- The above statistics should help to better target policy actions towards gender equality.

VI. Information about gender pay gap statistics …

STATISTICS EXPLAINED ARTICLE:

[Gender pay gap statistics - Statistics Explained (europa.eu)](#)

+ tables for users

Marina.perez-julian@ec.Europa.eu
Denis.Leythienne@ec.europa.eu

European Commission