



**26. Wissenschaftliches Kolloquium
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Wage inequalities in the EU

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OUTLINE

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I. Structure of Earnings Survey (SES)

- large enterprise survey
- conducted in the EU MSs, EU candidate countries and EFTA countries every 4 years
- legally based on:
 - **Council Regulation No 530/1999**
 - **Commission Regulation 1738/2005**
- **results:** comparable and EU-wide harmonised structural data / information on:
 - gross earnings
 - hours paid
 - annual days of paid holiday leave

I. Structure of Earnings Survey (SES)

- coverage:
 - **enterprises with at least 10 employees (1+ optional)**
 - **NACE Rev.2. sections B to S excluding O (section O optional)**
- breakdowns:
 - **regions - NUTS 1**
 - **education - ISCED; 4 main groups**
 - **economic activity –NACE ; level of divisions (2-digits)**
 - **occupation - ISCO; 2-digit level (in some cases 3-digit level available)**

How to access SES data in Eurostat?

- data available:
 - **approximately 2 years after the end of the reference period**
 - **aggregated data - in Eurostat's on-line database** ([Structure of earnings survey 2014 \(earn_ses2014\)](#))
 - **for research purposes:**
 - request access to anonymised microdata available in CD-ROM
 - request access to non-anonymised microdata available in Eurostat's Safe Centre
 - Useful additional information:

[Structure of earnings survey - access to microdata](#)

[How to access microdata in Eurostat?](#)

II. 'Low-wage earners'?

- concept for the first time introduced with SES 2010
- ***definition:***
 - Employees earning 2/3 or less of the national median hourly earnings.
- the threshold determining low-wages specific to each country
- apprentices excluded from analysis

Low-wage earners in the EU

	Share of low-wage earners (%)	Median gross hourly earnings (EUR)
Sweden	2.6	18.50
Belgium	3.8	17.30
Finland	5.3	17.20
Denmark	8.6	25.50
France	8.8	14.90
Italy	9.4	12.50
Luxembourg	11.9	18.40
Portugal	12.0	5.10
Spain	14.6	9.80
Austria	14.8	14.00
Malta	15.1	8.50
Hungary	17.8	3.60
Bulgaria	18.2	1.70
Netherlands	18.5	16.00
Slovenia	18.5	7.30
Czech Republic	18.7	4.60
Slovakia	19.2	4.40
Cyprus	19.3	8.40
United Kingdom	21.3	14.80
Ireland	21.6	20.20
Germany	22.5	15.70
Estonia	22.8	4.90
Poland	23.6	4.30
Lithuania	24.0	3.10
Romania	24.4	2.00
Latvia	25.5	3.40



Low-wage earners

employees earning two thirds or less of the national median gross hourly earnings



European Union

17.2 %



Median gross hourly earnings (EUR)

half of the population earns less and the other half earns more than this value



European Union

EUR 13.20

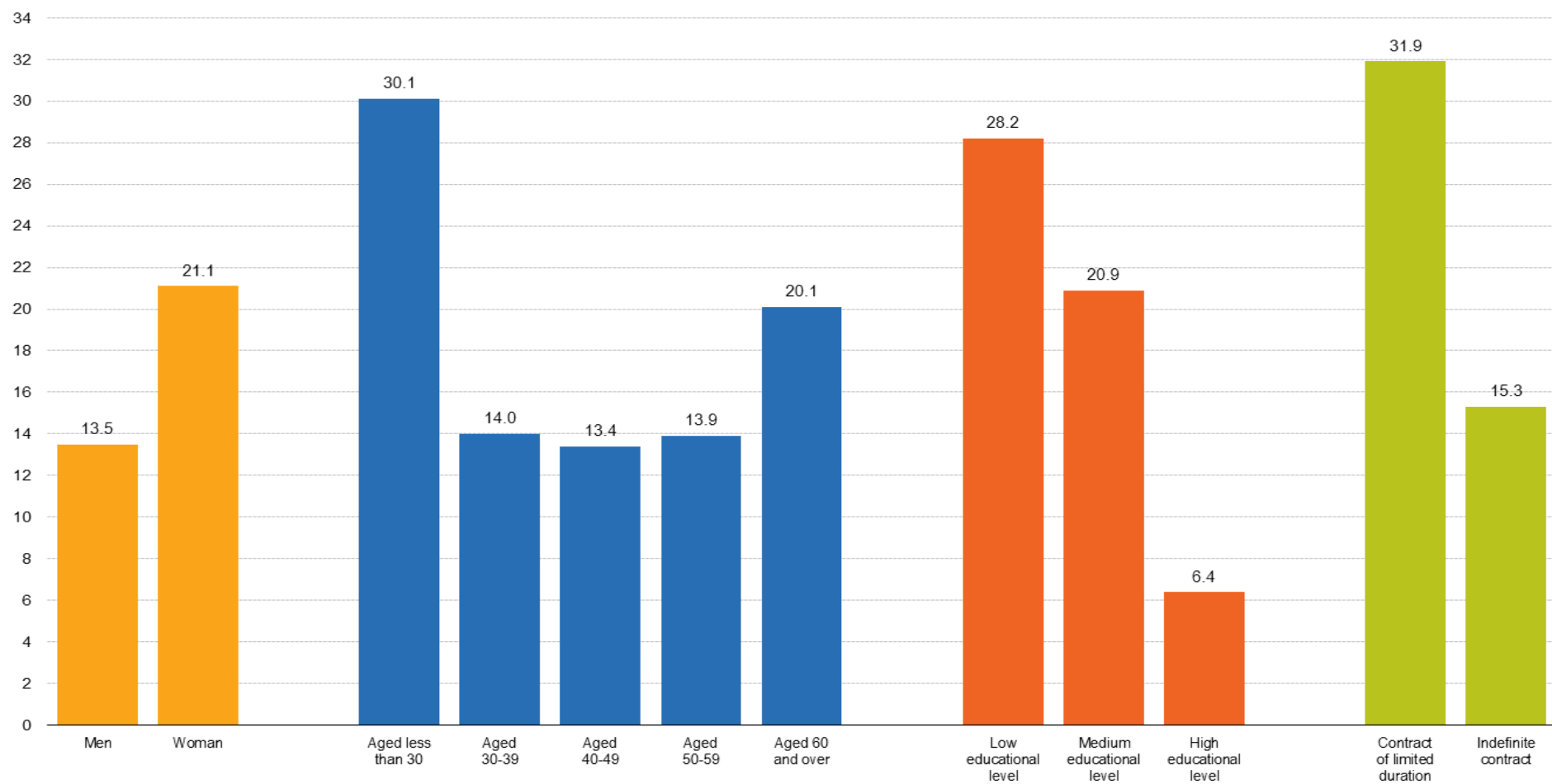
2014 data

Data refers to all employees (excluding apprentices) working in enterprises with 10 employees or more and which operate in all sectors of the economy except agriculture, forestry and fishing and public administration and defence; compulsory social security.

EU aggregate is compiled as the sum of all Member States except Greece and Croatia, for which data was not available.

Further information: <http://europa.eu/IRN96BX>

Proportion of low wage earners in the EU, by sex, age groups, level of education and type of contract, (%) 2014



In 2014:

- one in every six employees in the EU was a low-wage earner
- the proportion of low - wage earners (in EU MSs) – from 25.5% in Romania to 2.6% in Sweden
- the lower the level of education, the higher likelihood of being a low-wage earner
- the higher the median gross hourly earnings, the lower proportion of low-wage earners
- For more info see [Eurostat's News Release on Low-wage earners](#)

III. How are earnings distributed in the EU?

- notable disparities in earnings across the EU MSs:
 - **between the 10% of employees earning the least (D1) and the 10% earning the most (D9) - *in gross hourly earnings***
 - ⇒ *high D9/D1 inter decile ratio indicates large disparities*
 - **between economic activities within each EU Member State – *in gross monthly earnings***

In 2014:

- the 10% best-paid employees earned at least twice as much as the 10% lowest-paid in Sweden, and nearly five times as much in Poland - the D9/D1 dispersion ratio ranged from 2.1 in Sweden to 4.7 in Poland
- **upper end** of distribution of earnings - analysed using D9/Me ratio – the highest disparity was observed in Portugal (D9/Me = 2.8)
- **lower end** of distribution of earnings - analysed using Me/D1 ratio – largest disparities in Estonia (Me/D1 = 2.0)

And what about economic activities?

- analysis based on the gross monthly earnings

In 2014:

- **"Financial and insurance activities" ranked among the 3 highest paying economic activities in every EU Member State, except Ireland (where it ranked 4th)**
- **"Accommodation and food service activities" identified as the lowest paying activity of the economy in all Member States, except Spain, Malta and Slovenia (where it was the penultimate)**

For more info on distribution of earnings in the EU see [Eurostat's News Release on Distribution of earnings in the EU](#)

Ranking of economic activities across EU Member States, 2014

NACE Rev.2 sections		BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	FI	SE	SK	UK
B	Mining and quarrying	9	4	5	1	4	4	5	:	3	5	:	3	c	5	5	c	5	c	1	5	2	9	2	4	6	5	5	1
C	Manufacturing	8	13	6	7	6	9	8	:	7	6	:	9	14	12	8	12	7	10	10	7	9	15	12	11	5	7	7	9
D	Electricity, gas, steam and air conditioning supply	1	2	3	4	1	5	c	:	1	3	:	4	c	6	4	c	4	:	2	1	5	2	4	2	2	4	3	4
E	Water supply; sewerage, waste management and remediation activities	7	12	13	9	9	10	c	:	11	13	:	11	c	11	7	10	10	c	9	11	8	14	10	10	10	9	12	7
F	Construction	12	11	8	11	12	6	10	:	12	11	:	10	11	8	12	15	16	15	7	9	10	12	13	15	9	8	10	6
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	10	10	9	13	13	12	14	:	14	12	:	14	15	13	13	14	11	12	15	15	11	13	9	13	13	10	9	16
H	Transportation and storage	11	8	11	6	14	7	11	:	10	9	:	13	7	10	11	11	9	4	11	10	12	7	8	12	11	12	13	8
I	Accommodation and food service activities	17	17	17	17	17	17	17	:	16	17	:	17	17	17	17	17	17	16	17	17	17	17	17	16	17	17	17	17
J	Information and communication	4	1	1	3	3	2	2	:	4	2	:	5	6	2	2	5	2	2	4	3	1	3	3	1	1	2	1	3
K	Financial and insurance activities	3	3	2	2	2	1	4	:	2	1	:	2	3	1	1	2	1	1	3	2	3	1	1	3	3	1	2	2
L	Real estate activities	5	7	12	12	8	11	7	:	9	10	:	8	16	14	9	c	12	c	6	6	6	6	11	7	8	6	8	10
M	Professional, scientific and technical activities	2	5	4	5	5	3	3	:	5	4	:	6	4	3	3	4	3	c	5	4	4	5	5	5	4	3	4	5
N	Administrative and support service activities	16	16	16	15	16	13	15	:	17	16	:	16	13	9	15	16	14	14	16	16	16	16	15	17	16	16	16	15
P	Education	6	9	10	10	7	14	6	:	6	7	:	12	2	16	10	1*	6	9	8	8	7	4	6	9	7	15	11	11
Q	Human health and social work activities	14	6	7	14	10	8	9	:	8	15	:	7	8	7	6	8	13	8	12	13	13	11	7	8	12	14	6	12
R	Arts, entertainment and recreation	15	15	14	16	15	16	12	:	13	8	:	1	1*	15	16	c	8	3	14	12	14	8	16	6	15	13	14	14
S	Other service activities	13	14	15	8	11	15	13	:	15	14	:	15	10	4	14	13	15	c	13	14	15	10	14	14	14	11	15	13

Shades of orange show the best paying industries, while shades of blue show the lowest.

: Data not available

c Confidential data

* Data may not be reliable due to small sample size

IV. What explains earnings?

- ***method:***

multiple regression of log hourly earnings – analysis of R^2
coverage: EU-28 (all MSs), NACE Rev.2 sections B to S except O,
enterprises employing at least 10 employees, apprentices
excluded

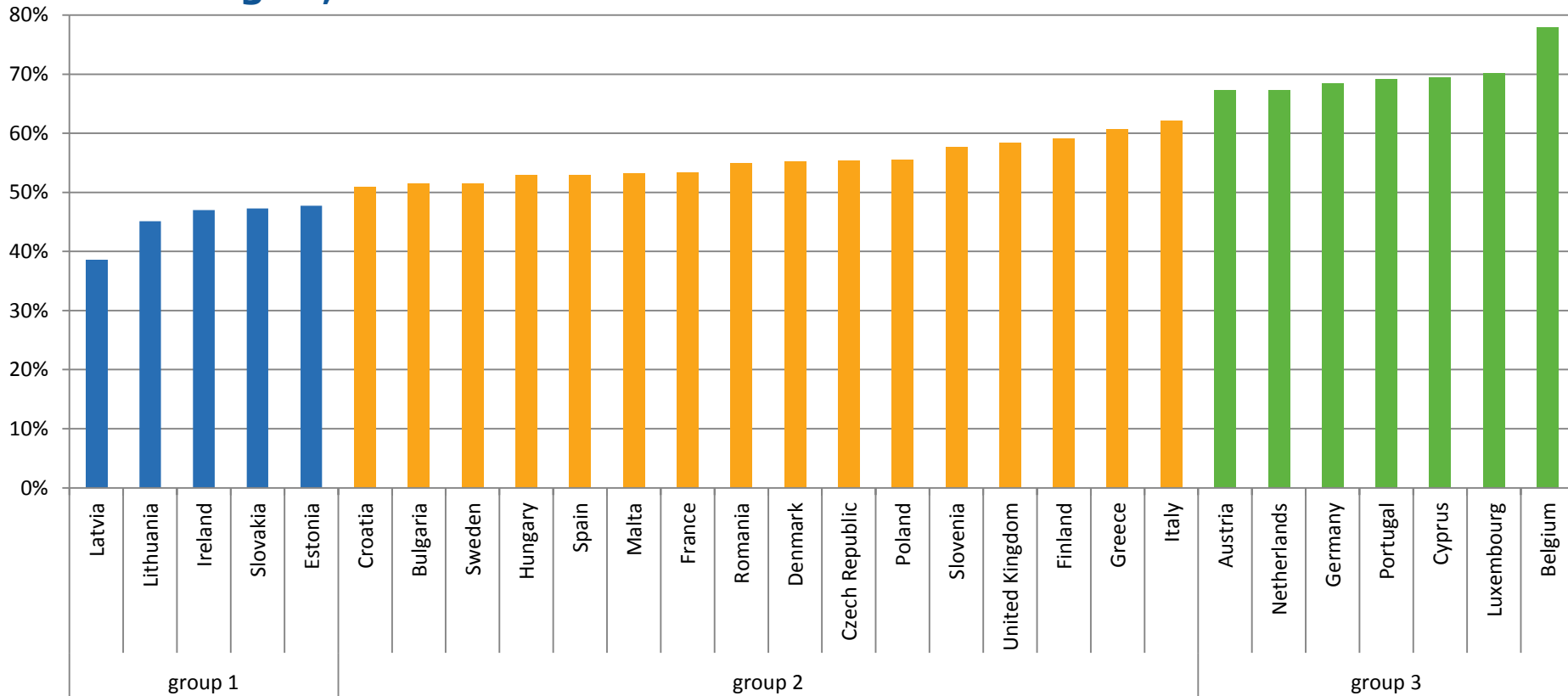
independent variables:

gender, education, occupation, working time, employment
contract, economic activity, size of an enterprise, control of an
enterprise, age, age squared and job experience

IV. What explains earnings?

- typology of EU MSs according to earnings setting frameworks (based on the calculated coefficients of determination) :
 - **Group 1: 'liberal' earnings setting - $R^2 < 45\%$** - 'general' characteristics of employees (e.g. education, occupation etc.) have highest influence in earnings settings compared to e.g. personal performance
 - **Group 2: 'mixed' earnings setting - $45\% > R^2 > 65\%$**
 - **Group 3: 'regulated' earnings setting - $R^2 > 65\%$** - opposite to group 1, personal performance highly impacts earnings setting framework

Typology of EU Member States according to earnings setting strategies, 2014



IV. What explains earnings?

- Impact of each of the SES variables slightly differs across identified groups of countries:
 - **Group 1:**
 - high impact:* **occupation**
 - medium impact:* employment contract (e.g. Estonia), **economic activity**, enterprise size (e.g. Slovakia)
 - notable impact:* education, working time, age
 - **Group 2:**
 - high impact:* **occupation**
 - medium impact:* education, **economic activity**
 - notable impact:* enterprise size (e.g. Malta), employment contract, gender
 - **Group 3:**
 - high impact:* **occupation**, employment contract (e.g. Belgium)
 - medium impact:* **economic activity**, enterprise size (e.g. Latvia, Austria)
 - notable impact:* education, age (e.g. Portugal), gender

V. Conclusions

- SES = very rich source of data for different analysis of wage inequalities
- Can currently available variables can be improved? – e.g. variable length of experience could be exchanged with total length of experience
- Do identified groups of countries reflect real market situations?



Thank you for your attention!