

Maternal employment



Equilytics Consulting

Data-Driven. Gender-Focused.
Policy Empowered.

Project Manager:
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Making the world a little more equal:

**How can we get more mothers into the
labour market?**

Main Interests



Country Comparison (EU): State of Integration of Mothers in the Labour Market



How Do Other Gender-Related Factors Differ? (Pay Gap, Part Time, Leave Policies)



Which Variables Have an Influence on The Maternal Employment Rate?

&

Work Process

STEP
01

Subjective: characteristics & influence factors for maternal employment

STEP
02

Research Data: OECD Family Database & Eurostat

STEP
03

Preparing & Cleaning the data: country comparison, from ~ 15 tables

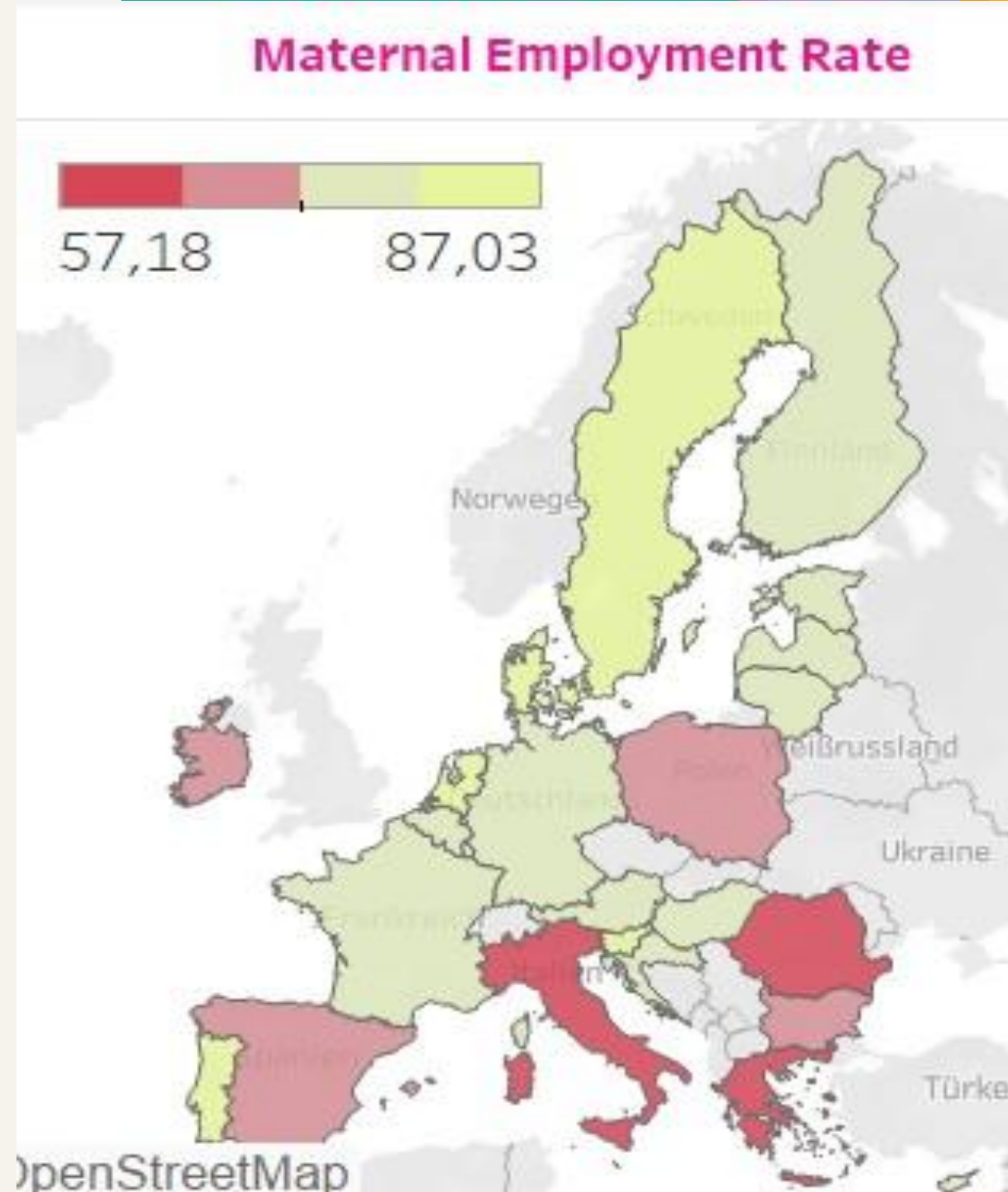
STEP
04

Uni- & bi- & multivariate EDA & hypothesis testing

STEP
05

OLS Regression with selected features on maternal employment

Europe: Painting a Picture



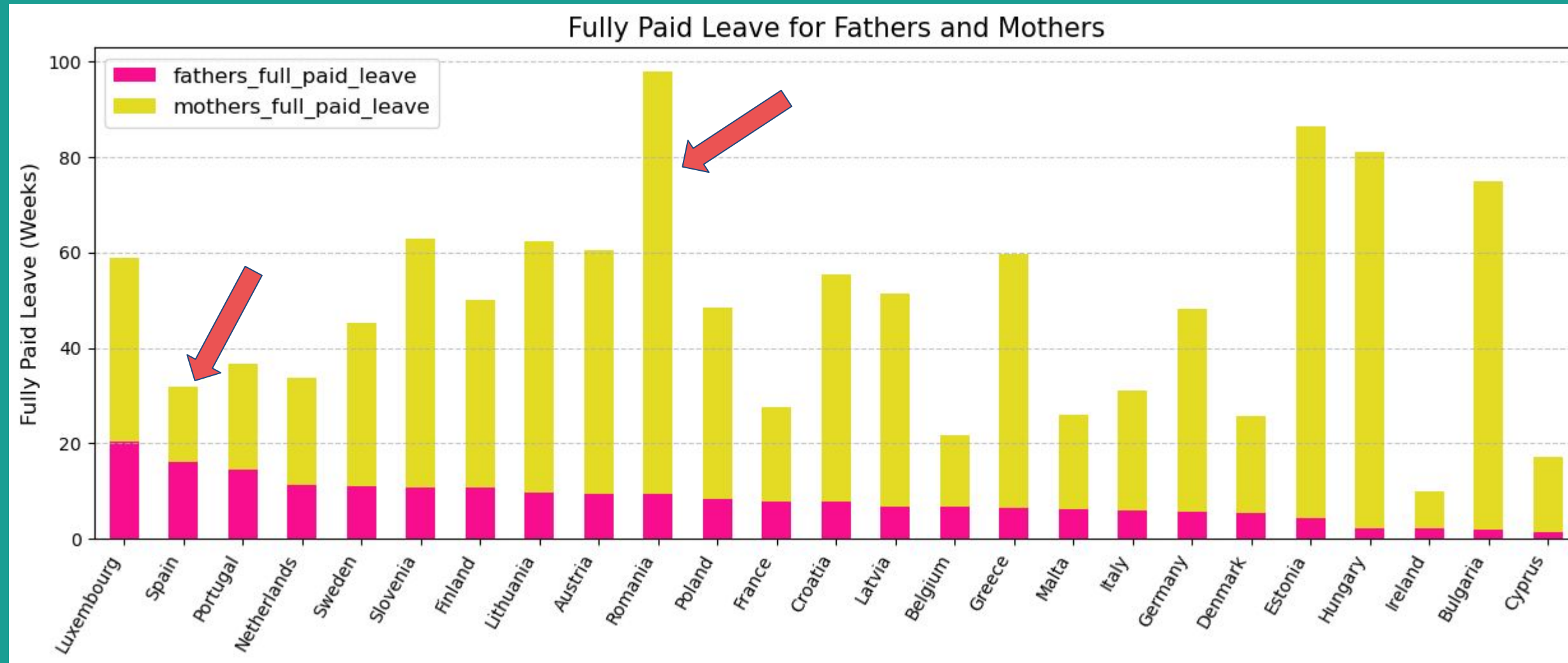
★ ★ ★

★ Different Europe – but are there tendencies? ★

★ Let's take a look! ★

★ ★ ★

Europe: Painting a Picture



Key Assumptions

Countries with **higher public spending** on family benefits have a **higher maternal employment rate**.

EDA



Countries with a **higher proportion of female managers** have higher maternal employment rates.

EDA



Partnered mothers have a higher employment rate than **single mothers**. This difference is smaller in countries with higher spending on family benefits.

EDA



Inferential



In countries where **more men work part-time**, maternal employment rates are higher.

EDA



Inferential



In countries with a **lower gender pay gap**, maternal employment rates are higher.

EDA



Hurdles Overcome

Overfitting

Multicollinearity

Non-linearity

Scale Discrepancy

So, what does have an impact on maternal employment?

After testing **interest-driven predictors** (leave policies, spending on family benefits, gender pay gap etc.) as well as **control variables** (i.e. GDP, unemployment):

Predictor	Unit	Effect on Mat. Emp.	In std
Fully Paid Leave for Fathers	⬆ by 1 week	⬆ by 0.8 %	+ 3.5
Education Level Women	⬆ by 1 point	⬆ by 14.3 %	+ 3.4
Unemployment	⬆ by 1 %	⬇ by 1.2 %	- 2.6

A Brief Classification

Education Level of Women

**One point
is A LOT!**

	edu_women_score	rate_women_low_edu	rate_women_med_edu	rate_women_high_edu
country				
Lithuania	1.00	8.80	43.90	47.30
Latvia	0.86	11.60	46.50	41.90
Estonia	0.83	13.50	40.30	46.20
Ireland	0.75	16.50	35.00	48.50
Poland	0.74	12.50	53.80	33.70
Slovenia	0.74	15.10	44.50	40.40
Finland	0.72	16.30	42.20	41.50
Sweden	0.70	18.30	34.90	46.90
Cyprus	0.69	18.50	35.40	46.10
Slovakia	0.65	13.90	56.00	29.60
Belgium	0.59	19.90	31.00	43.20
Czechia	0.59	17.00	37.00	25.10
France	0.55	20.00	38.00	38.50
Luxembourg	0.55	24.30	29.40	46.30
Denmark	0.53	23.70	36.00	40.30
Netherlands	0.53	23.50	37.70	38.80
Bulgaria	0.52	19.80	49.40	30.80
Austria	0.50	20.90	47.70	31.40
Hungary	0.50	19.40	51.70	28.90
Croatia	0.45	18.90	55.60	25.50
Greece	0.42	24.80	44.20	31.00
Germany	0.39	22.70	51.20	26.20
Malta	0.28	32.10	37.50	30.30
Spain	0.25	37.00	24.60	38.30
Romania	0.18	23.50	58.90	17.60
Portugal	0.11	41.10	28.80	30.10
Italy	0.00	38.40	41.50	20.20

Key Policy Recommendations

1. Above all: Increase the length of leave reserved for fathers

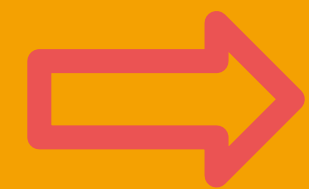


2. Close second: Strengthens women's education levels



How to Lower Maternal Age (if desired):

The longer the maternal leave



the younger women are at the birth of their first child

**Every additional week
reduces the age by ~ two
weeks.**

(R² Adjusted: 41 %, highly
significant)



Possible **Limitations**:

- ❑ Missing influencing factors?
- ❑ Small dataset (EU -2)
- ❑ Many non-linear predictors

Outlook for Further Analysis:

- ❑ Broader database
- ❑ More regression models and feature engineering
- ❑ Integrate more predictors (cultural, care system)



Thank you

PAULA BOKS WITH
IRONHACK