

Jean Monnet Project
**Regional Gender Equality
Measurement in the EU/ ReGEM**

Regional gender equality measure in comparison

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Genoa, May 27



With the support of the
Erasmus+ Programme
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JEAN MONNET PROJECT

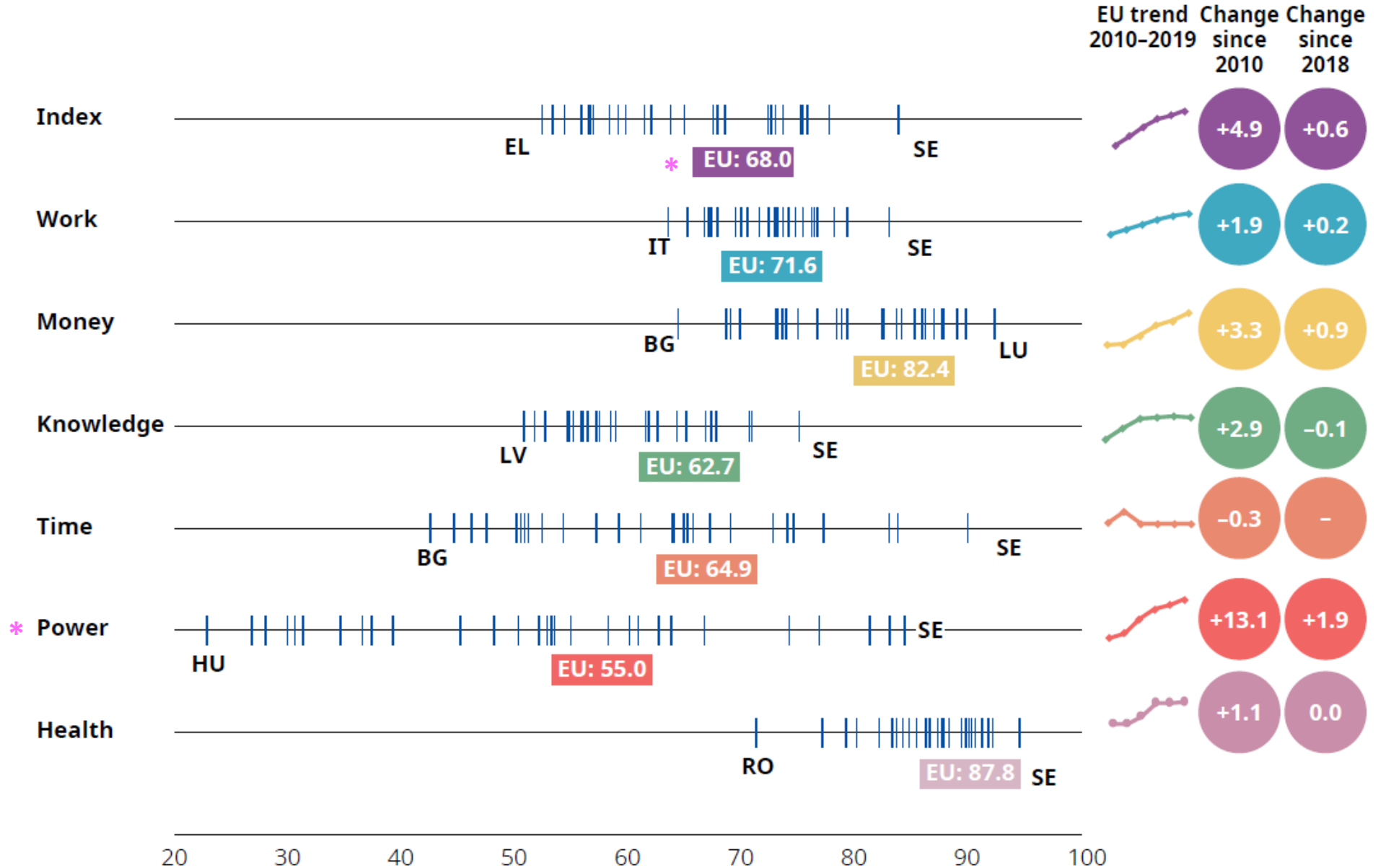
ReGEM Regional Gender Equality Measurement in the EU

Presentation:

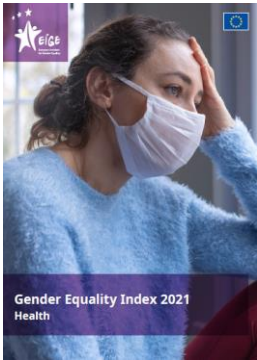
- Gender Equality Index (GEI): Main results for European countries
- RGEI: Preliminary comparison for German, France, Italy and Spain



GEI 2021



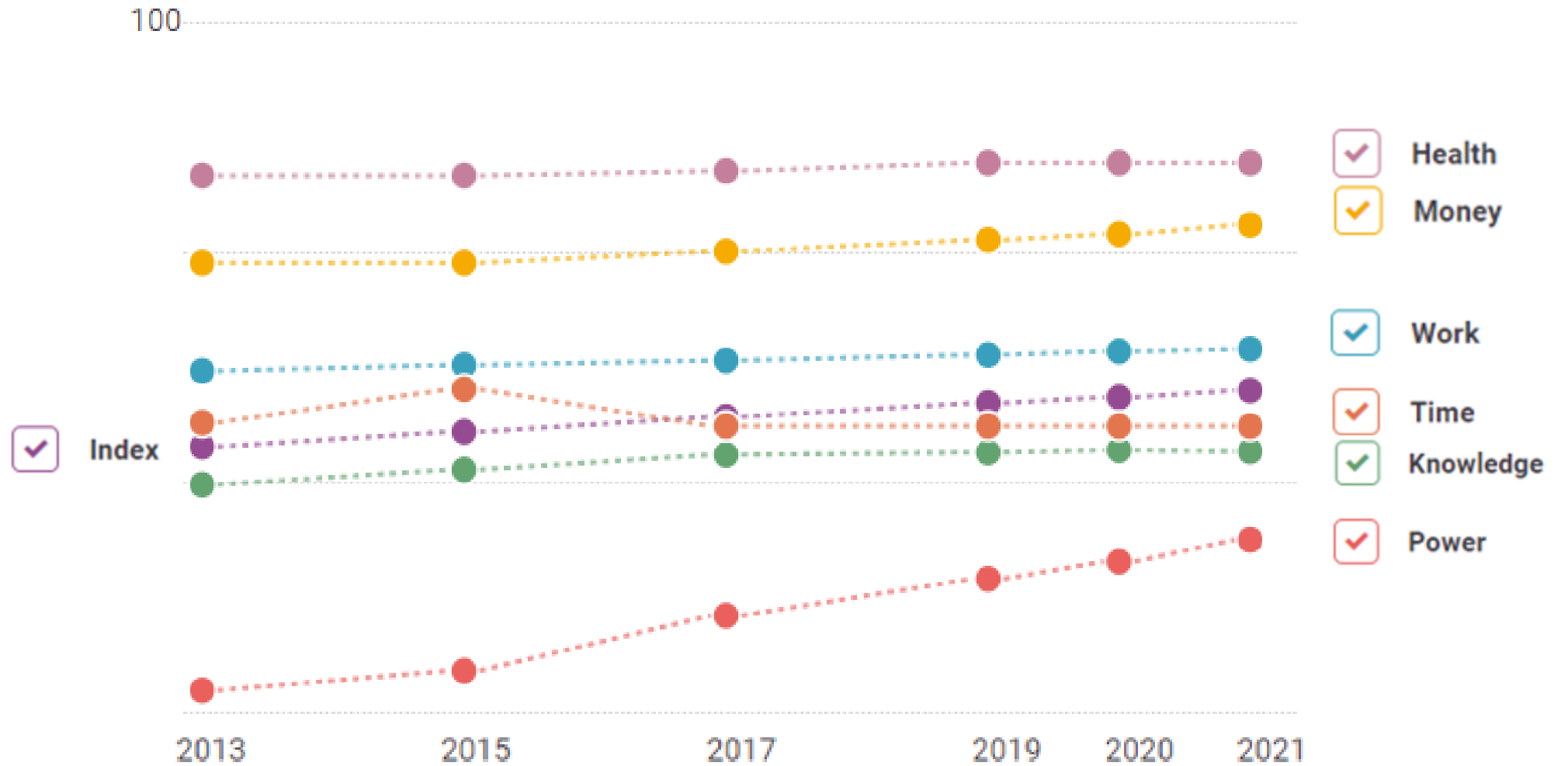
Data 2019
(pre-Covid)



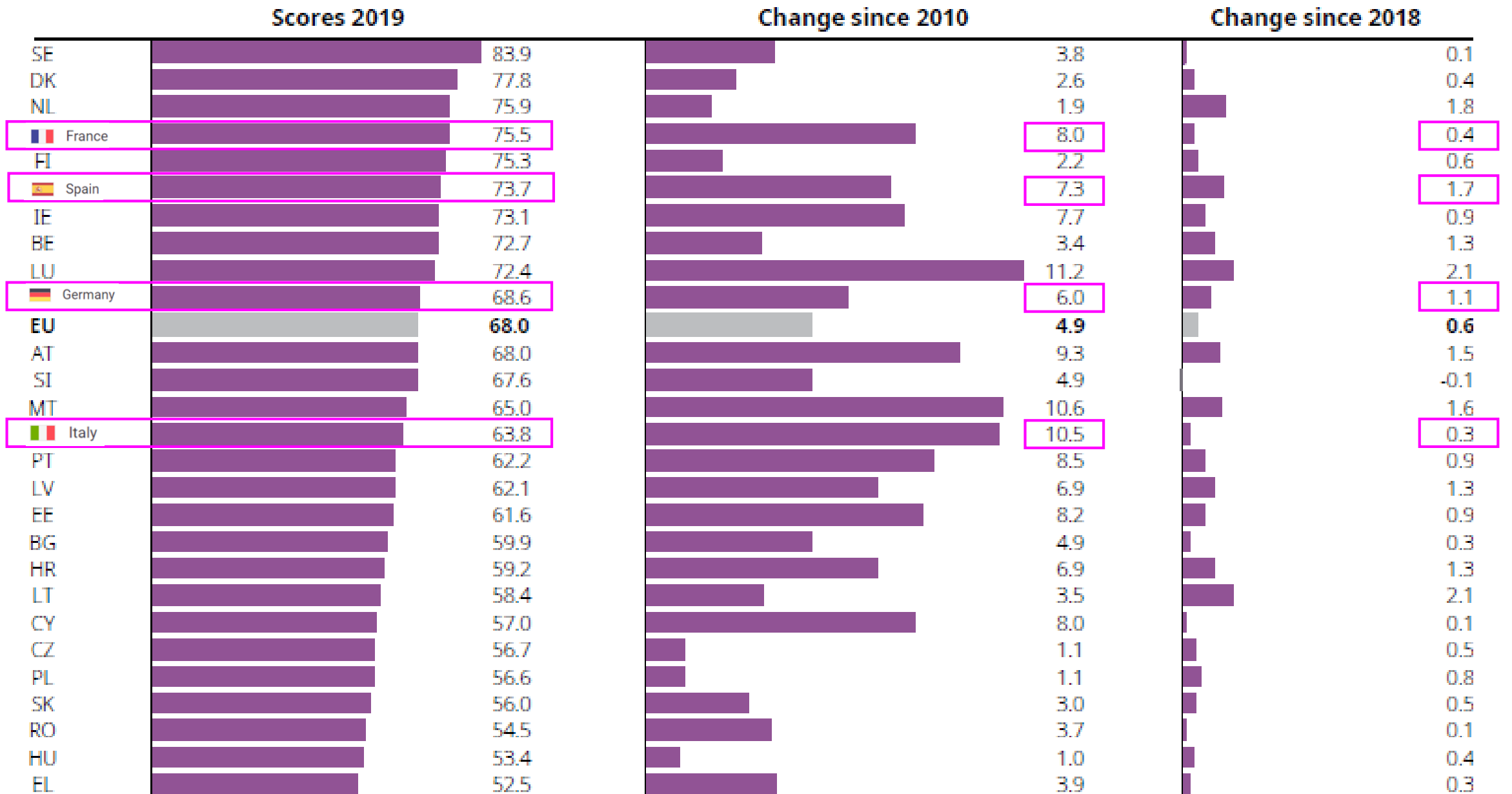
GEI 2021

Data 2019

Trends in EU



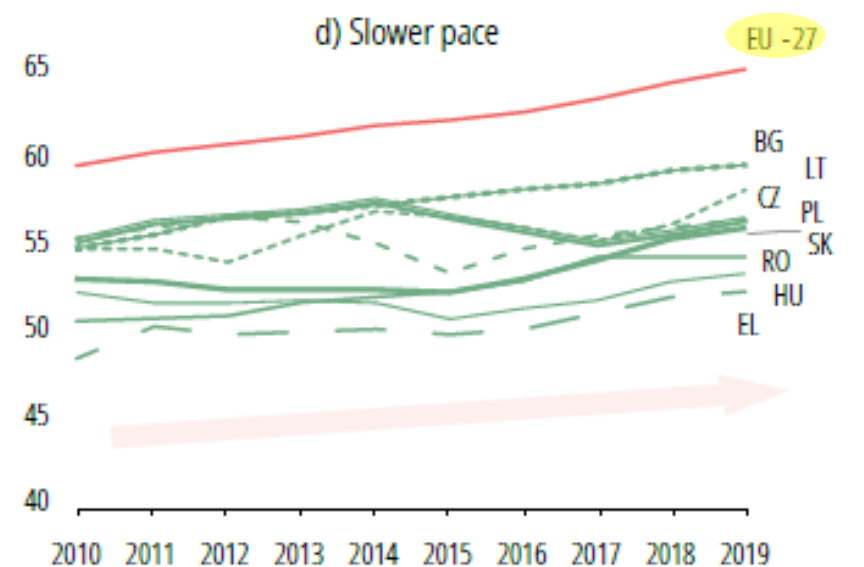
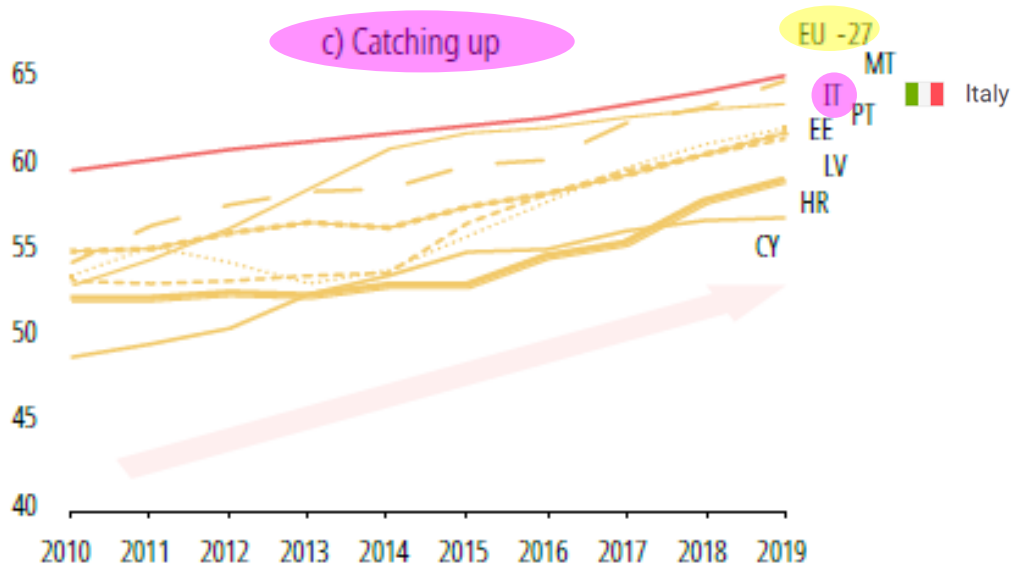
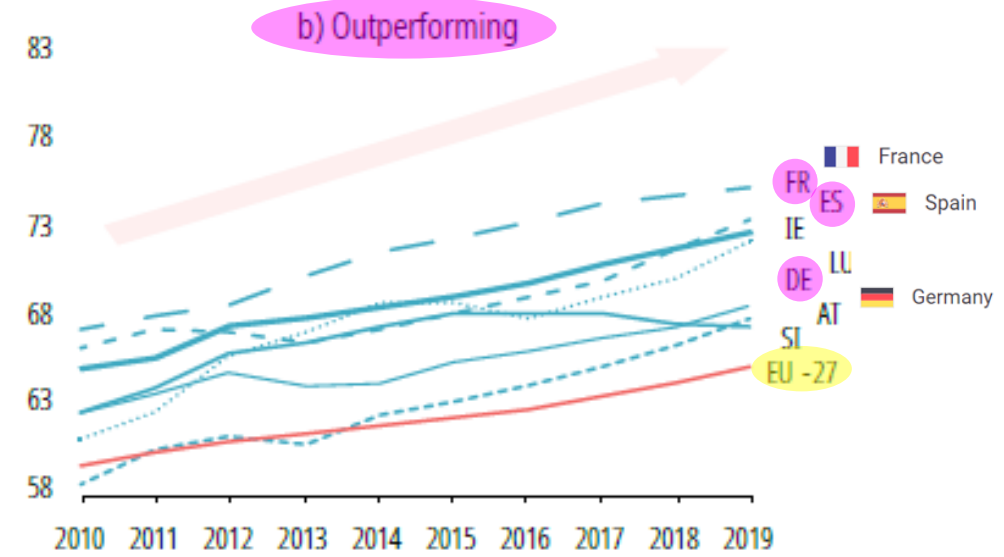
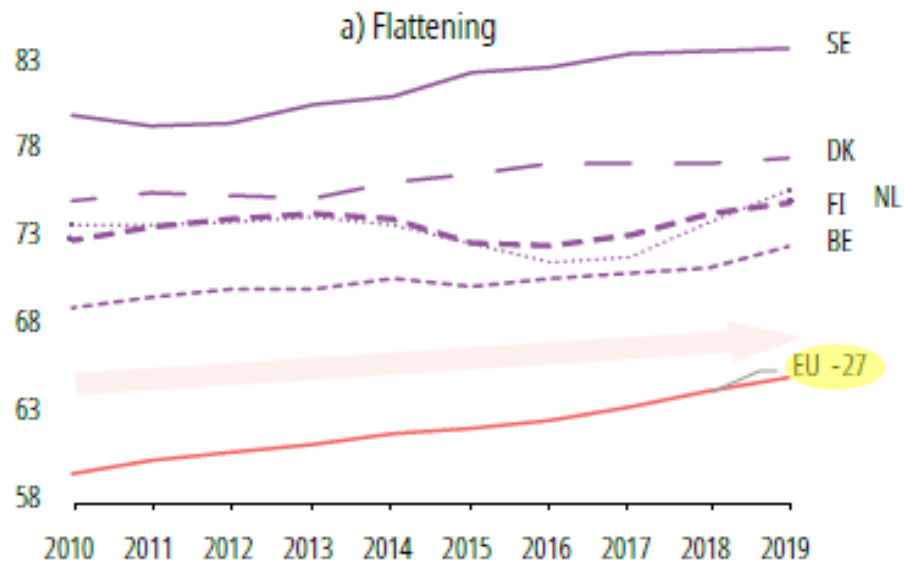
GEI 2021

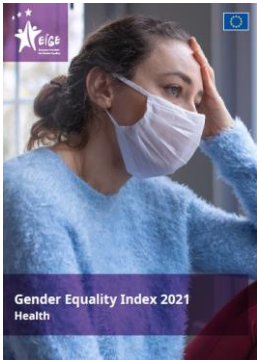




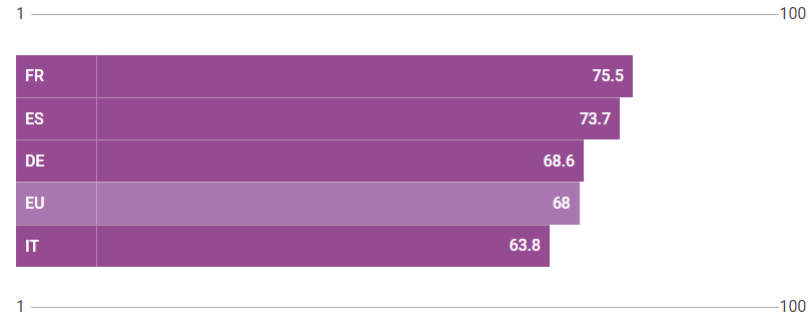
GEI 2021

Data 2019





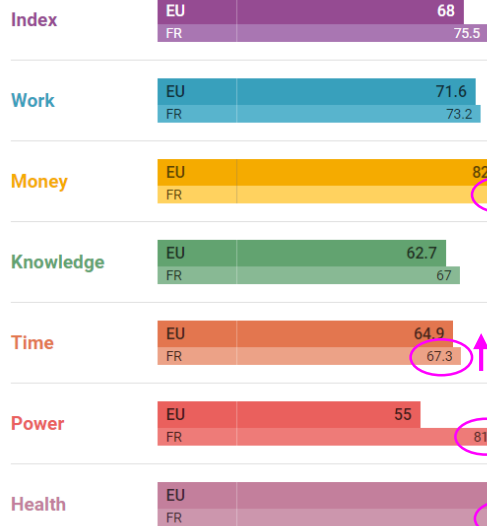
GEI 2021 Data 2019



Scores in EU

Compare to

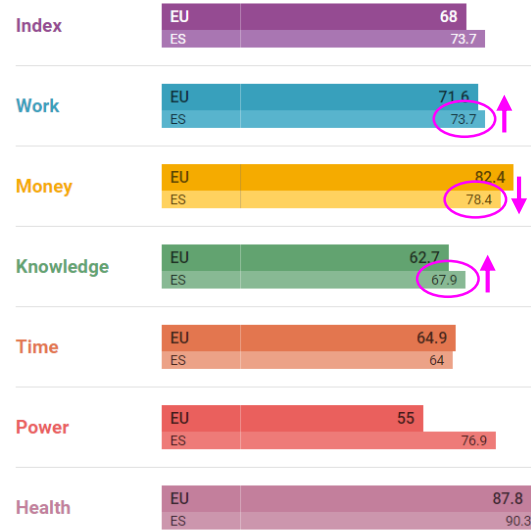
France



Scores in EU

Compare to

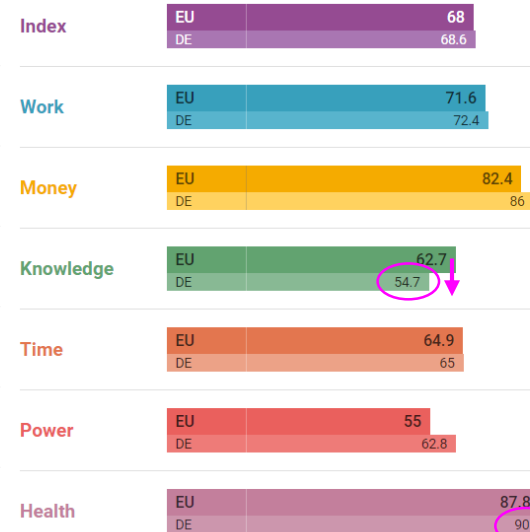
Spain



Scores in EU

Compare to

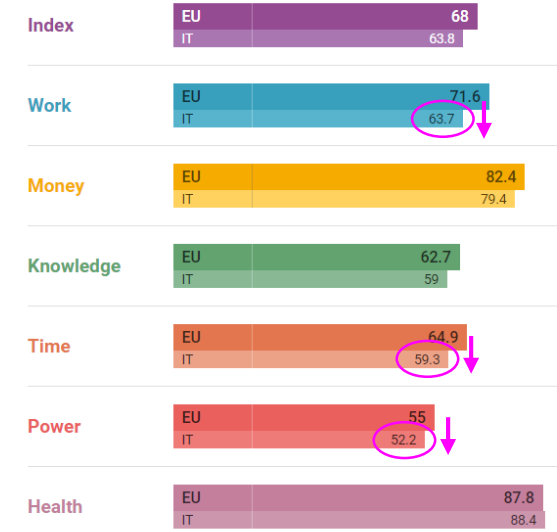
Germany



Scores in EU

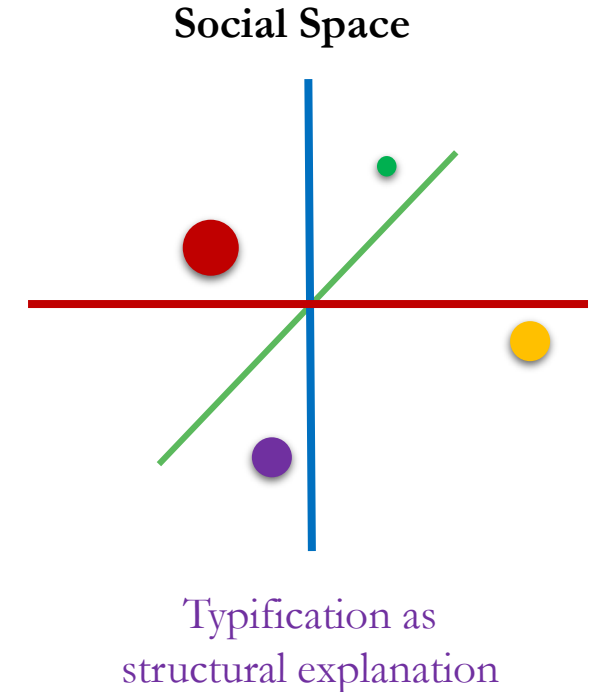
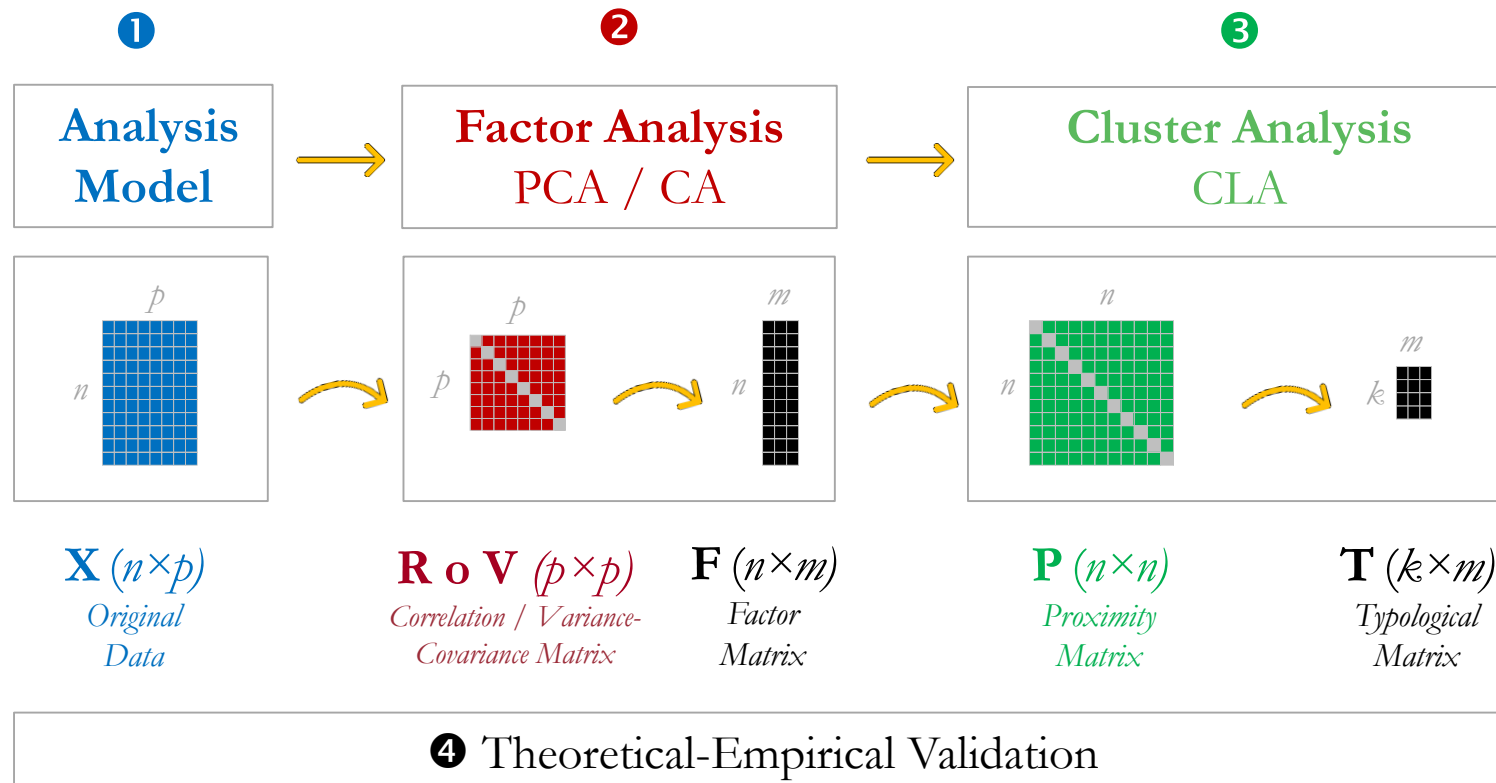
Compare to

Italy



Comparison in Europe between 2013 and 2021:

Structural and Articulated Typology



n cases, p variables, m factors and k types

Data Matrix 2013 and 2021

27 countries & 6 Domains

GEI 2013

Country	WORK	MONEY	KNOWLEDGE	TIME	POWER	HEALTH
BE	72,7	85,5	70,6	70,3	47,9	86,5
BG	67,9	60,8	50,4	43,9	45,8	75,3
CZ	64,9	73,8	55,4	53,8	31,0	85,7
DK	79,8	83,6	73,2	80,4	58,0	90,3
DE	70,0	83,2	56,3	69,8	38,3	89,3
EE	71,2	65,5	51,6	73,7	21,9	82,7
IE	73,5	85,5	65,3	70,8	37,2	90,7
EL	63,6	75,3	53,4	35,6	22,3	84,3
ES	71,8	77,1	63,5	60,8	52,6	88,6
FR	71,5	83,5	62,0	66,6	52,4	86,7
HR	67,2	68,6	49,9	49,8	28,4	81,5
IT	61,3	78,9	53,8	55,1	25,2	86,3
CY	70,5	80,7	55,5	45,9	15,4	86,4
LV	72,6	58,9	49,2	62,0	34,8	77,3
LT	72,6	60,8	54,3	52,2	32,9	80,4
LU	70,9	91,8	66,3	70,2	25,6	89,8
HU	66,0	70,8	54,5	54,1	23,5	85,4
MT	65,1	79,2	65,4	54,3	20,9	90,6
NL	76,3	86,6	66,9	85,9	56,9	90,3
AT	75,3	82,8	58,9	56,0	28,4	91,1
PL	66,3	69,5	57,8	54,2	30,6	81,6
PT	71,4	71,8	50,1	38,7	34,9	84,3
RO	67,9	59,8	47,2	50,6	30,8	69,9
SI	71,9	80,3	55,0	68,3	41,1	86,8
SK	64,8	70,2	59,5	39,9	29,5	84,8
FI	74,5	84,1	58,6	80,1	69,1	89,5
SE	80,4	85,3	70,7	84,5	77,8	93,2

GEI 2021

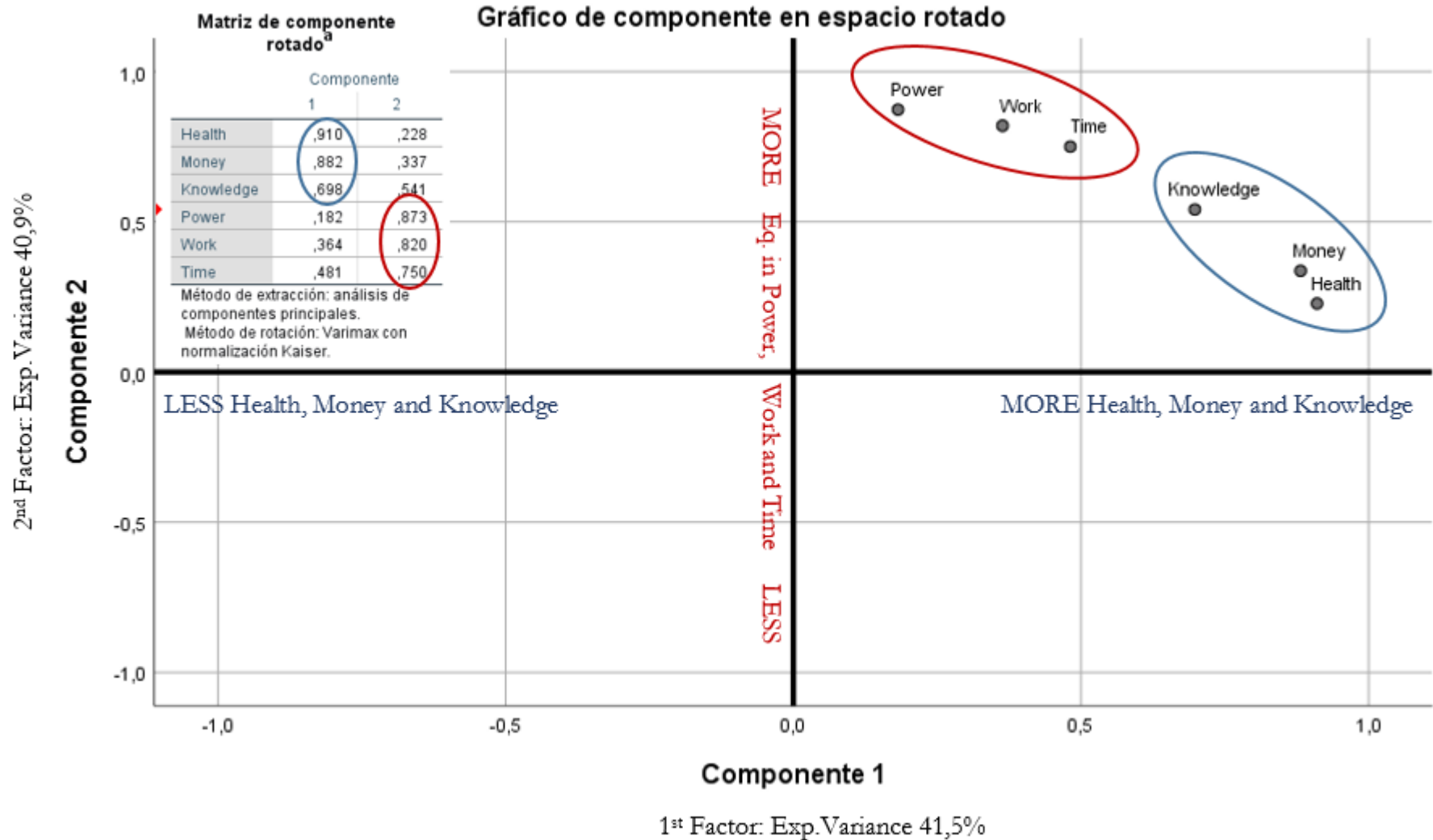
Country	WORK	MONEY	KNOWLEDGE	TIME	POWER	HEALTH
BE	74,9	89,9	70,8	65,3	61,0	86,3
BG	69,6	64,5	55,2	42,7	60,2	77,2
CZ	67,4	78,9	58,5	57,3	28,1	86,3
DK	79,4	89,1	71,0	83,1	66,8	89,5
DE	72,4	86,0	54,7	65,0	62,8	90,7
EE	72,5	73,2	57,3	74,7	36,6	82,2
IE	76,5	87,8	67,4	74,2	58,4	91,3
EL	65,3	73,7	54,9	44,7	27,0	84,3
ES	73,7	78,4	67,9	64,0	76,9	90,3
FR	73,2	86,3	67,0	67,3	81,4	87,4
HR	70,1	74,0	51,8	51,0	45,3	83,8
IT	63,7	79,4	59,0	59,3	52,2	88,4
CY	70,6	82,6	56,0	51,3	30,0	87,9
LV	74,3	68,7	50,9	65,8	50,4	79,3
LT	74,2	69,9	56,1	50,6	39,3	80,3
LU	76,3	92,4	70,8	69,1	53,4	89,9
HU	68,0	73,3	57,2	54,3	22,9	86,7
MT	76,8	84,2	65,2	64,2	37,5	92,3
NL	78,3	87,0	67,4	83,9	64,0	90,2
AT	76,8	87,7	64,3	61,2	48,2	91,9
PL	67,2	76,7	57,6	52,5	31,5	83,3
PT	73,2	73,6	56,5	47,5	53,6	84,8
RO	67,5	69,1	52,8	50,3	34,7	71,3
SI	73,0	83,7	56,6	72,9	53,0	87,8
SK	66,8	75,1	61,6	46,3	30,7	85,5
FI	75,5	87,9	61,9	77,4	74,3	89,5
SE	83,1	85,4	75,2	90,1	84,5	94,6

Comparison in Europe between 2013 and 2021 European Social Space

2021

KMO= 0,857

	Media
Work	72,56478007
Money	80,03275289
Knowledge	61,01149977
Time	62,52546067
Power	50,70350864
Health	86,45991074



Comparison in Europe between 2013 and 2021

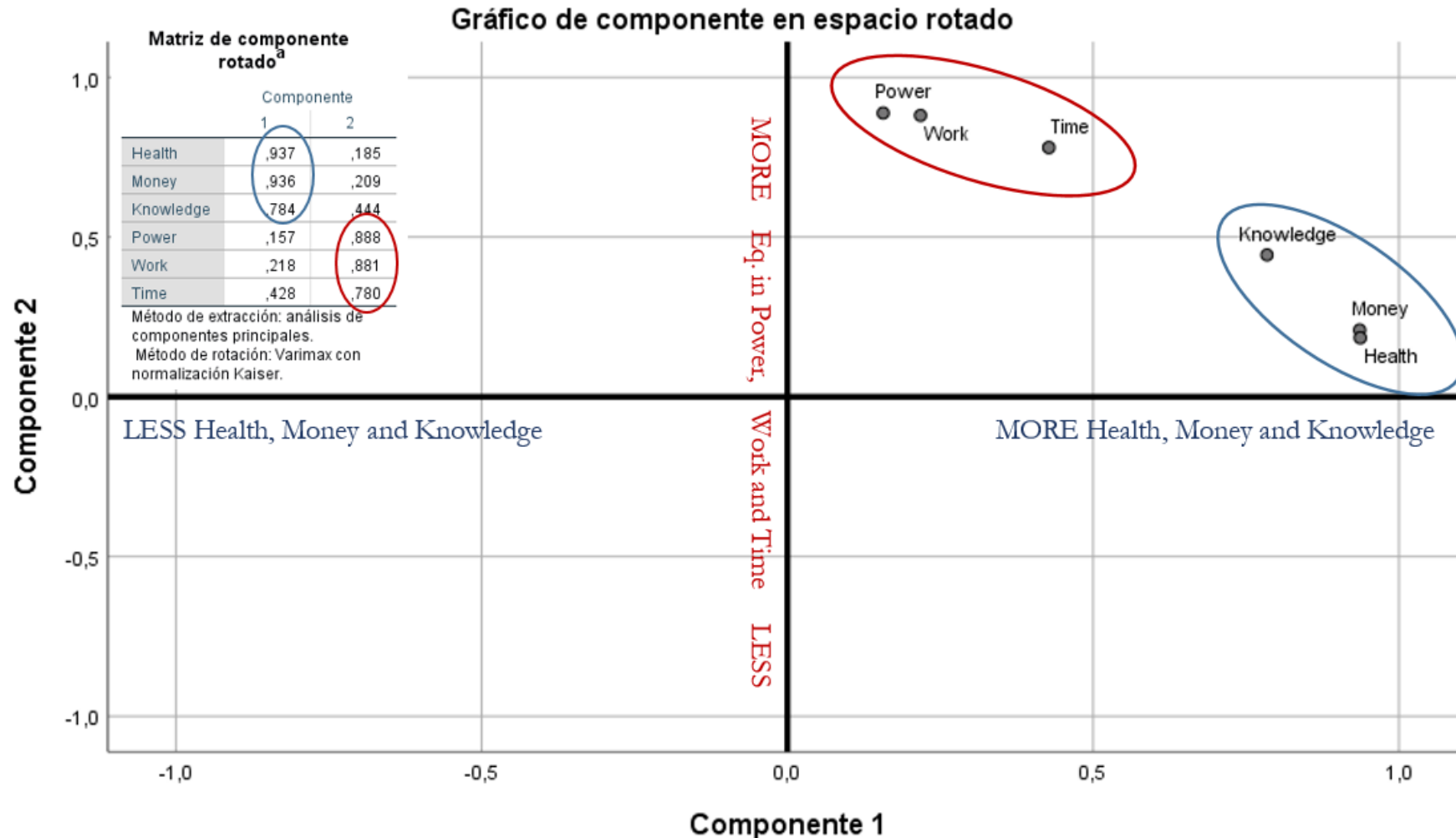
European Social Space

2013

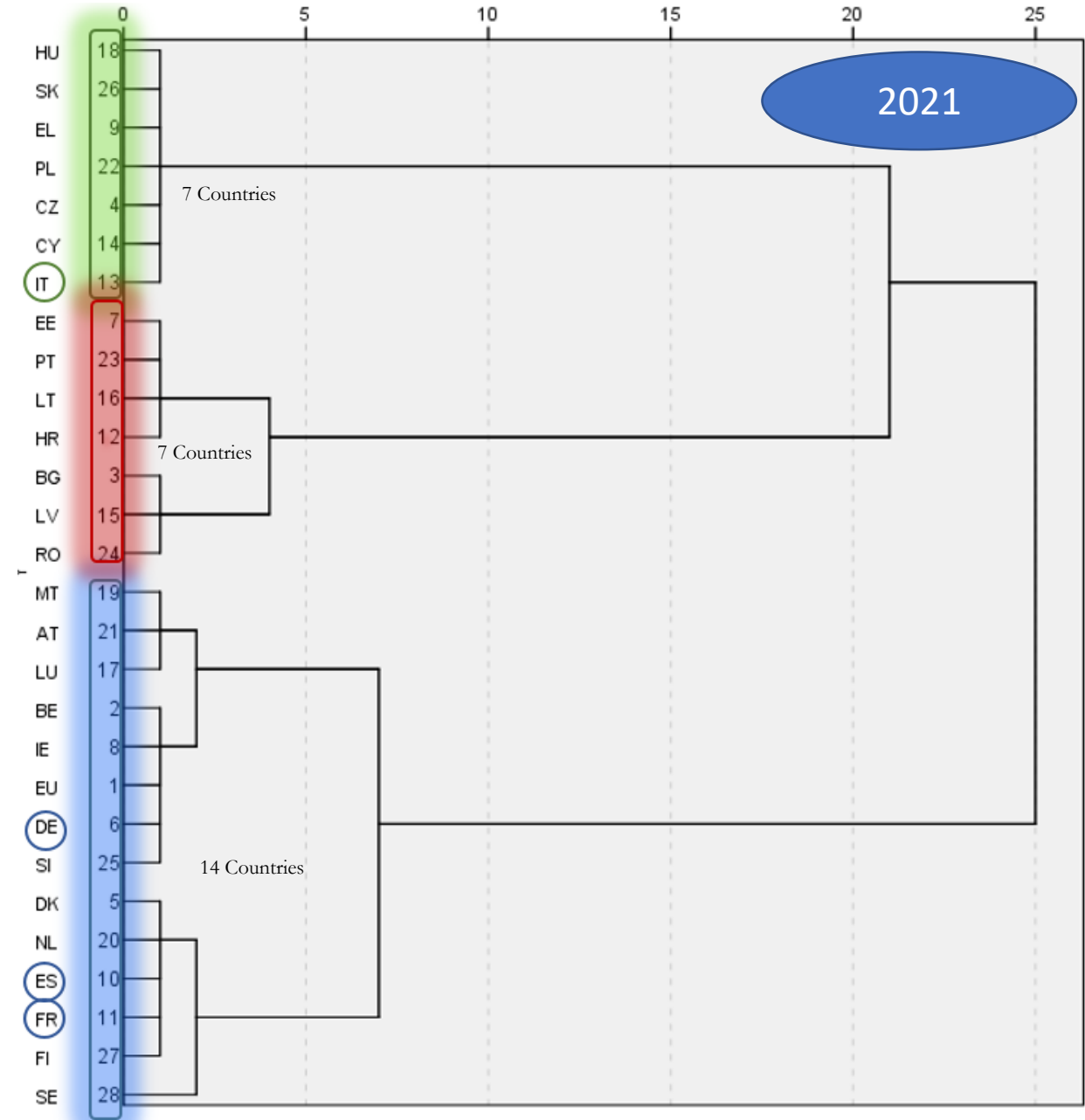
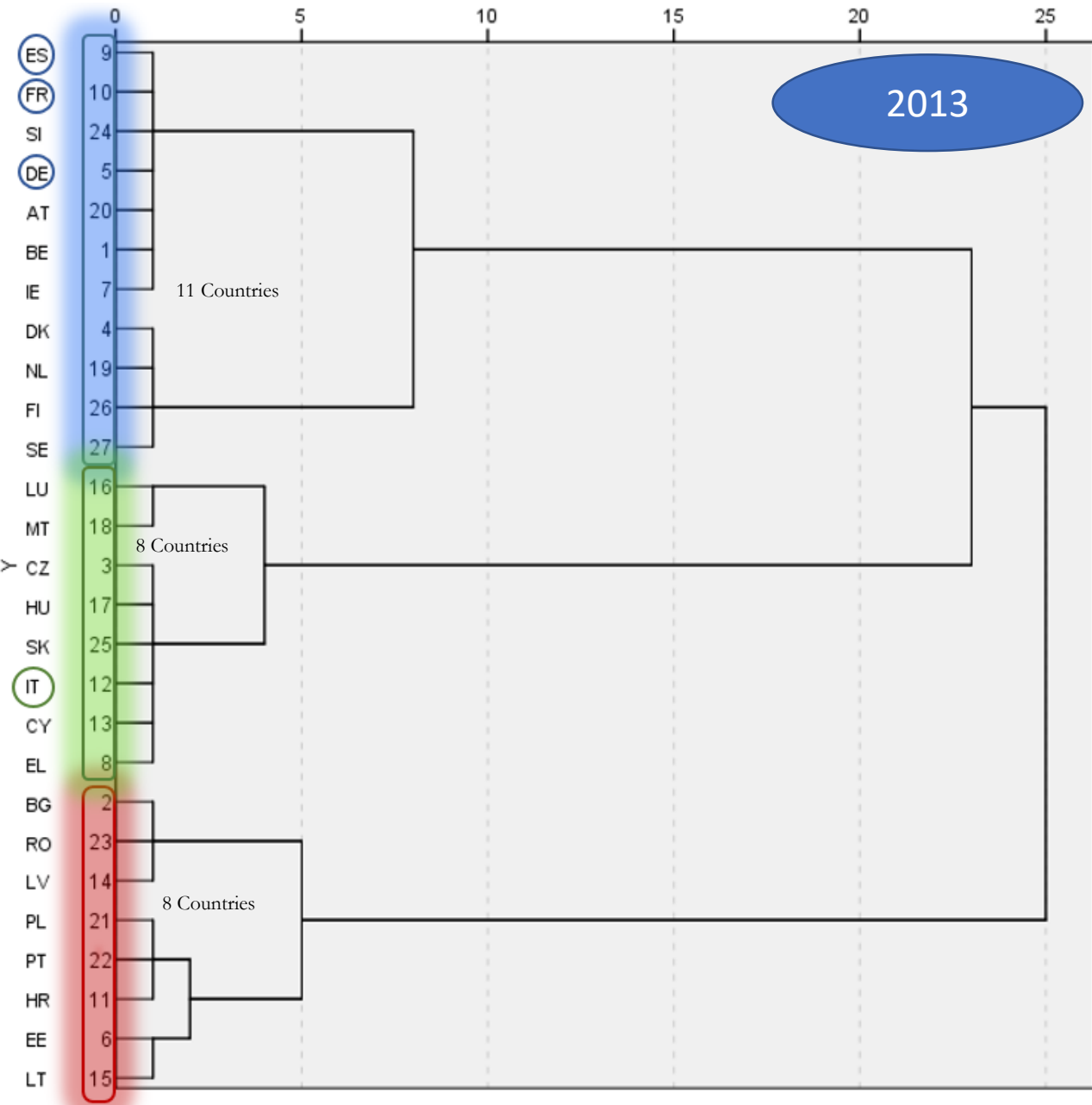
KMO= 0,818

	Media
Work	70,44015968
Money	76,08005723
Knowledge	58,34637334
Time	60,27313635
Power	37,53400791
Health	85,53173658

2nd Factor: Exp. Variance 40,8%



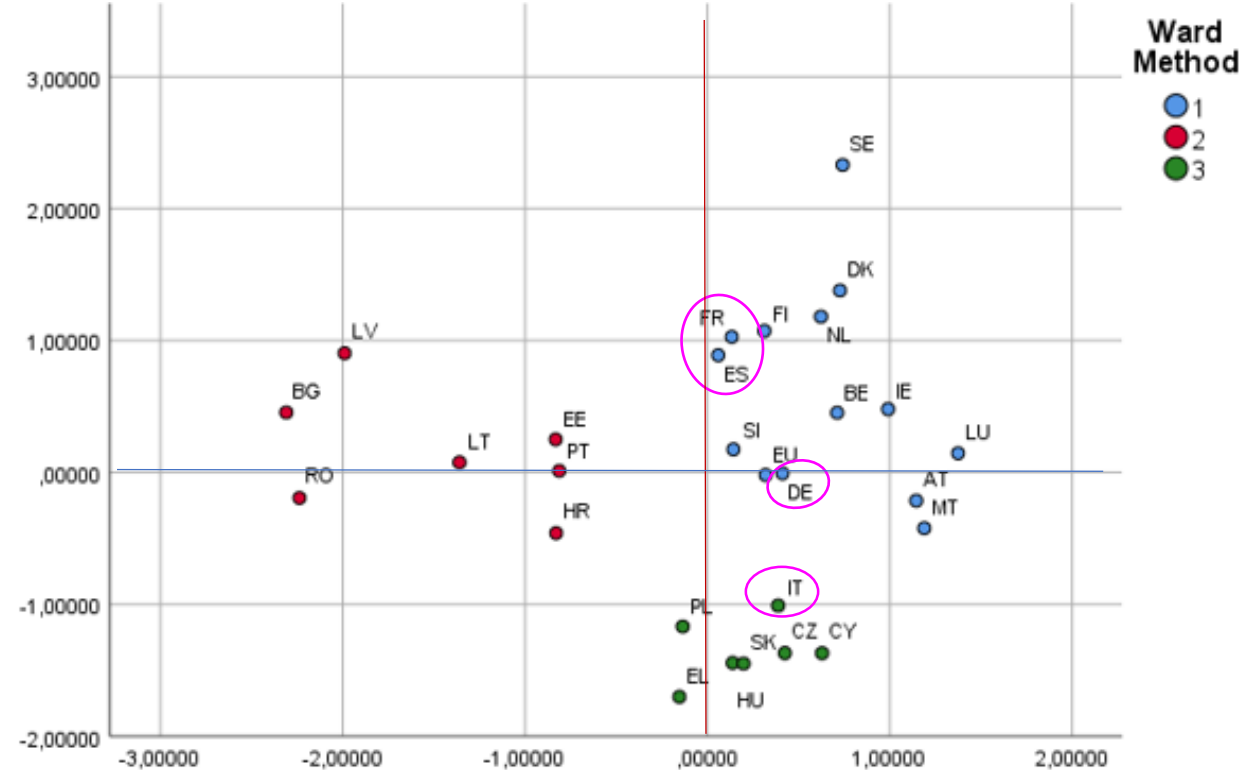
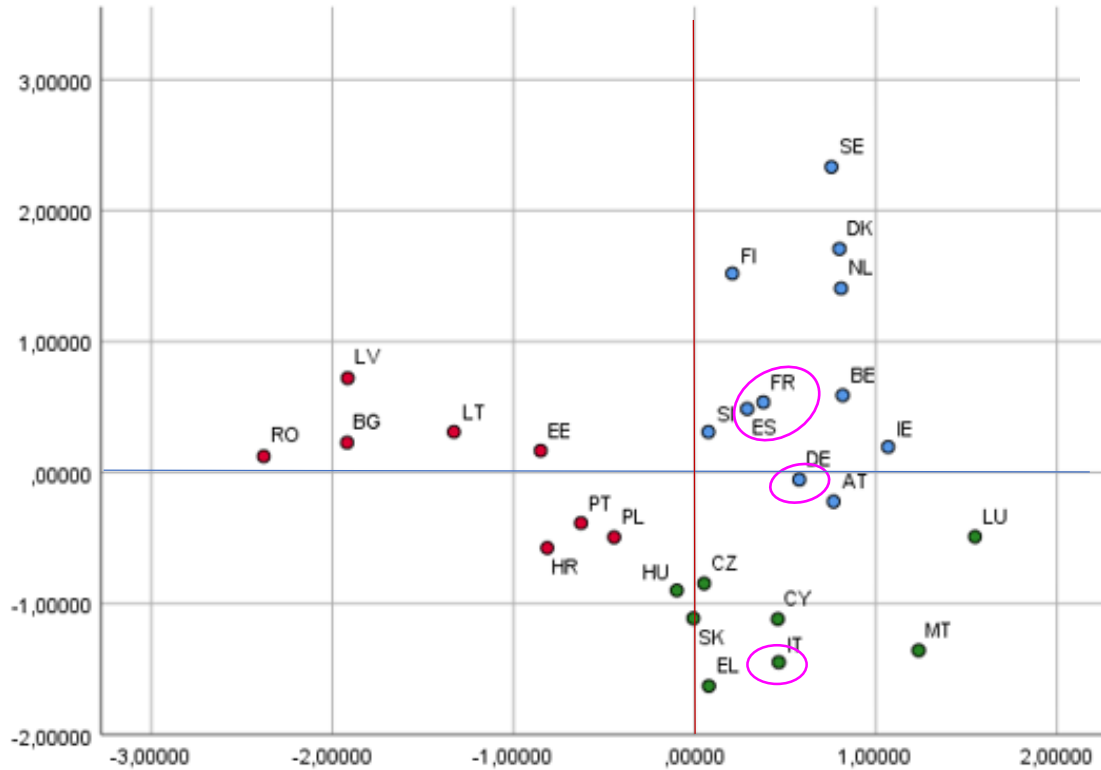
How we might group countries according to gender equality?: Cluster analysis



But, Which group is more egalitarian and which less inside European social space?

2013

2021



LESS Health, Money and Knowledge MORE

GEI	SE	DK	NL	FI	BE	FR	ES	IE	EU	SI	DE	LU	AT	CZ
	80,1	75,2	74,0	73,1	69,3	67,5	66,4	65,4	63,1	62,7	62,6	61,2	58,7	55,6
	PL	LV	BG	LT	MT	PT	EE	IT	SK	HU	HR	RO	CY	EL
55,5	55,2	55,0	54,9	54,4	53,7	53,4	53,3	53,0	52,4	52,3	50,8	49,0	48,6	

LESS Health, Money and Knowledge MORE

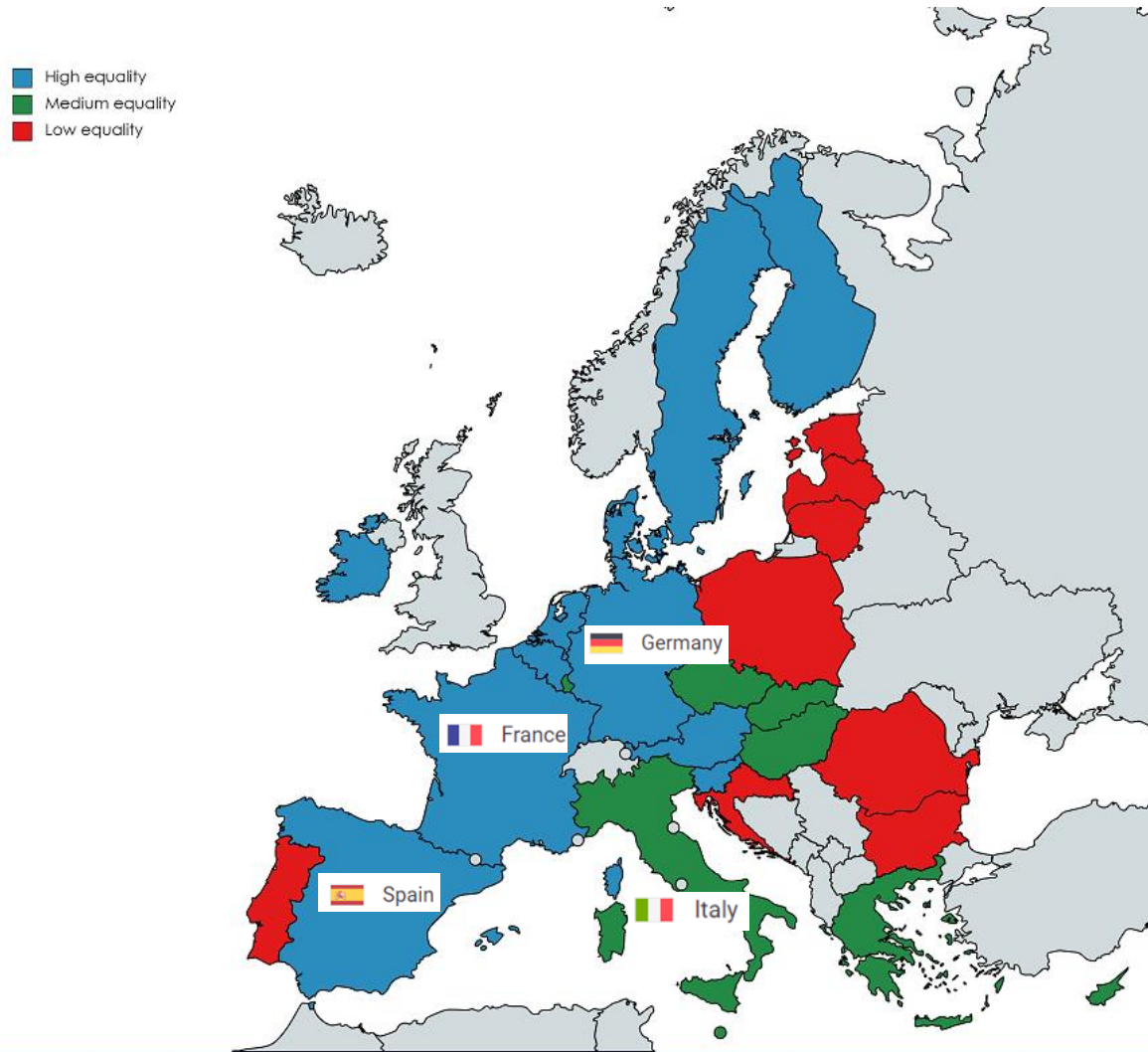
GEI	SE	DK	NL	FR	FI	ES	IE	BE	LU	DE	EU	AT	SI	MT
	83,9	77,8	75,9	75,5	75,3	73,7	73,1	72,7	72,4	68,6	68,0	68,0	67,6	65,0
	IT	PT	LV	EE	BG	HR	LT	CY	CZ	PL	SK	RO	HU	EL
63,8	62,2	62,1	61,6	59,9	59,2	58,4	57,0	56,7	56,6	56,0	54,5	53,4	52,5	

Rumanía	Bulgaria	Letonia	Lituania	Estonia	Portuga	Croacia
RO	BG	LV	LT	EE	PT	HR

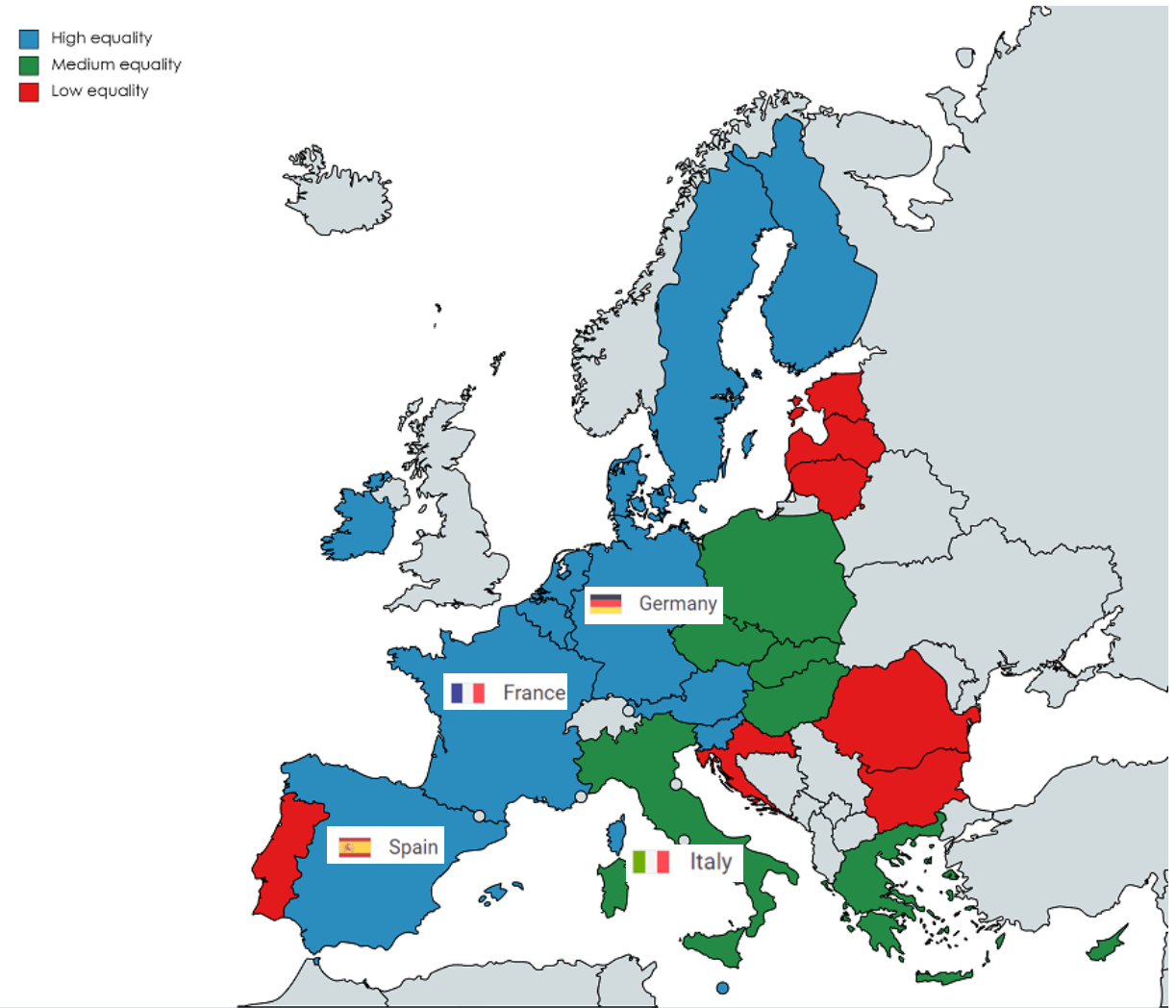
Polonia	Grecia	Eslovaquia	Hungría	Italia	Chequia	Chipre
PL	EL	SK	HU	IT	CZ	CY

Bélgica	Dinamarca	Alemania	Irlanda	España	Francia	Luxemburgo
BE	DK	DE	IE	ES	FR	LU
Malta	Países Bajos	Austria	Eslovenia	Finlandia	Suecia	
MT	NL	AT	SI	FI	SE	

2013



2021



From 2013 to 2021, Poland turns from red to green and Luxembourg and Malta from green to blue.

Results of R-GEI for

 Italy  France  Spain  Germany

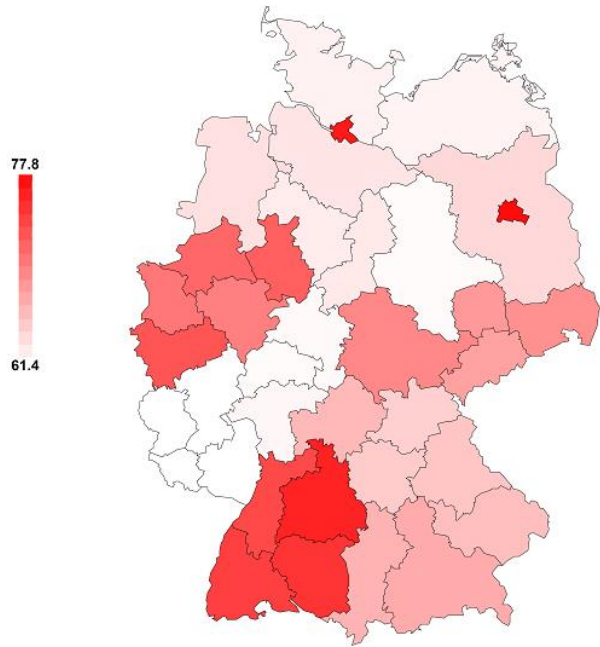
How do the results change if we look at indicators
at the regional level?

R-GEI for Germany, France, Italy and Spain 22 indicators

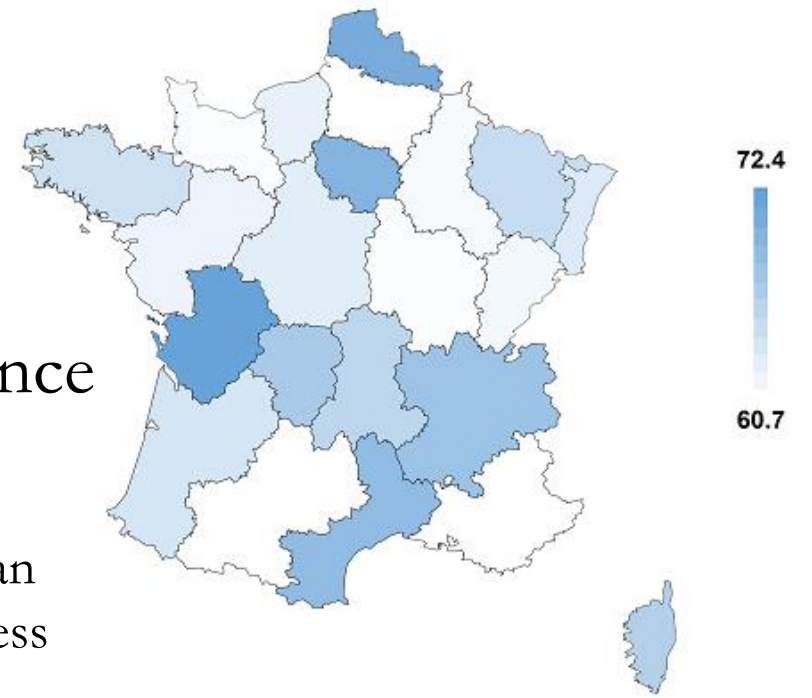
SYMBOL	DOMAIN	SUB-DOMAIN	GEI Description
W_FTE	WORK	PARTICIPATION	Full-time equivalent employment rate
	WORK	PARTICIPATION	Duration of working life
W_PQ	WORK	SEGREGATION AND QUALITY	Employed in education, human health, and social work
W_HOFF	WORK	SEGREGATION AND QUALITY	Ability to take 1 or 2 working hours off to take care of personal or family
	WORK	SEGREGATION AND QUALITY	Career Prospects Index
T_CARE	TIME	CARE ACTIVITIES	People caring for and educating their children or grandchildren, elderly, or disabled people
	TIME	CARE ACTIVITIES	People doing cooking and/or housework everyday
T_LEIS	TIME	SOCIAL ACTIVITIES	Workers doing sport, cultural or leisure activities outside their home several times a week
T_CHAR	TIME	SOCIAL ACTIVITIES	Workers involved in voluntary or charitable activities at least once a month
H_GOOD	HEALTH	STATUS	Self-perceived good or very good health
H_LE	HEALTH	STATUS	Life expectancy at birth
	HEALTH	STATUS	Healthy life expectancy at birth
	HEALTH	BEHAVIOUR	People not smoking and not involved in harmful drinking
	HEALTH	BEHAVIOUR	People doing physical activities and/or consuming fruits and vegetables
H_UNMED	HEALTH	ACCESS	Population without unmet needs for medical examination
H_UNDENT	HEALTH	ACCESS	Population without unmet needs for dental examination
M_EARN	MONEY	FINANCIAL RESOURCES	Monthly Earnings in PPS
M_INC	MONEY	FINANCIAL RESOURCES	Equivalised net income
M_NOPOOR	MONEY	ECONOMIC RESOURCES	Not-at-risk-of-poverty as 60% median income
M_IQR	MONEY	ECONOMIC RESOURCES	Income distribution as S20/S80
K_UNI	KNOWLEDGE	ATTAINMENT AND PARTICIPATION	Graduates of tertiary education
K_TRED	KNOWLEDGE	ATTAINMENT AND PARTICIPATION	People participating in formal and non-formal education and training
K_FIELD	KNOWLEDGE	SEGREGATION	Tertiary students in the fields of education, health and welfare, humanities and art
	POWER	POLITICAL	Share of Ministers
	POWER	POLITICAL	Share of members of Parliament
	POWER	POLITICAL	Share of regional assemblies
P_LARGE	POWER	ECONOMIC	Share of boards in largest quoted companies
P_FIN	POWER	ECONOMIC	Share of board members of central banks
P_RES	POWER	SOCIAL	Share of board members of research funding organizations
P_INFO	POWER	SOCIAL	Share of board members of publicly-owned broadcasting organizations
P_ART	POWER	SOCIAL	Share of board members in national Olympic sports organizations

Results of R-GEI

Germany

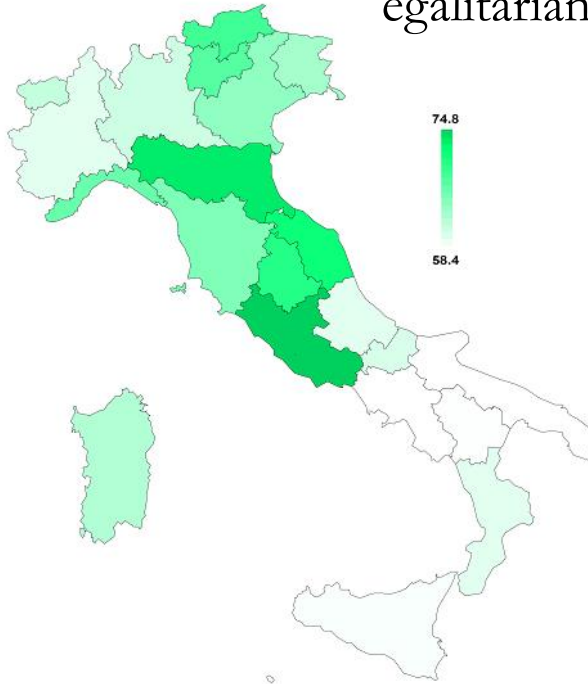


France

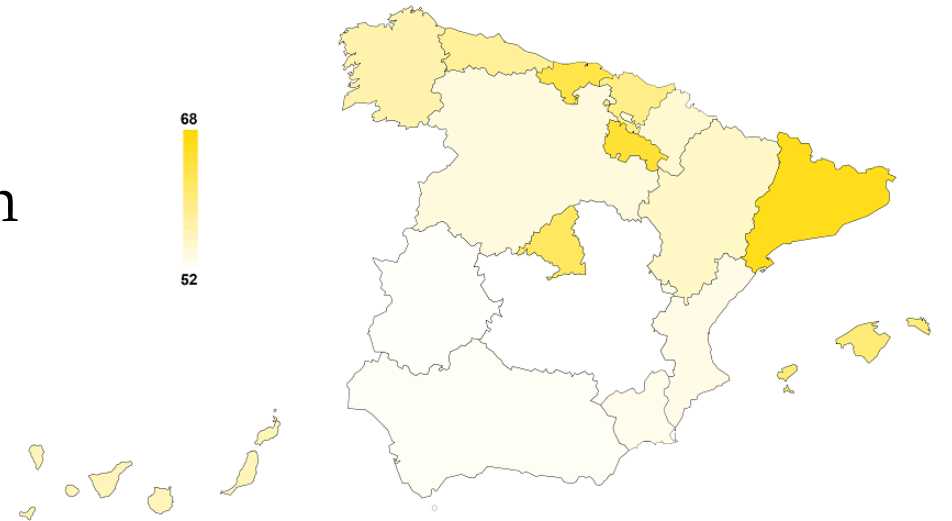


The countries are presented with a gradient color, with the most egalitarian regions (stronger colors) towards the less egalitarian ones with a lighter color.

Italy

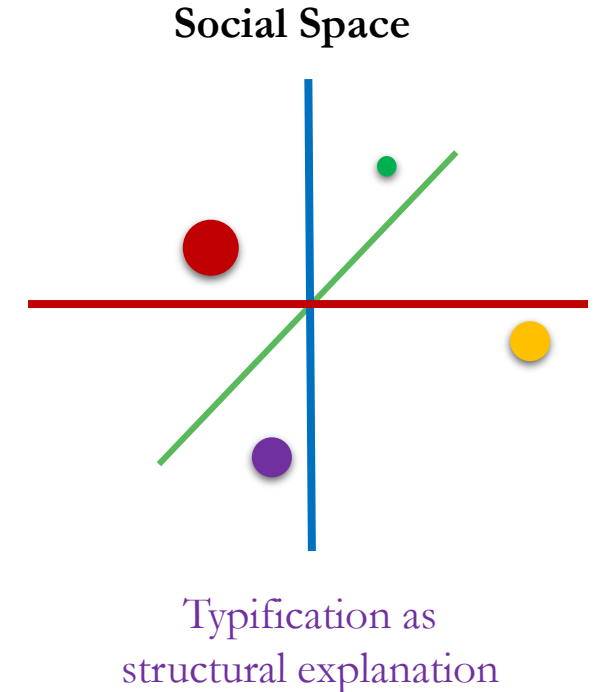
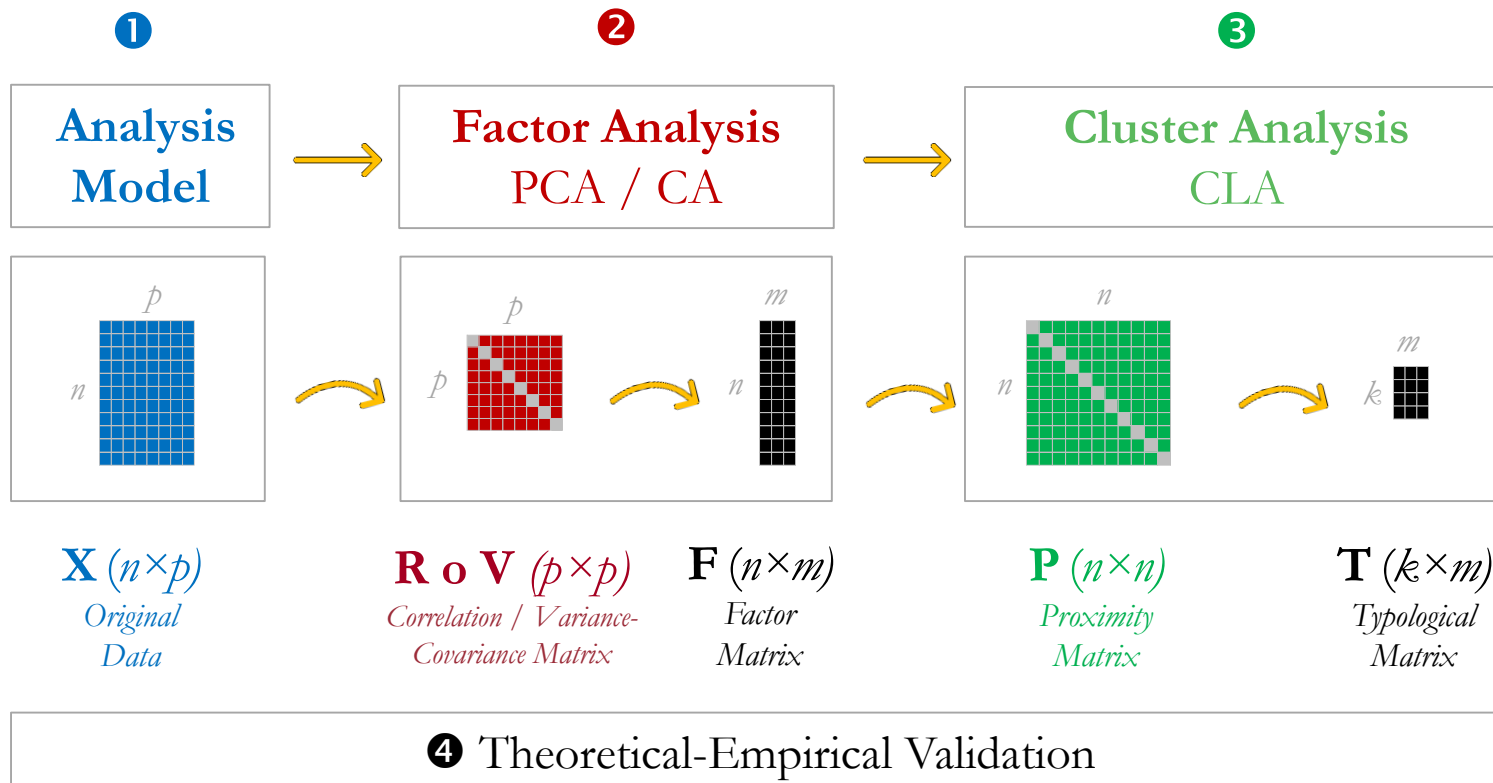


Spain



Comparison in Europe between 2013 and 2021:

Structural and Articulated Typology



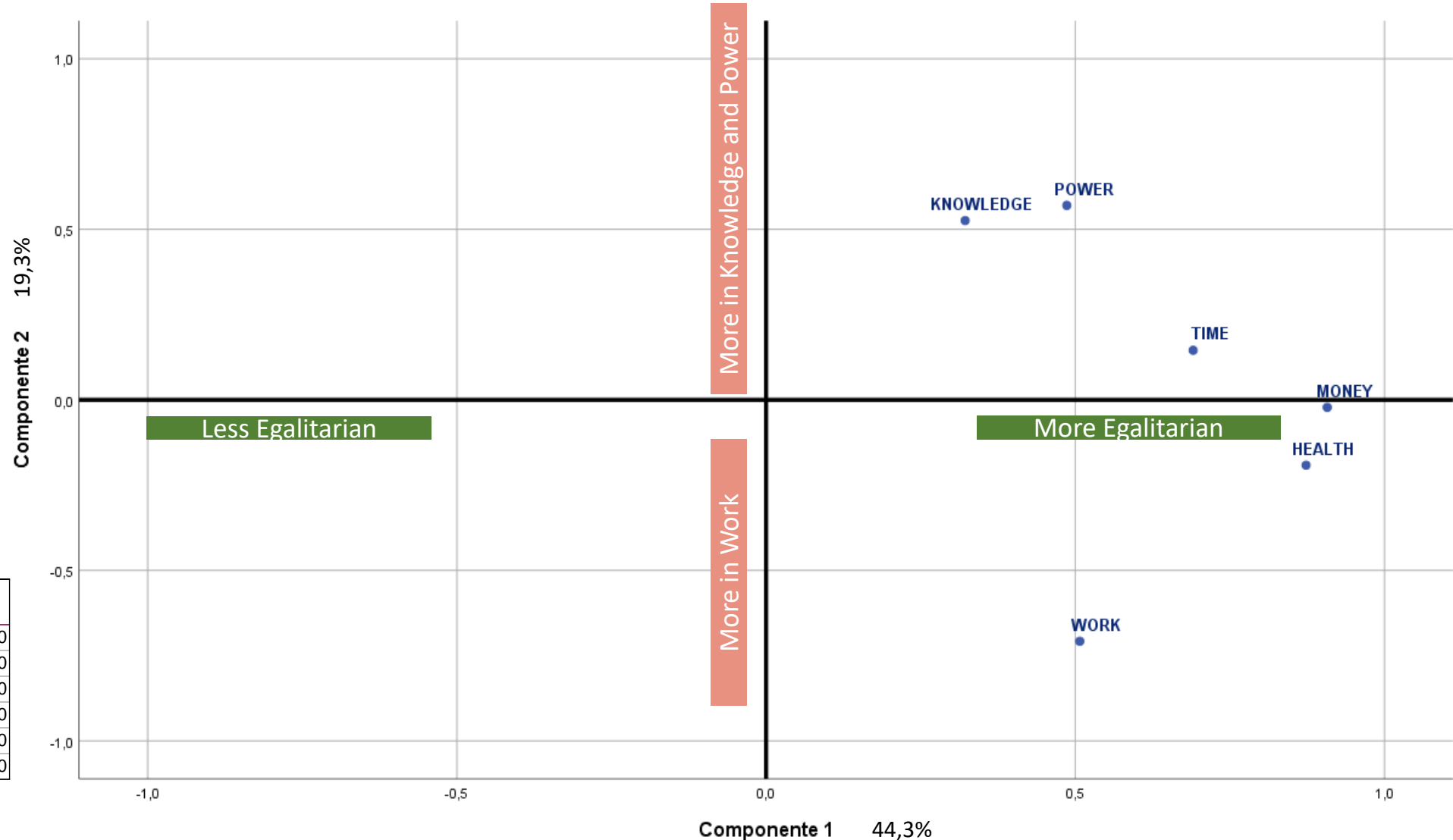
n cases, p variables, m factors and k types

Results of R-GEI for Germany, France, Italy and Spain

2021

KMO= 0,708

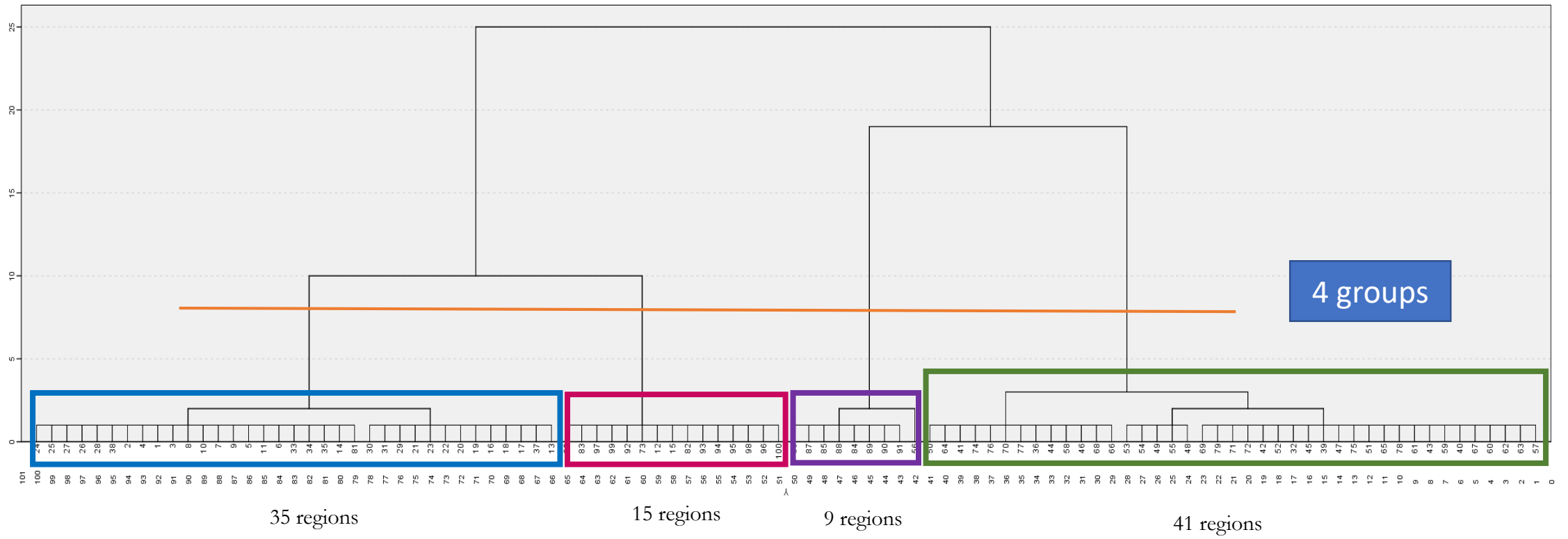
Dominios	Componente	
	1	2
MONEY	0,907	-0,022
HEALTH	0,873	-0,192
TIME	0,691	0,145
WORK	0,507	-0,708
POWER	0,486	0,570
KNOWLEDGE	0,322	0,526



Dominios	Media	Desv.	N de análisis
		Desviación	
WORK	67,29	7,16	100
TIME	88,57	4,78	100
HEALTH	92,61	4,16	100
MONEY	88,34	5,67	100
KNOWLEDGE	57,35	6,68	100
POWER	49,77	10,02	100

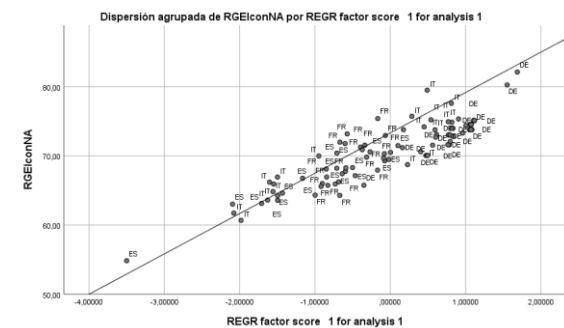
How we might group of regions according to gender equality?: Cluster analysis

2021



But, Which group is more egalitarian and which less inside Regional social space?

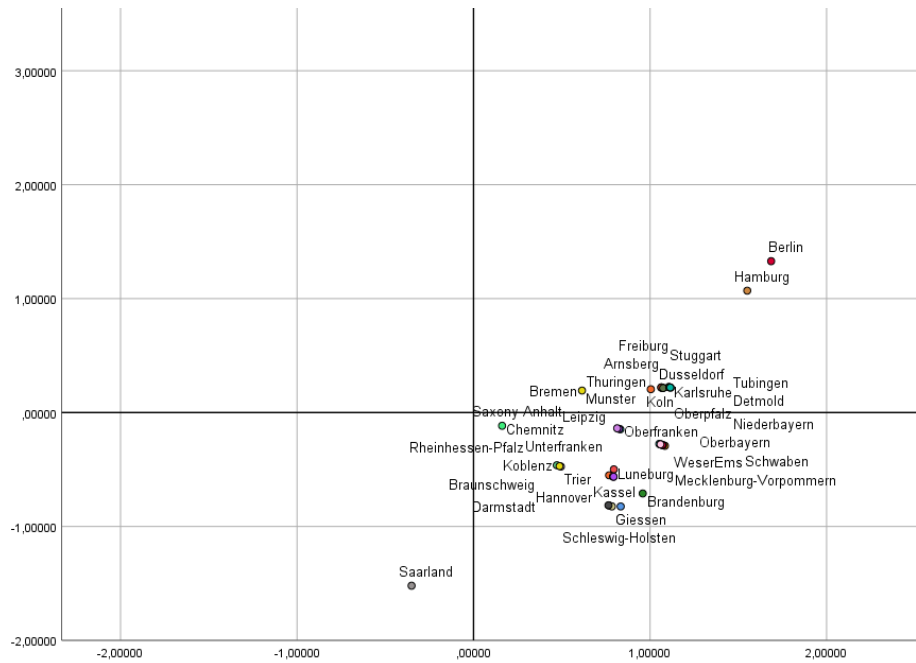
MORE Egalitarian in
Knowledge and Power



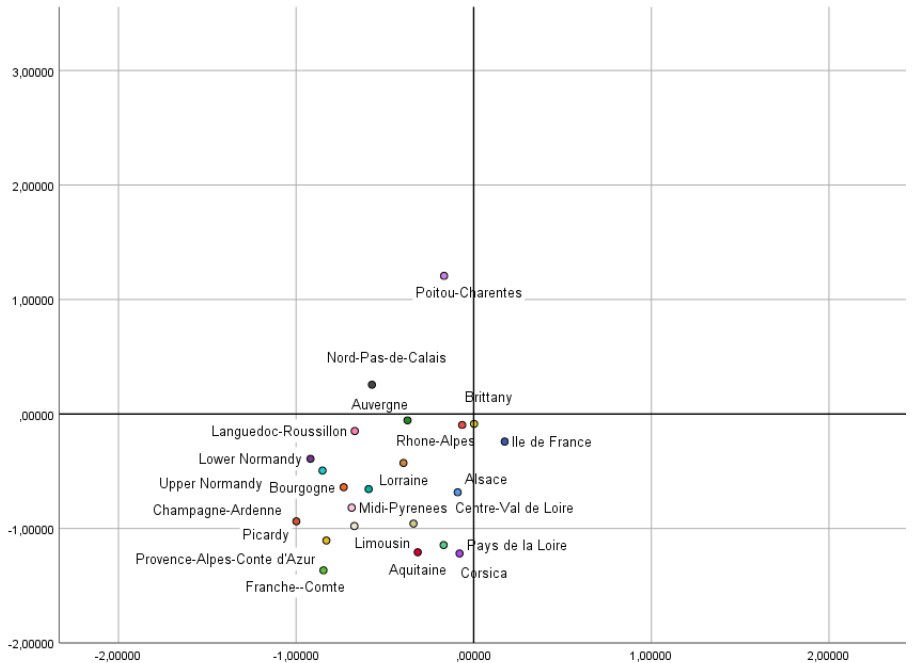
MORE
Egalitarian in
Work

Contrast with RGEI

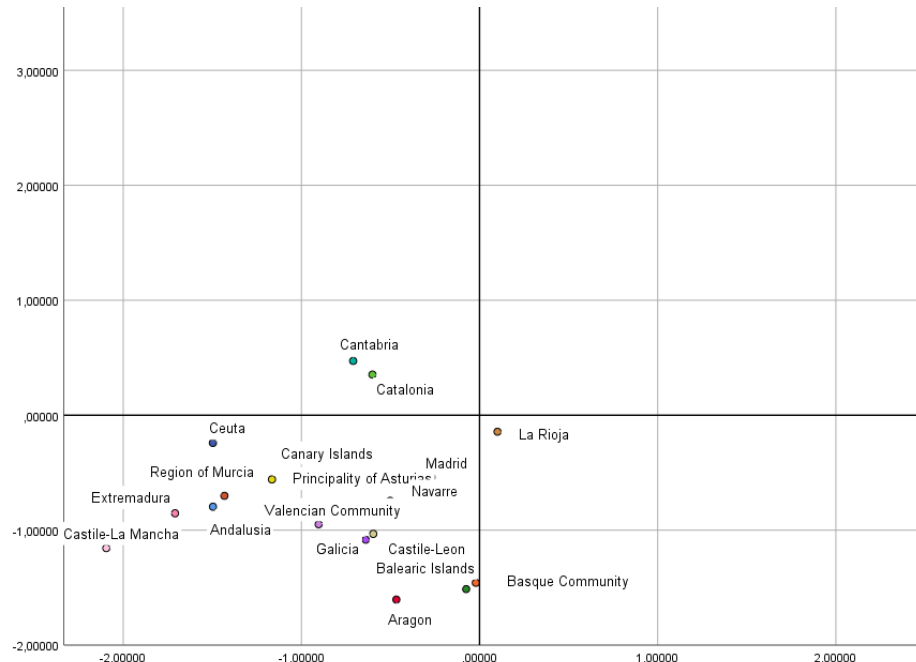
Germany



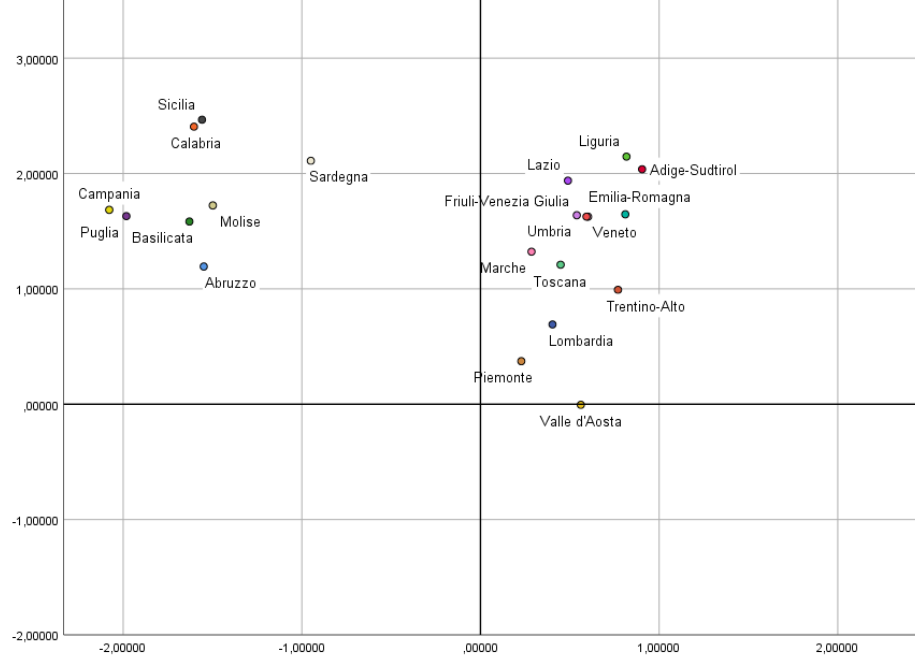
France



Spain



Italy



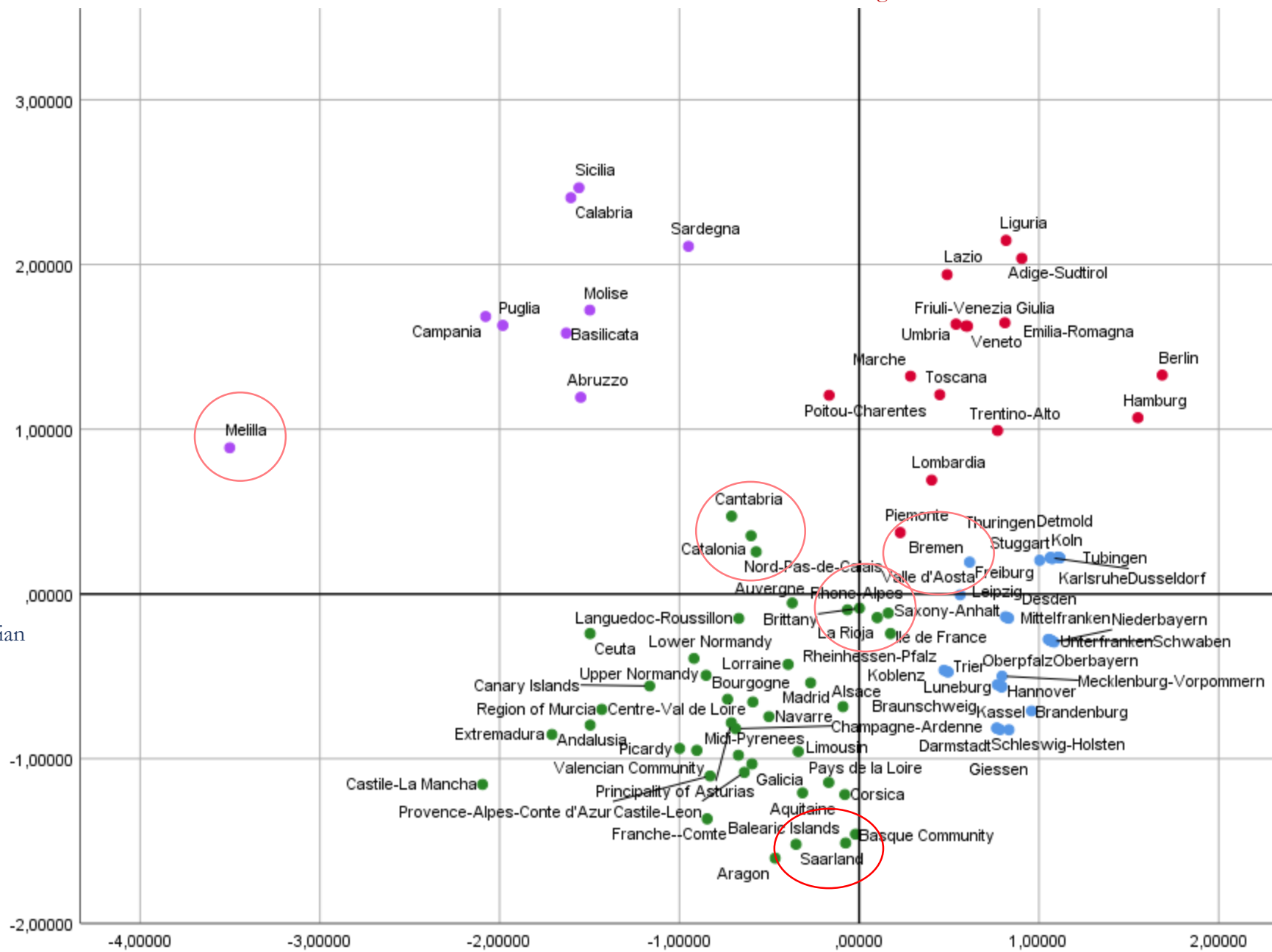
MORE Egalitarian in
Knowledge and Power

Ward Method

- Egalitarian specially in Work
- Egalitarian specially in Knowledge and Power
- Less Egalitarian but good performance in Work
- Less Egalitarian but good performance in Knowledge and Power

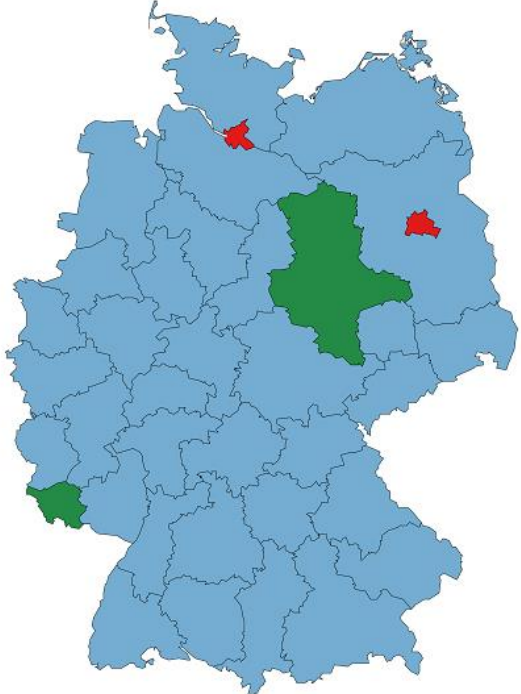
LESS
egalitarian

MORE
egalitarian

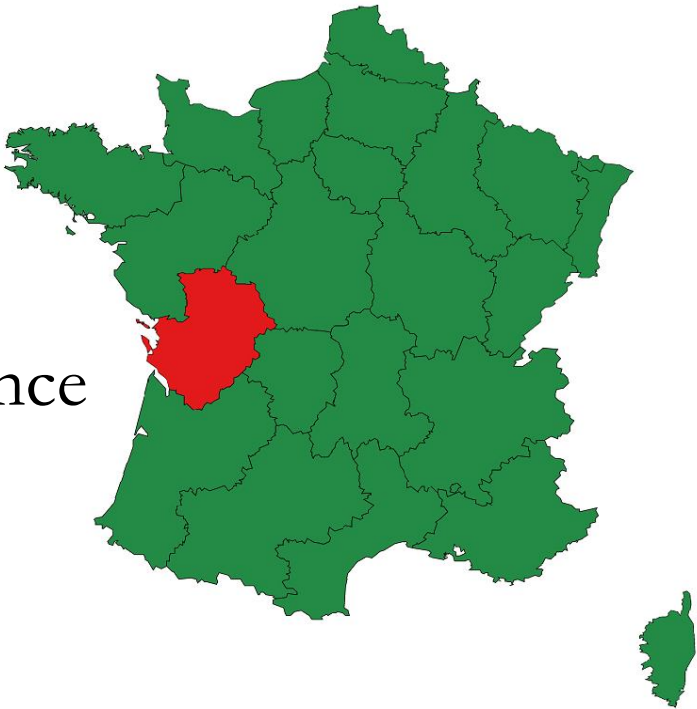


MORE Egalitarian in Work

Results of Clusters



Germany



France

- Egalitarian specially in Work
- Egalitarian specially in Knowledge and Power
- Less Egalitarian but good performance in Knowledge and Power
- Less Egalitarian but good performance in Work



Italy

Spain



Conclusions

Preliminary results of regional analysis shows an order: DE, IT, FR and ES

COUNTRY	RGEI	RGEI (NA)	GEI
DE	73,5180	73,5162	68,6000
ES	67,0099	66,7384	73,7000
FR	69,1418	69,3010	75,5000
IT	70,3576	70,6968	63,8000
Total	70,6550	70,7090	70,4000

At national level, the order is FR, ES, DE and IT

Hip 1: The fact that we consider 22 indicators and not 31 change the results

Hip 2: The fact that the regional calculation modify the average at country level

Hip 3: Both at the same time

To be continued



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Thanks for your attention

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With the support of the
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of the European Union

Collaboration of Students

Internship Students UPO:

Efrén Domínguez (Undergraduate)
Nazaret Ramírez Moyano (Máster)

Internal Students UPO:

Rocío Muñoz de Viguera
Javier Pastor
Ricardo Quintero Carrizosa
(Undergraduate students)

Internship Student at UAB:

Érica Noguera
(Undergraduate)

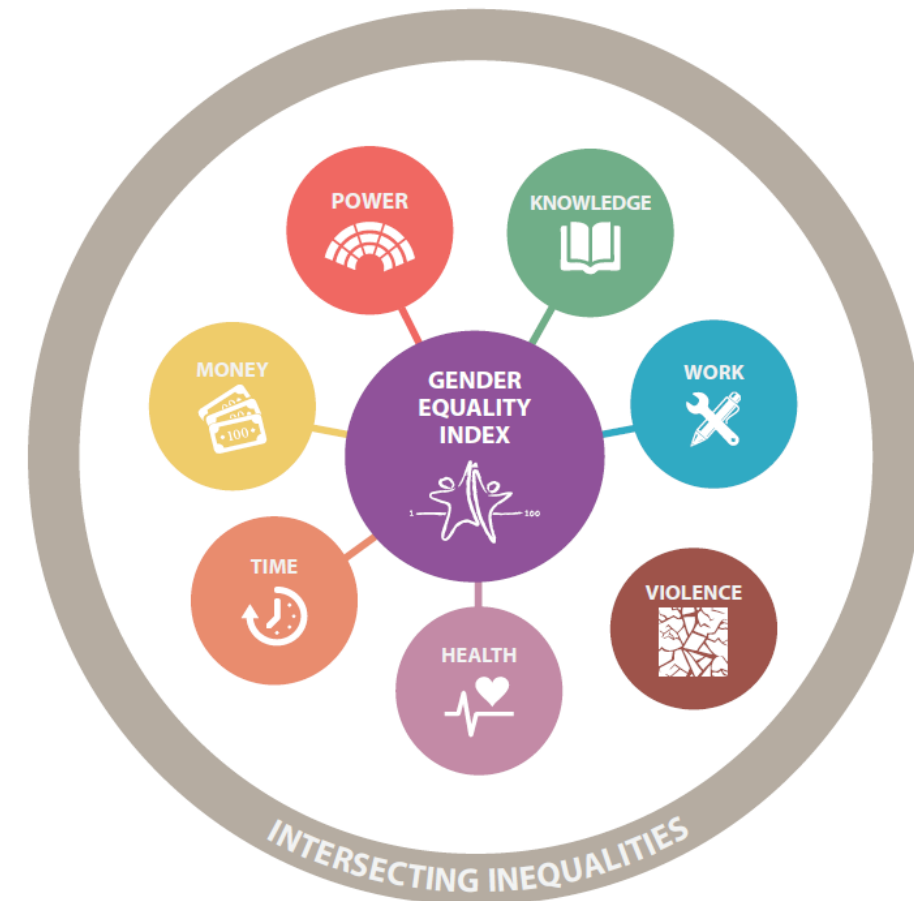


DOMAIN	SUB-DOMAIN	INDICATOR
Work	Participation	FTE employment rate (%)
		Duration of working life (years)
	Segregation and quality of work	Employed people in education, human health and social work activities (%)
		Ability to take one hour or two off during working hours to take care of personal or family matters (%)
		Career Prospects Index (points, 0-100)
Money	Financial resources	Mean monthly earnings (PPS) (Only total population)
		Mean equivalised net income (PPS) (Only total population)
	Economic situation	At-risk-of-poverty (%) (Only total population)
		Income distribution S20/80
Knowledge	Attainment and participation	Graduates of tertiary education (%)
		Participation rate in education and training (%)
	Segregation	Tertiary students in education, health and welfare, humanities and arts (%)

DOMAIN	SUB-DOMAIN	INDICATOR
Health	Status	Life expectancy at birth (years)
		Self-perceived health, good or very good (%)
		Healthy life years at birth (years)
	Behaviour	People doing physical activities and/or consuming fruits and vegetables (%)
		People who don't smoke and are not involved in harmful drinking (%)
	Access	Population with unmet needs for medical examination (%)
Power	Political	Share of ministers (%)
		Share of members of parliament (%)
		Share of members of regional assemblies (%)
	Economic	Share of members of boards in largest quoted companies, supervisory board or board of directors (%)
		Share of board members of central bank (%)
	Social	Share of board members of research funding organisations (%)
		Share of board members of publically owned broadcasting organisations (%)
		Share of members of highest decision making body of the national Olympic sport organisations (%)
Time	Care activities	People caring for and educating their children or grandchildren, elderly or people with disabilities, every day (%)
		People doing cooking and/or household, every day (%)
	Social activities	Workers doing sporting, cultural or leisure activities outside of their home, at least daily or several times a week (%)
		Workers involved in voluntary or charitable activities, at least once a month (%)

The Gender Equality Index

- The GEI is a comprehensive measure for monitoring progress in **gender equality across the EU over time**
- It shows the different outcomes of EU and national policies
- It measures gender gaps
- The conceptual frameworks of the index (EIGE, 2013) consider several **areas** of economic and social life summarised into a hierarchical structure of:
- **Domains: core** (**work, money, knowledge, time, power and health**) & **satellite** (violence & intersecting inequalities)
- **Sub-domains**
- Composite indicator to provide a summary of a complex reality of gender equality as an underlying multidimensional concept



The Gender Equality Index

The GEI is based on the internationally accepted **10-step methodology** on building composite indicators developed by the European Commission's Joint Research Centre (JRC) and the Organisation for Economic Co-operation and Development (OECD) (Nardo et al., 2008):

1. **Developing a theoretical framework** that defines and structures what is measured and provides the basis for the selection and combination of variables into a meaningful index.
2. **Selecting variables** based on the analytical soundness, measurability, country coverage, cross-country comparability, and relevance of indicators.
3. **Imputing missing data** in order to obtain a complete dataset for all countries.
4. **Conducting a multivariate analysis** to study the overall structure of the dataset, assess its suitability, and guide subsequent methodological choices.
5. **Normalising the data**, if needed, to ensure the comparability of variables.
6. **Weighting and aggregating indicators** according to both the theoretical framework and the results of the multivariate analysis.
7. **Conducting an uncertainty and sensitivity analysis** to assess the robustness of the index in terms of all possible sources of uncertainty in its development (choice of imputation method, normalisation scheme, weighting system or aggregation method).
8. **Returning to the data** in order to analyse what domains and sub-domains are driving the index results.
9. **Identifying possible association with other variables** and existing known indicators.
10. **Presenting and disseminating the index results** in a clear and accurate manner.

The Gender Equality Index

The **calculation** of the different elements of the GEI can be summarized in 5 steps:

- 1. Selection and processing of indicators.** The GEI is composed of **31 indicators**, divided between **14 sub-domains**, which make up the six domains (work, money, knowledge, time, power and health)
- 2. Calculating gender gaps.** A single measure for the indicators is developed. Gender gaps are calculated and transformed so that the **value of 1** can be interpreted as full achievement of gender equality, while any value below 1 indicates some degree of gender inequality in a given indicator. The **value of 0** theoretically refers to full inequality.
- 3. Calculating the correcting coefficient.** Correcting coefficients are calculated and applied to each gender gap. This means that Member States with similar gender gaps are treated differently if their levels of achievement differ.
The higher the level of achievement, the lower the correction of the gender gap.
- 4. Calculating the gender gap metric.** A combination of the gender gap and the correcting coefficient. It is dimensionless (measurement units of variables have been eliminated), and bound between [1; 100].
- 5. Calculating the Index (aggregating, weighting, and normalisation)**
 - a) Aggregation of variables of each sub-domain, creating indices at the subdomain level (value bound [1; 100]), and using *arithmetic mean* of the metrics of the indicators.
 - b) Aggregation of the sub-domains into domains, using *geometric means* of the scores of sub-domains (value bound [1; 100]).
 - c) Aggregating the scores of the domains into overall GEI, using geometric means of the six scores of the domain, by applying experts' weights to the domains, obtained through the analytic *hierarchy process* (AHP). The Gender Equality Index takes a value on a scale of 1 to 100, where value of **100** stands for complete gender equality, and 1 for full gender inequality.

The Gender Equality Index

Processing indicators

- All variables have a **positive sign**, i.e. higher value would indicate being closer to EU targets or ‘desirable situation’
- All indicators are expressed in **relative terms** dividing the variable of interest by its closest reference population: $\tilde{X}_{it}^k = \frac{X_{it}^k}{\text{reference population}_{it}^k}$ or directly: $\tilde{X}_{it}^k = X_{it}^k$
or using the purchasing power standard (PPS)

Imputation of missing values

- Closest year
- The average (non-weighted) of 28 country values
- Expectation-maximisation (EM) algorithm available in SPSS

The Gender Equality Index

Gender gap metric

To define a metric that combines the women and men figures in a single measure. Properties:

- The metric measures gender gaps by taking into account the **relative position** of women and men, and **all gaps**, regardless of whether they are to the advantage of women or men
- It identifies the gender equality point set at 100
- The metric that combines the values for women and men of each variable, can be expressed as:

$$\Gamma_{(X_{it})} = 1 + [\alpha_{(X_{it})} \cdot (1 - Y_{(X_{it})})] \cdot 99$$

Correcting coefficient:
country context to compare
the performance of each country
with the best performer in the EU-
28

Difference between 1 & gender gap: $Y_{(X_{it})} = \left| \frac{\bar{x}_{it}^W}{\bar{x}_{it}^a} - 1 \right|$
% that women represents over the
average of the two values of women and
men

- Measurement units of variables are eliminated are rescaled to avoid the presence of zeros



The Gender Equality Index

Computing the index

Selected as the most robust among 3,636 potential indices, with these characteristics:

	Variables	Sub-domains	Domains
Weighting	Equal	Equal	Experts (AHP)
Aggregation	Arithmetic	Geometric	Geometric
Normalisation	Metric by construction acts as a normalisation method		
Imputation	Closest values Average of MS for EU-28 Expectation-Maximisation (EM)	No imputation	No imputation

Mean experts' weights used for the Gender Equality Index

Work	Money	Knowledge	Time	Power	Health
0.19	0.15	0.22	0.15	0.19	0.10

Groups the variables in order to create indices at domain/sub-domain level & overall GEI

GEI Index

$$I_i^t = \prod_{d=1}^6 \left\{ \prod_{s=1}^{n_{s_d}} \left[\sum_{v=1}^{n_s} \frac{\Gamma(X_{itv})}{n_s} \right]^{1/n_{s_d}} \right\}^{w_{AHP_d}}$$

$i = 1, \dots, 28$
 $d = 1, \dots, 6$
 $s = 1, \dots, 14$
 $v = 1, \dots, 31$
 n_s = number of indicators in the sub-domain s
 n_{s_d} = number of sub-domains in the domain d
 $w_{AHP_d} \in [0,1]$

Methodology: Data Matrix 2013 and 2021

GEI 2013

Country	WORK	MONEY	KNOWLEDGE	TIME	POWER	HEALTH
BE	72,7	85,5	70,6	70,3	47,9	86,5
BG	67,9	60,8	50,4	43,9	45,8	75,3
CZ	64,9	73,8	55,4	53,8	31,0	85,7
DK	79,8	83,6	73,2	80,4	58,0	90,3
DE	70,0	83,2	56,3	69,8	38,3	89,3
EE	71,2	65,5	51,6	73,7	21,9	82,7
IE	73,5	85,5	65,3	70,8	37,2	90,7
EL	63,6	75,3	53,4	35,6	22,3	84,3
ES	71,8	77,1	63,5	60,8	52,6	88,6
FR	71,5	83,5	62,0	66,6	52,4	86,7
HR	67,2	68,6	49,9	49,8	28,4	81,5
IT	61,3	78,9	53,8	55,1	25,2	86,3
CY	70,5	80,7	55,5	45,9	15,4	86,4
LV	72,6	58,9	49,2	62,0	34,8	77,3
LT	72,6	60,8	54,3	52,2	32,9	80,4
LU	70,9	91,8	66,3	70,2	25,6	89,8
HU	66,0	70,8	54,5	54,1	23,5	85,4
MT	65,1	79,2	65,4	54,3	20,9	90,6
NL	76,3	86,6	66,9	85,9	56,9	90,3
AT	75,3	82,8	58,9	56,0	28,4	91,1
PL	66,3	69,5	57,8	54,2	30,6	81,6
PT	71,4	71,8	50,1	38,7	34,9	84,3
RO	67,9	59,8	47,2	50,6	30,8	69,9
SI	71,9	80,3	55,0	68,3	41,1	86,8
SK	64,8	70,2	59,5	39,9	29,5	84,8
FI	74,5	84,1	58,6	80,1	69,1	89,5
SE	80,4	85,3	70,7	84,5	77,8	93,2

GEI 2021

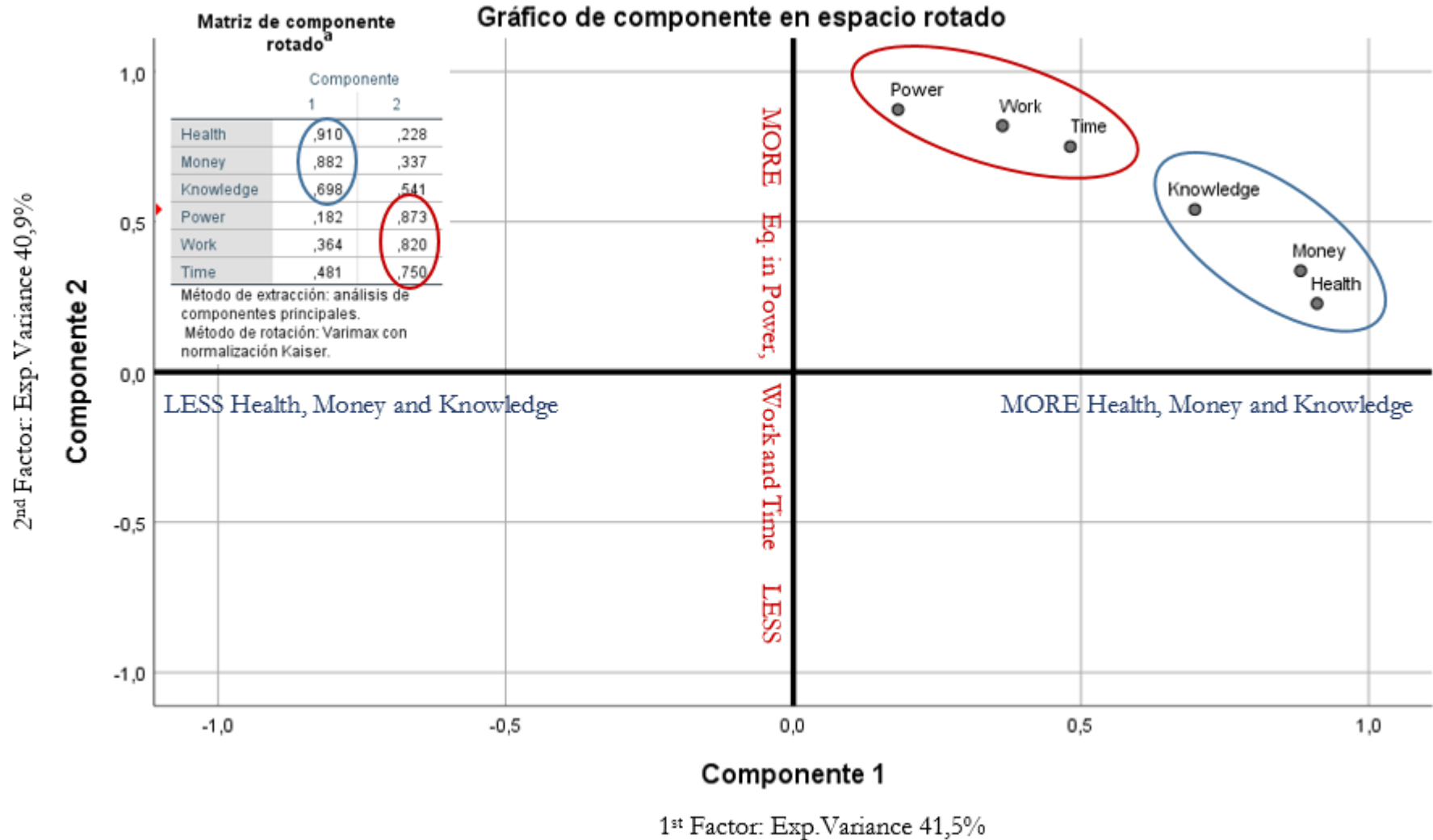
Country	WORK	MONEY	KNOWLEDGE	TIME	POWER	HEALTH
BE	74,9	89,9	70,8	65,3	61,0	86,3
BG	69,6	64,5	55,2	42,7	60,2	77,2
CZ	67,4	78,9	58,5	57,3	28,1	86,3
DK	79,4	89,1	71,0	83,1	66,8	89,5
DE	72,4	86,0	54,7	65,0	62,8	90,7
EE	72,5	73,2	57,3	74,7	36,6	82,2
IE	76,5	87,8	67,4	74,2	58,4	91,3
EL	65,3	73,7	54,9	44,7	27,0	84,3
ES	73,7	78,4	67,9	64,0	76,9	90,3
FR	73,2	86,3	67,0	67,3	81,4	87,4
HR	70,1	74,0	51,8	51,0	45,3	83,8
IT	63,7	79,4	59,0	59,3	52,2	88,4
CY	70,6	82,6	56,0	51,3	30,0	87,9
LV	74,3	68,7	50,9	65,8	50,4	79,3
LT	74,2	69,9	56,1	50,6	39,3	80,3
LU	76,3	92,4	70,8	69,1	53,4	89,9
HU	68,0	73,3	57,2	54,3	22,9	86,7
MT	76,8	84,2	65,2	64,2	37,5	92,3
NL	78,3	87,0	67,4	83,9	64,0	90,2
AT	76,8	87,7	64,3	61,2	48,2	91,9
PL	67,2	76,7	57,6	52,5	31,5	83,3
PT	73,2	73,6	56,5	47,5	53,6	84,8
RO	67,5	69,1	52,8	50,3	34,7	71,3
SI	73,0	83,7	56,6	72,9	53,0	87,8
SK	66,8	75,1	61,6	46,3	30,7	85,5
FI	75,5	87,9	61,9	77,4	74,3	89,5
SE	83,1	85,4	75,2	90,1	84,5	94,6

Comparison in Europe between 2013 and 2021 European Social Space

2021

KMO= 0,857

	Media
Work	72,56478007
Money	80,03275289
Knowledge	61,01149977
Time	62,52546067
Power	50,70350864
Health	86,45991074



Comparison in Europe between 2013 and 2021

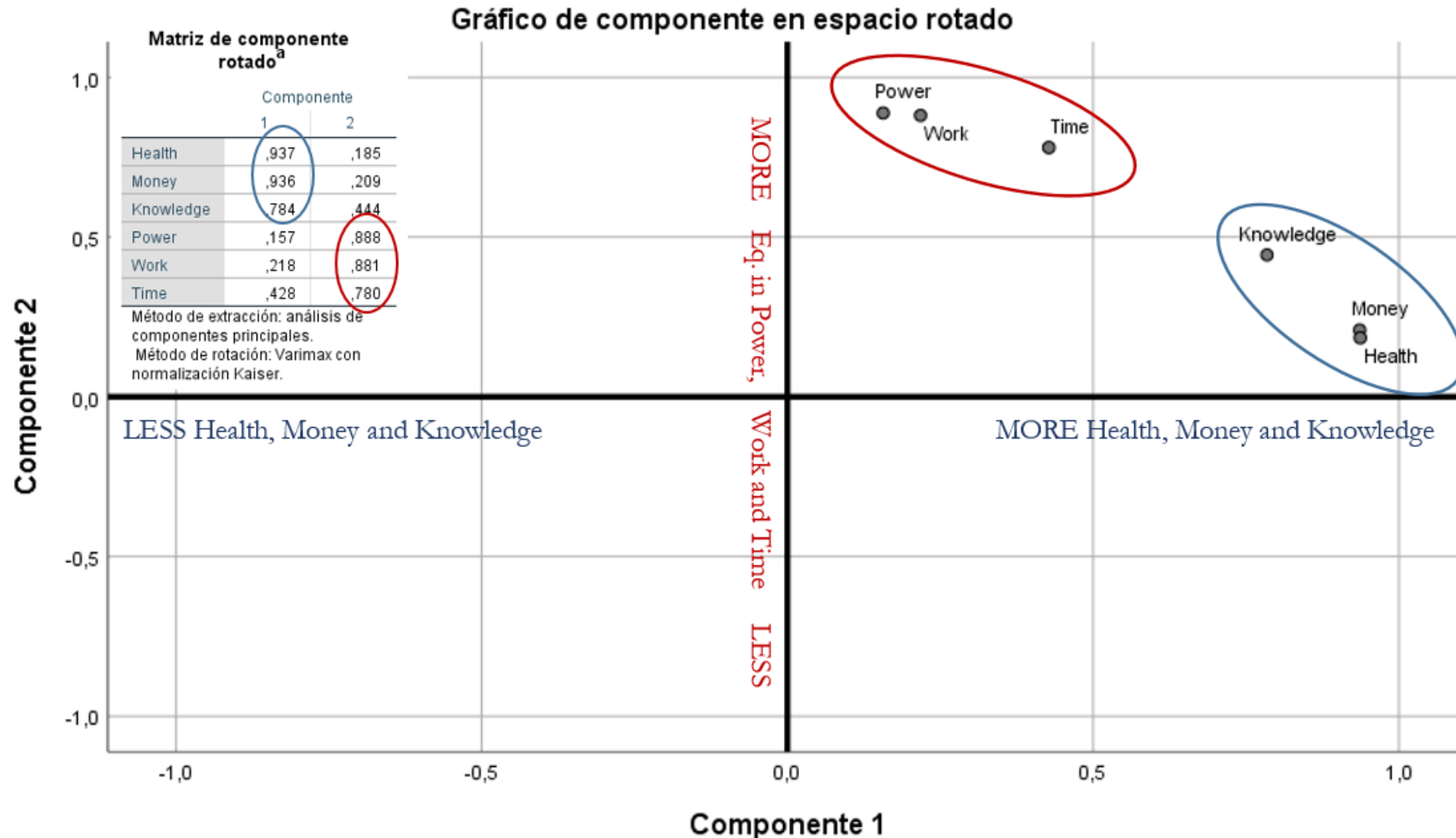
European Social Space

2013

KMO= 0,818

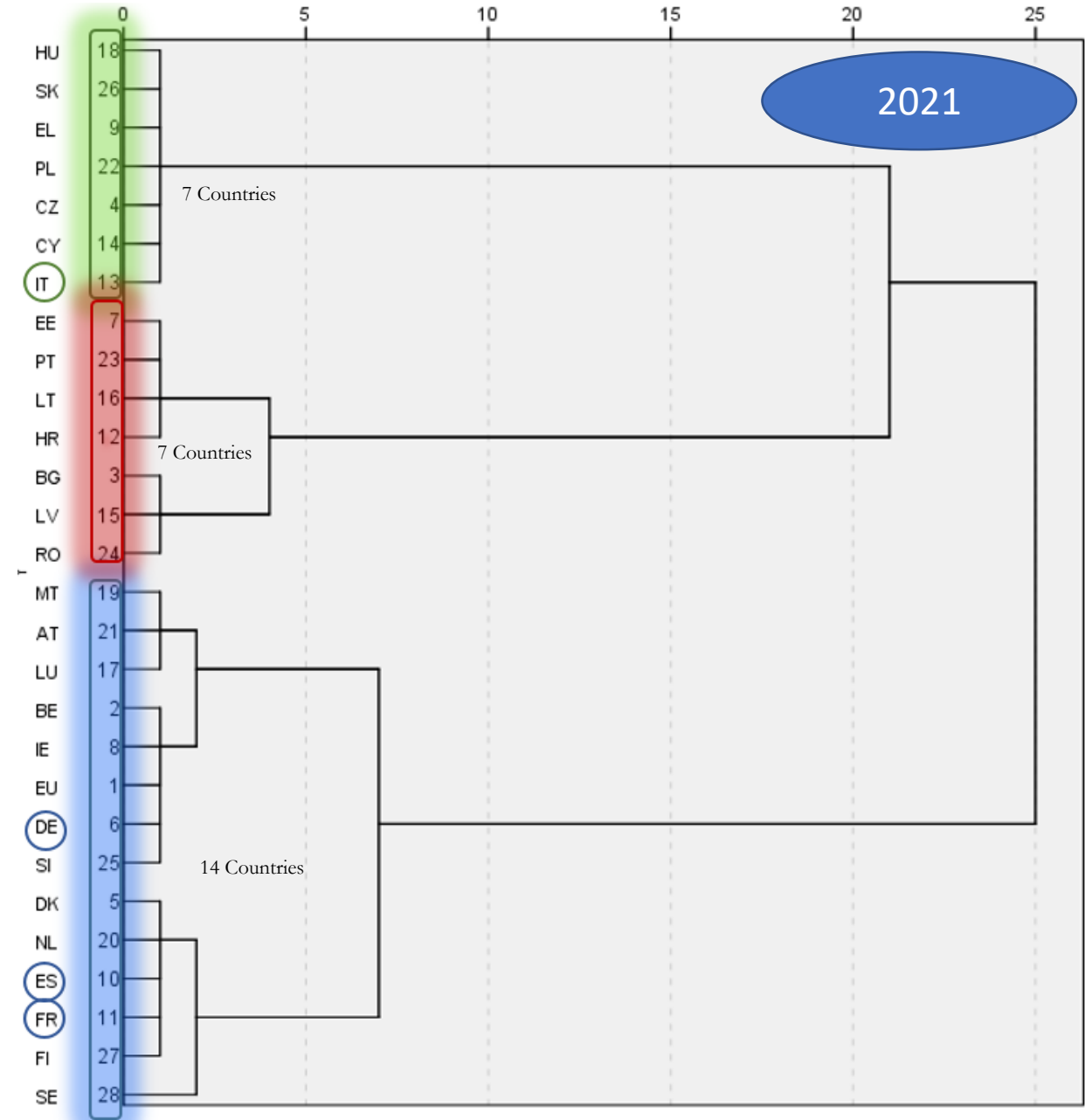
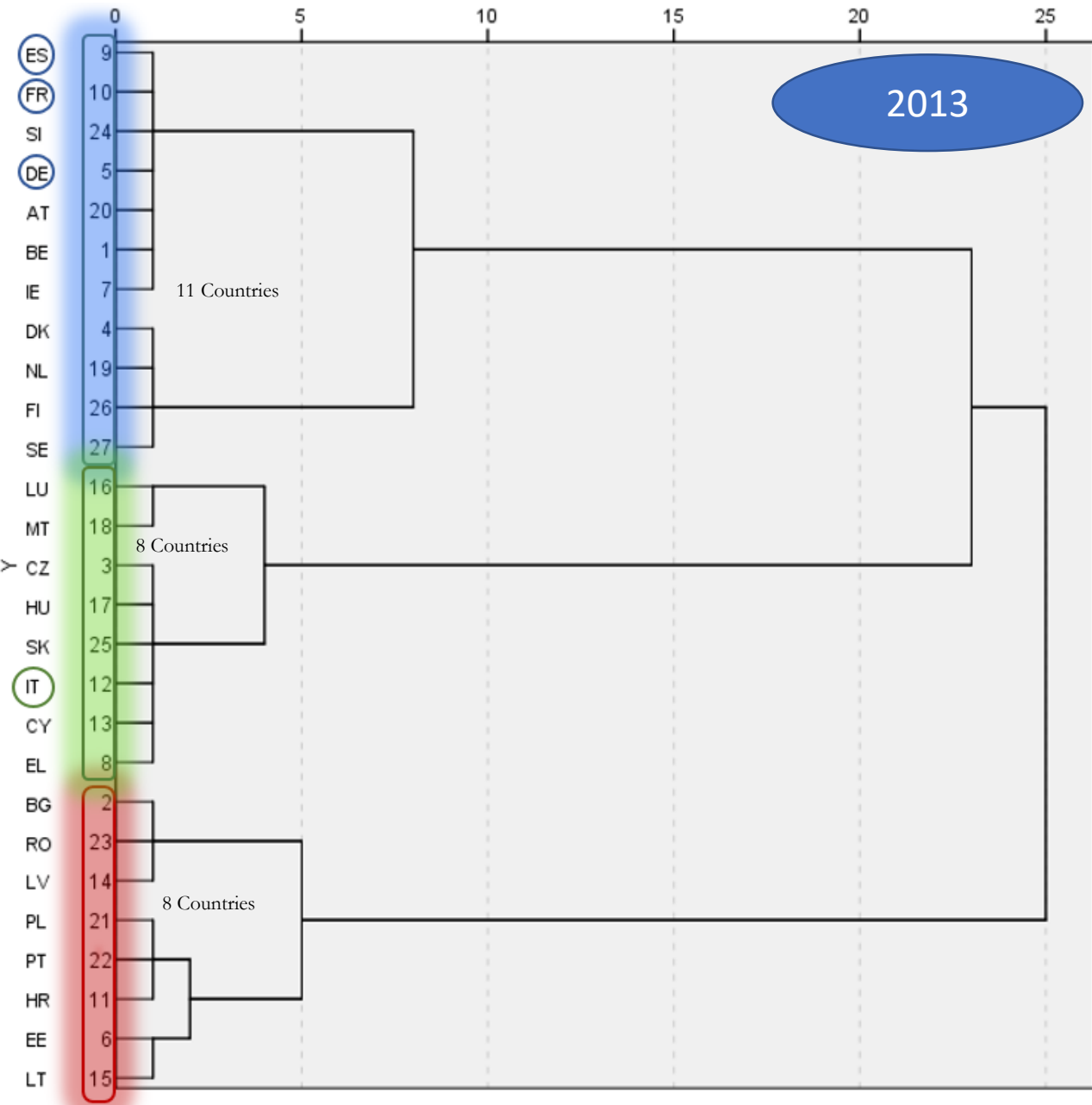
	Media
Work	70,44015968
Money	76,08005723
Knowledge	58,34637334
Time	60,27313635
Power	37,53400791
Health	85,53173658

2nd Factor: Exp. Variance 40,8%



1st Factor: Exp. Variance 43,7%

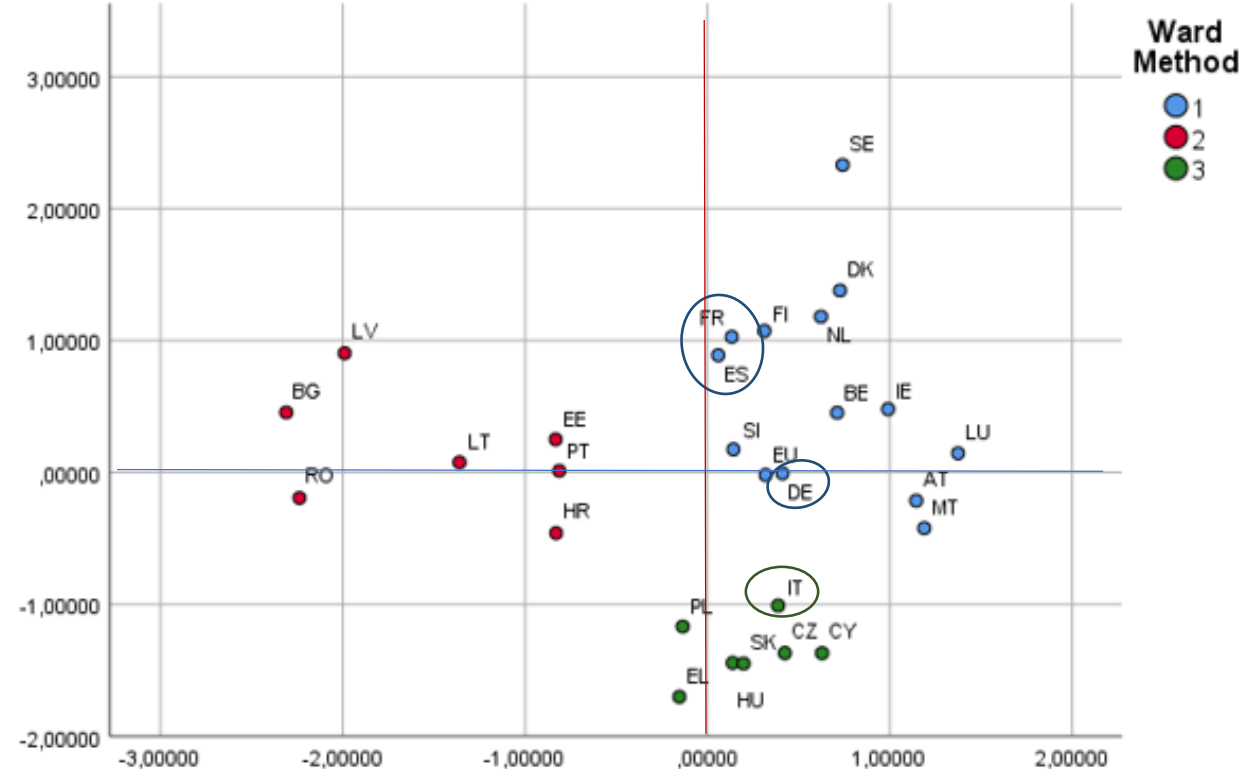
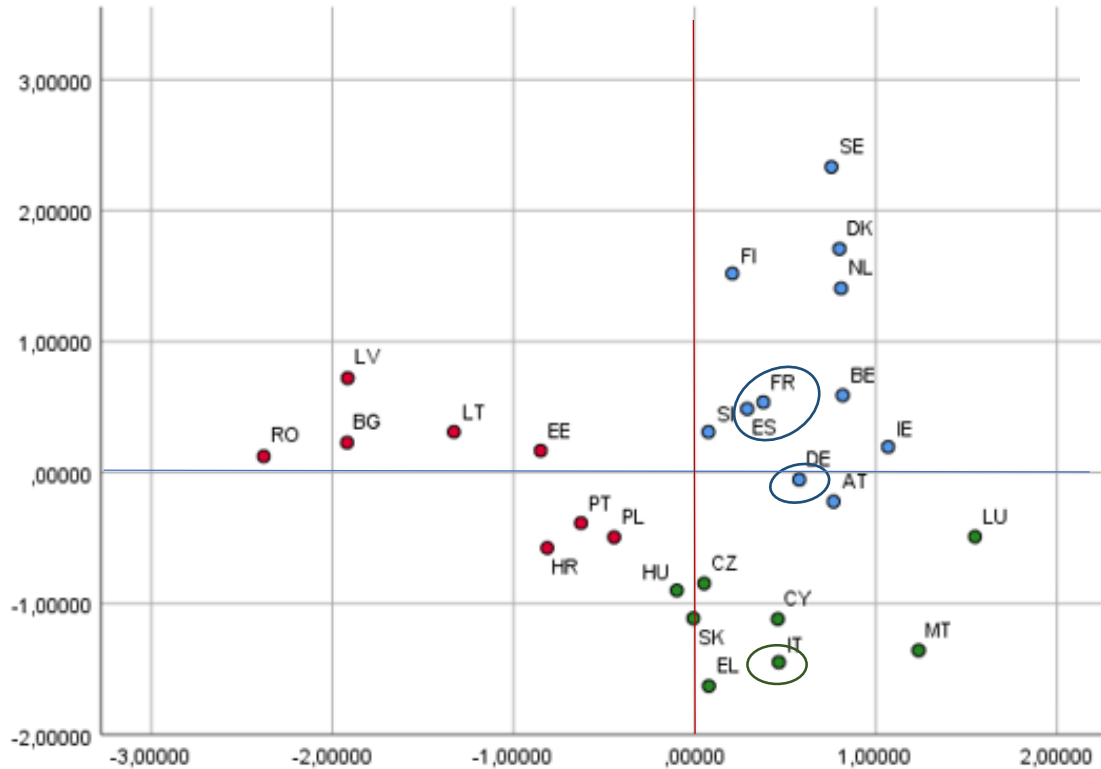
How we might group countries according to gender equality?: Cluster analysis



But, Which group is more egalitarian and which less inside European social space?

2013

2021



LESS Health, Money and Knowledge MORE

GEI	SE	DK	NL	FI	BE	FR	ES	IE	EU	SI	DE	LU	AT	CZ
	80,1	75,2	74,0	73,1	69,3	67,5	66,4	65,4	63,1	62,7	62,6	61,2	58,7	55,6
	PL	LV	BG	LT	MT	PT	EE	IT	SK	HU	HR	RO	CY	EL
55,5	55,2	55,0	54,9	54,4	53,7	53,4	53,3	53,0	52,4	52,3	50,8	49,0	48,6	

LESS Health, Money and Knowledge MORE

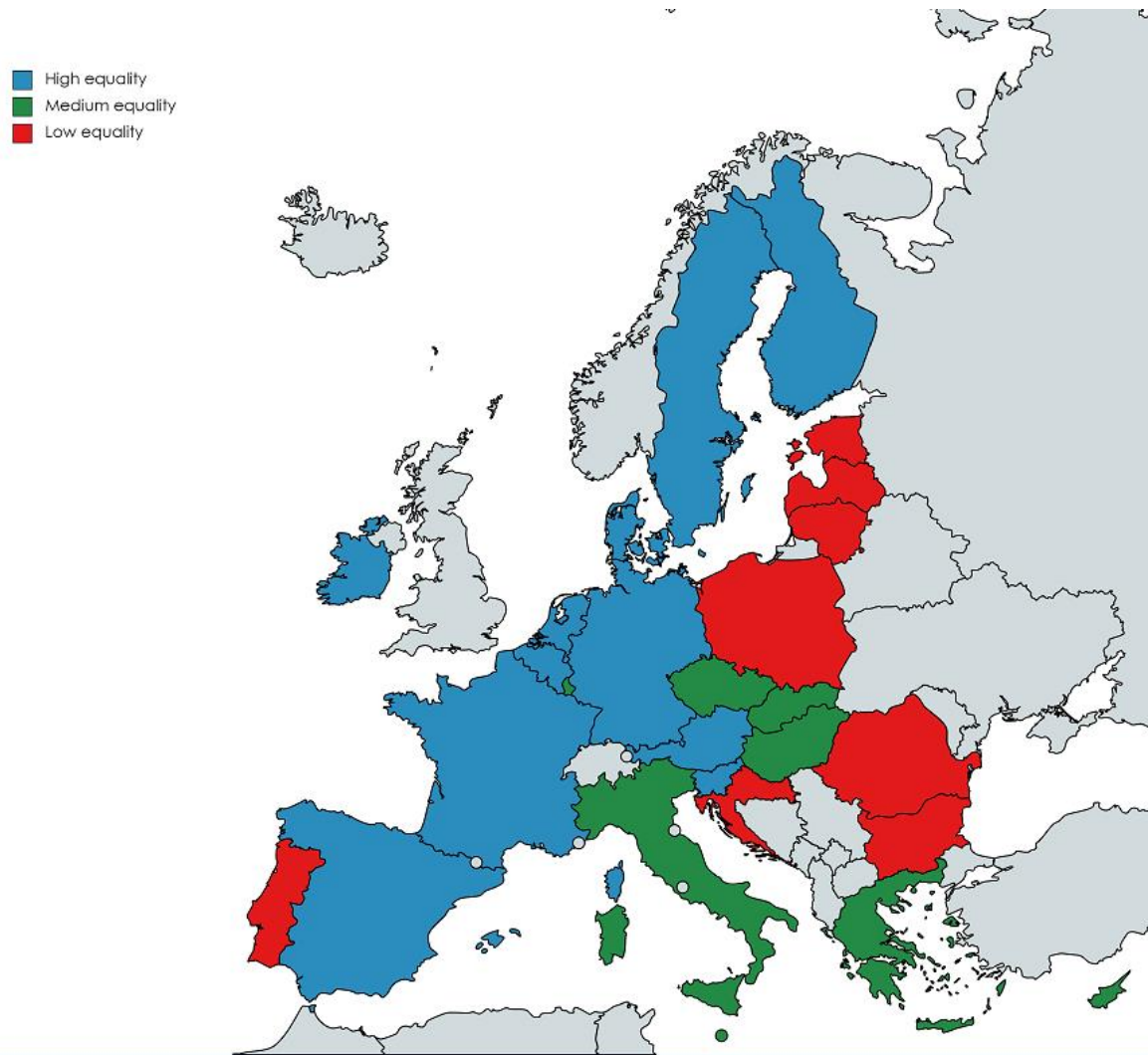
GEI	SE	DK	NL	FR	FI	ES	IE	BE	LU	DE	EU	AT	SI	MT
	83,9	77,8	75,9	75,5	75,3	73,7	73,1	72,7	72,4	68,6	68,0	68,0	67,6	65,0
	IT	PT	LV	EE	BG	HR	LT	CY	CZ	PL	SK	RO	HU	EL
63,8	62,2	62,1	61,6	59,9	59,2	58,4	57,0	56,7	56,6	56,0	54,5	53,4	52,5	

Rumanía	Bulgaria	Letonia	Lituania	Estonia	Portuga	Croacia
RO	BG	LV	LT	EE	PT	HR

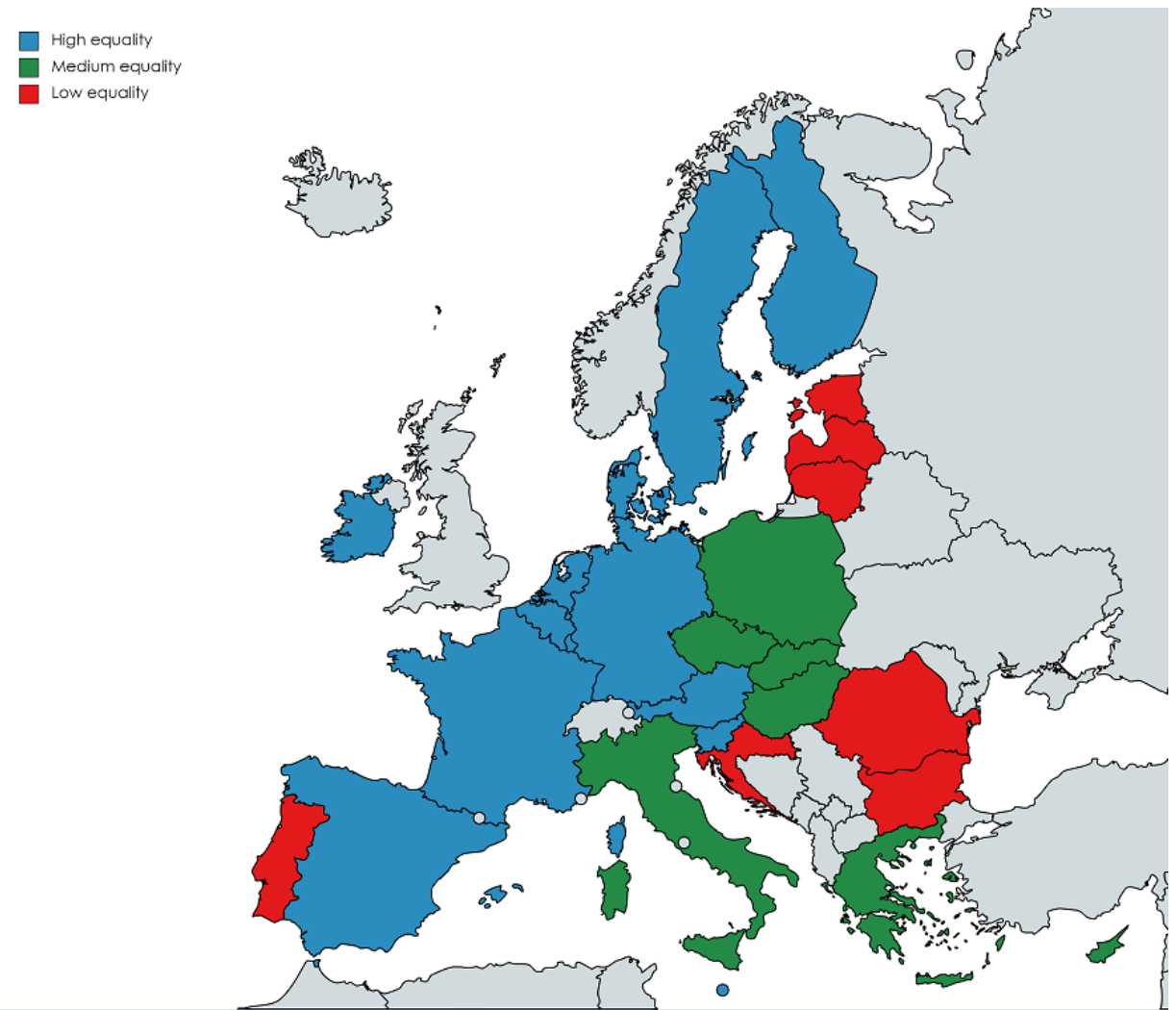
Polonia	Grecia	Eslovaquia	Hungría	Italia	Chequia	Chipre
PL	EL	SK	HU	IT	CZ	CY

Bélgica	Dinamarca	Alemania	Irlanda	España	Francia	Luxemburgo
BE	DK	DE	IE	ES	FR	LU
Malta	Países Bajos	Austria	Eslovenia	Finlandia	Suecia	
MT	NL	AT	SI	FI	SE	

2013
















2021



From 2013 to 2021, Poland turns from red to green and Luxembourg and Malta from green to blue.

Preliminary indicators for Spain

Work in progress

DOMAIN	SUB-DOMAIN	INDICATOR		NUTs2
Work	Participation	FTE employment rate (%)		Yes
		Duration of working life (years)		No
	Segregation and quality of work	Employed people in education, human health and social work activities (%)		Yes
		Ability to take one hour or two off during working hours to take care of personal or family matters (%)		No
		Career Prospects Index (points, 0-100)		No
Money	Financial resources	Mean monthly earnings (PPS) (Only total population)		No*
		Mean equivalised net income (PPS) (Only total population)		No*
	Economic situation	At-risk-of-poverty (%) (Only total population)		No*
		Income distribution S20/80		No
Knowledge	Attainment and participation	Graduates of tertiary education (%)		Yes
		Participation rate in education and training (%)		No
	Segregation	Tertiary students in education, health and welfare, humanities and arts (%)		No

* NUTs2: Nomenclature of territorial units for statistics. Per region (CCAA) but not by sex.

Looking for available data: mostly 2019 but also 2018 and before

Preliminary indicators for Spain

Work in progress

DOMAIN	SUB-DOMAIN	INDICATOR		NUTs2
Health	Status	Life expectancy at birth (years)		Yes
		Self-perceived health, good or very good (%)		No
		Healthy life years at birth (years)		No
	Behaviour	People doing physical activities and/or consuming fruits and vegetables (%)		No
		People who don't smoke and are not involved in harmful drinking (%)		No
Access	Population with unmet needs for medical examination (%)		No	
Power	Political	Share of ministers (%)		No
		Share of members of parliament (%)		No
		Share of members of regional assemblies (%)		No
	Economic	Share of members of boards in largest quoted companies, supervisory board or board of directors (%)		No
		Share of board members of central bank (%)		No
	Social	Share of board members of research funding organisations (%)		No
		Share of board members of publically owned broadcasting organisations (%)		No
	Share of members of highest decision making body of the national Olympic sport organisations (%)		No	
Time	Care activities	People caring for and educating their children or grandchildren, elderly or people with disabilities, every day (%)		No
		People doing cooking and/or household, every day (%)		No
	Social activities	Workers doing sporting, cultural or leisure activities outside of their home, at least daily or several times a week (%)		No
		Workers involved in voluntary or charitable activities, at least once a month (%)		No



Preliminary indicators for Spain

DOMAIN	INDICATOR
Work	Full-time or equivalent employment (2019)
	People employed in education, health and social work activities (2019)
	Employed persons (2019)
	Self-employed persons (2019)
Money	Annual gross salary (2014)
	Earning per normal working hour (2019)
	Poverty risk (2019)
Knowledge	Graduates of tertiary education (%)
	People participating in formal or non-formal education (2019)
Health	Life expectancy at birth (2019)
	Self-perceived health (Very good + Good) (2017) (%)
	Years of healthy life - Life expectancy without disability (2018)
	Fresh fruit consumption (2017)
	Consumption of vegetables, salads and vegetables (2017)
	Physical activity (2017)
	Tobacco use (2020)
	Alcohol consumption (2020)
Power	Representation of men and women in parliament (average 2016-2018)
	Representation in regional parliaments (2019)
	Representation in councils (2019)
	Representation in municipalities (2019)
Time	Child care leave (2019)
	Leave of absence for care of relatives (2019)
	Social life and fun (2019)
	Sports and outdoor activities (2019)

Gender gap

Women / Men

Preliminary indicators for Spain

Principal Component Analysis

DOMAIN	INDICATOR		<i>First factor (% variance)</i>	
1. Work	Full-time or equivalent employment (2019)	→	Factor 1	71,7%
	People employed in education, health and social work activities (2019)			
	Employed persons (2019)			
	Self-employed persons (2019)			
2. Money	Annual gross salary (2014)	→	Factor 2	61,3%
	Earning per normal working hour (2019)			
	Poverty risk (2019)			
3. Knowledge	Graduates of tertiary education (%)	→	Factor 3	75,2%
	People participating in formal or non-formal education (2019)			
4. Health	Life expectancy at birth (2019)	→	Factor 4	65,5%
	Self-perceived health (Very good + Good) (2017) (%)			
	Years of healthy life - Life expectancy without disability (2018)			
	Fresh fruit consumption (2017)			
	Consumption of vegetables, salads and vegetables (2017)			
	Physical activity (2017)			
	Tobacco use (2020)			
	Alcohol consumption (2020)			
5. Power	Representation of men and women in parliament (average 2016-2018)	→	Factor 5	56,1%
	Representation in regional parliaments (2019)			
	Representation in councils (2019)			
	Representation in municipalities (2019)			
6. Time	Child care leave (2019)	→	Factor 6	51,7%
	Leave of absence for care of relatives (2019)			
	Social life and fun (2019)			
	Sports and outdoor activities (2019)			

Preliminary indicators for Spain

Gender Equality Index

CC.AA.	D1	D2	D3	D4	D5	D6	GEI_ES	GEI_ES
	Work	Money	Knowledge	Health	Power	Time	1 weighted	2 unweighted
Andalucía	2,42	2,82	1,39	0,66	1,33	0,9	1,51	1,59
Aragón	0	1,29	2,31	1,61	0,63	1,59	1,34	1,24
Principado de Asturias	1,29	2,85	3,23	3,15	0,45	0,96	2,03	1,99
Illes Balears	1,37	2,37	0,55	1,89	2,83	2,29	1,97	1,88
Canarias	1,28	1,31	0	1,8	3,54	2,41	1,79	1,72
Cantabria	3,59	0	1,2	1,81	0,95	2,2	1,5	1,63
Castilla y León	1,22	0,19	2,87	1,36	1,4	2,75	1,65	1,63
Castilla-la Mancha	1,87	1,64	1,74	0	2,66	1,58	1,5	1,58
Cataluña	2,41	1,17	1,89	2,88	0,79	1,95	1,84	1,85
Comunitat Valenciana	2,34	2,31	1,81	1,33	0,96	1,9	1,75	1,78
Extremadura	1,04	1,88	1,65	0,27	3,27	4,76	2,29	2,15
Galicia	1,17	1,22	1,44	3	1,68	1,78	1,78	1,72
Comunidad de Madrid	3,16	1,84	1,33	2,78	1,37	0	1,61	1,75
Región de Murcia	1,71	3,25	1	0,72	1,58	1,54	1,65	1,63
Comunidad Foral de Navarra	3,41	2,61	1,5	2,13	0	1,88	1,87	1,92
País Vasco	1,82	3,69	0,91	2,88	1,06	1,14	1,98	1,92
La Rioja	3,39	2,02	4,14	2,72	1,17	2,36	2,54	2,63

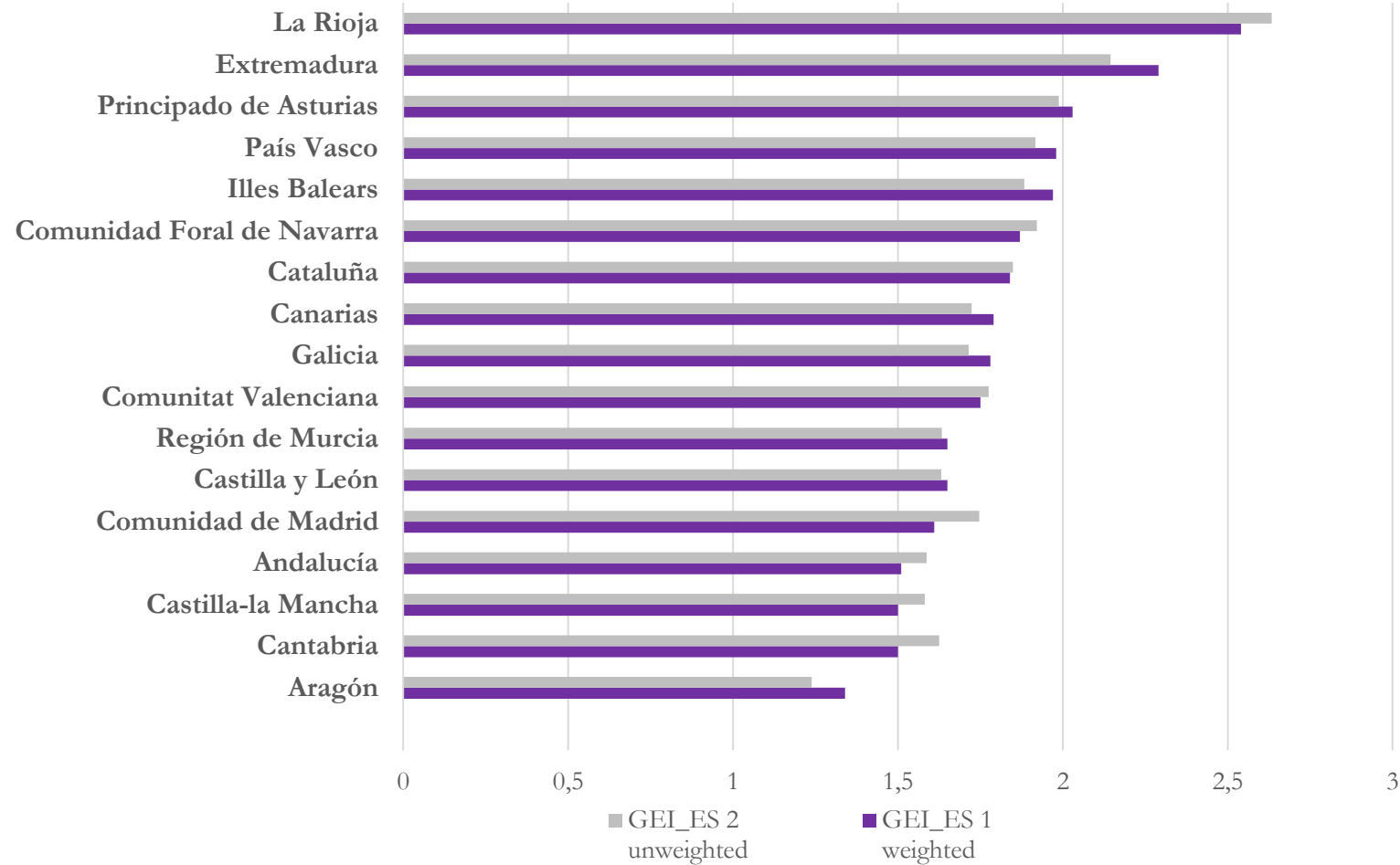
Preliminary indicators for Spain

Gender Equality Index

More



Less



Preliminary indicators for Spain

Gender Equality Index

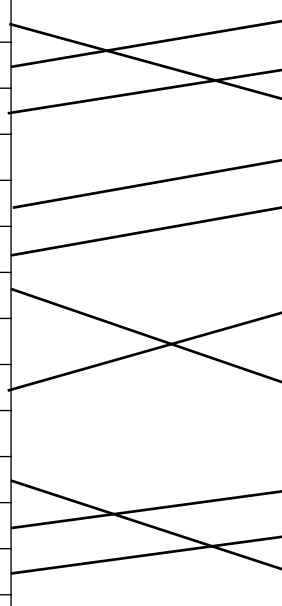
Less



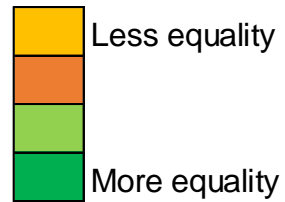
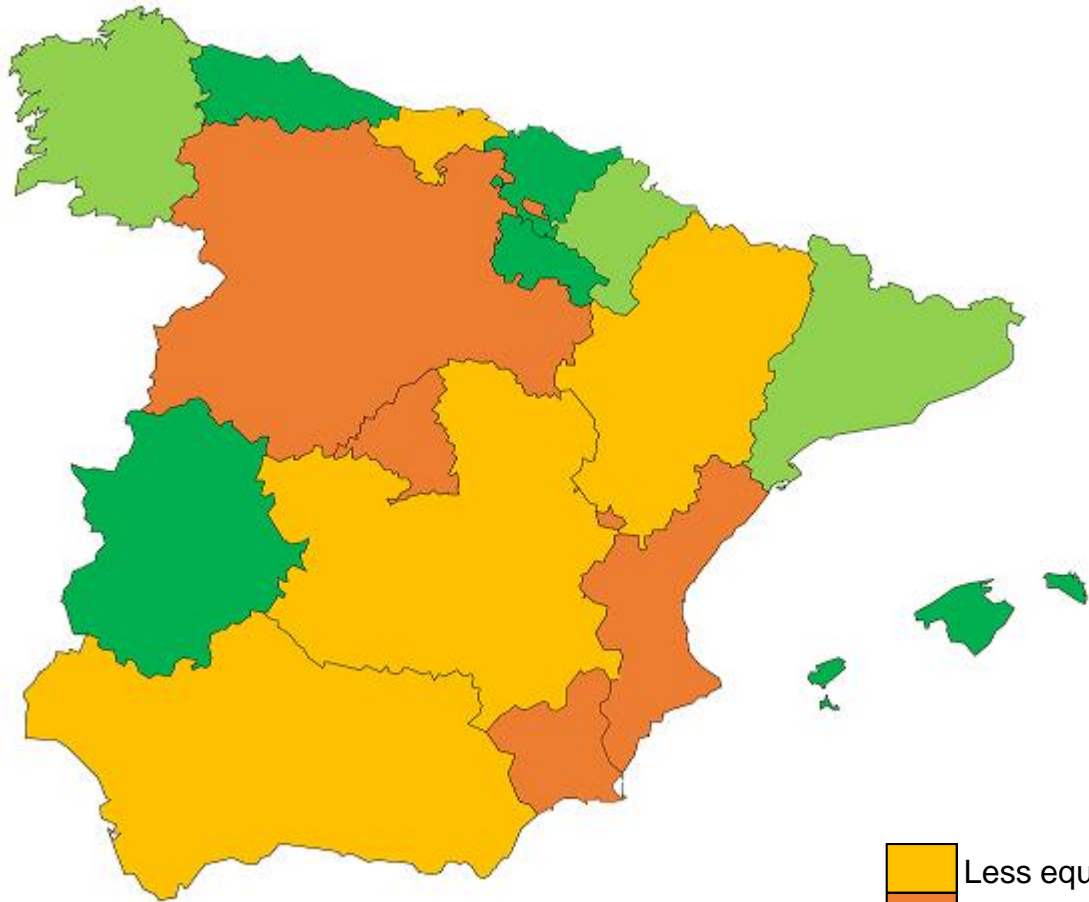
More

CC.AA.	GEI_ES 1 weighted
Aragón	1,34
Cantabria	1,5
Castilla-la Mancha	1,5
Andalucía	1,51
Comunidad de Madrid	1,61
Castilla y León	1,65
Región de Murcia	1,65
Comunitat Valenciana	1,75
Galicia	1,78
Canarias	1,79
Cataluña	1,84
Comunidad Foral de Navarra	1,87
Illes Balears	1,97
País Vasco	1,98
Principado de Asturias	2,03
Extremadura	2,29
La Rioja	2,54

CC.AA.	GEI_ES 2 unweighted
Aragón	1,24
Castilla-la Mancha	1,58
Andalucía	1,59
Cantabria	1,63
Castilla y León	1,63
Región de Murcia	1,63
Galicia	1,72
Canarias	1,72
Comunidad de Madrid	1,75
Comunitat Valenciana	1,78
Cataluña	1,85
Illes Balears	1,88
País Vasco	1,92
Comunidad Foral de Navarra	1,92
Principado de Asturias	1,99
Extremadura	2,15
La Rioja	2,63



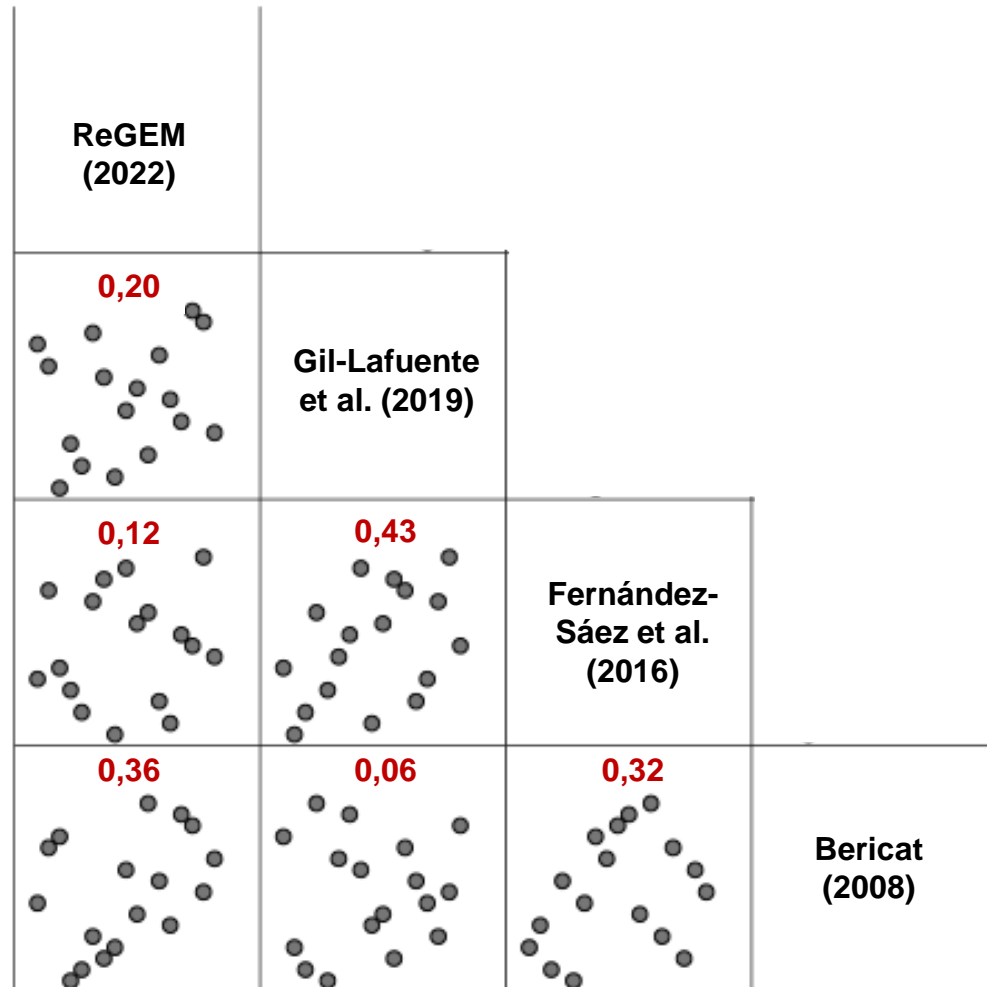
GEI_ES 1 (weighted)



GEI_ES 2 (unweighted)

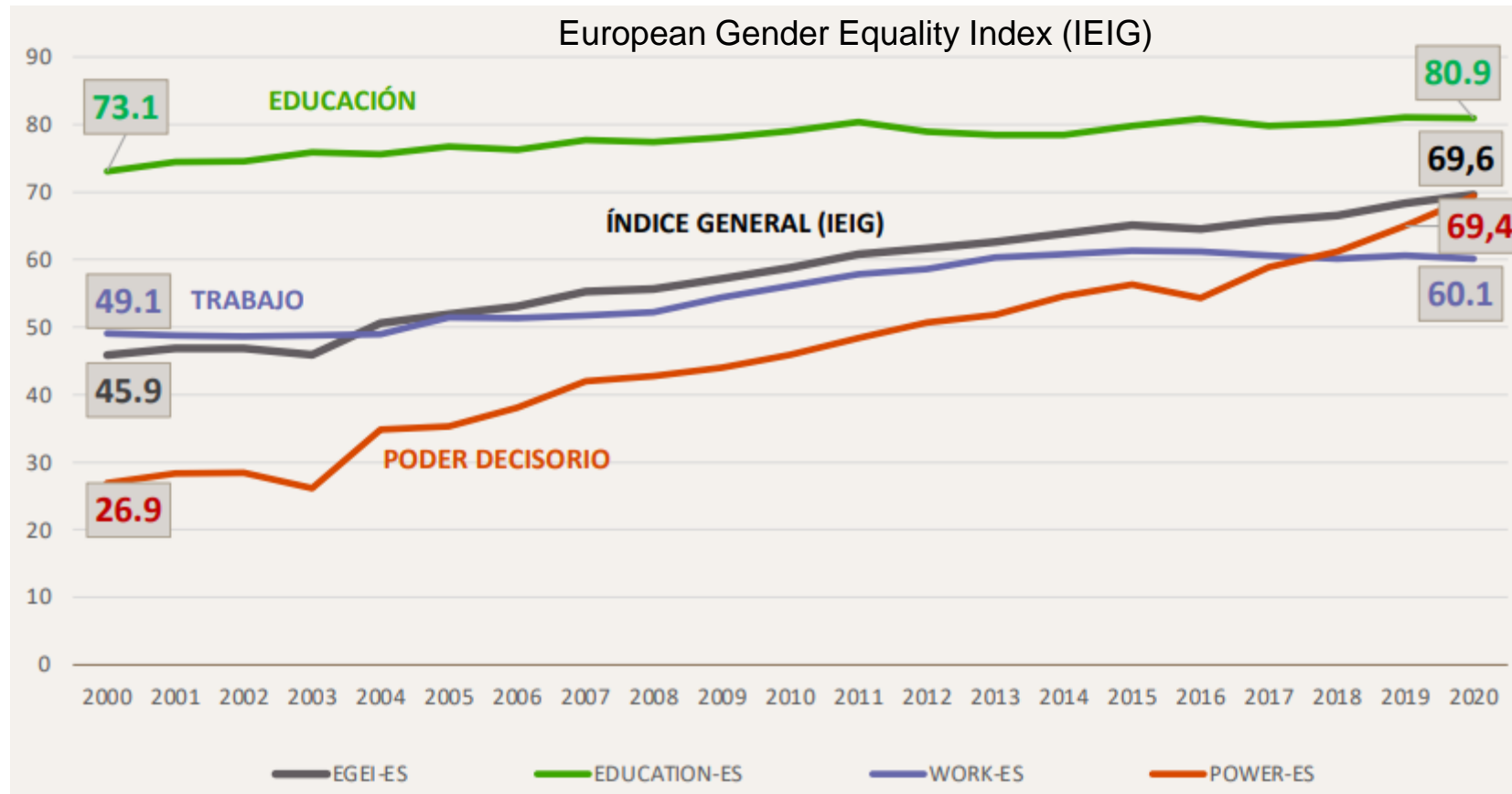


Spearman's ρ among different gender (in)equality measures by Autonomous Communities in Spain



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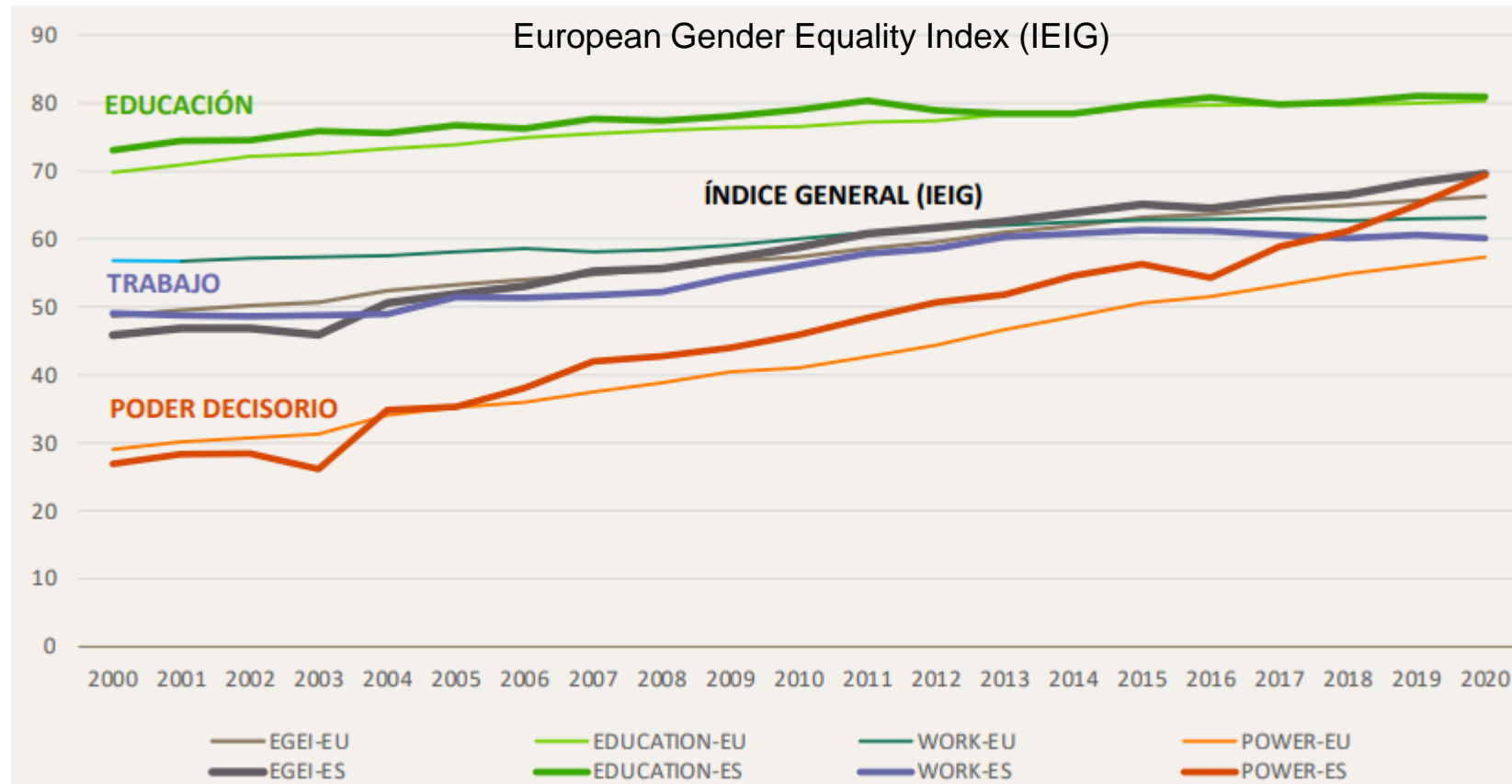
Evolution of the Gender Equality in Spain 2000-2020



Source: Bericat, E.; Camarero, M. (2022). **El progreso de la igualdad de género en España y en Europa durante las dos últimas décadas**. Seminarios del Departamento de Sociología. Universidad de Sevilla, 7 March.

https://www.researchgate.net/publication/359068770_EL_PROGRESO_DE_LA_IGUALDAD_DE_GENERO_EN_ESPANA_Y_EUROPA_DURANTE_LAS_DOS_ULTIMAS_DECADAS

Evolution of the Gender Equality in Spain & European Union 2000-2020



Source: Bericat, E.; Camarero, M. (2022). **El progreso de la igualdad de género en España y en Europa durante las dos últimas décadas**. Seminarios del Departamento de Sociología. Universidad de Sevilla, 7 March.

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