

# **Profiles of tolerance and respect for gender equality among youth. A comparison across countries.**

Using Latent Class Analysis

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# 0 Outline

- ① Introduction
- ② Data
- ③ Method
- ④ Results
- ⑤ Further analysis

# 1 Outline

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# 1 Research questions

- 1 What profiles of attitudes toward gender equality can be distinguished among adolescents in different countries?
- 2 Are these profiles comparable across countries?
- 3 What individual and contextual factors are associated with profile membership?

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## 2 Civic and citizenship education - 2016

The International Civic and Citizenship Education Study (ICCS)

- ▶ **Population:** Grade 8 students
- ▶ **Complex sample design:** Sampling weights, Nested clusters
- ▶ **Complex assessment design:** Plausible values

## 2 Focus

### Countries

- ▶ **Europe:** Belgium (Flanders), Netherlands
- ▶ **South America:** Chile, Colombia

### Items

- ▶ **Attitudes towards gender equality scale** (Agree/Disagree)
  - Men and women should have equal opportunities to take part in government
  - Men and women should have the same rights in every way
  - Not many jobs available, men should have more right to a job than women (r)
  - Men are better qualified to be political leaders than women (r)

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### 3 Methods

- ▶ **Latent Class Analysis:** Can directly assess the theory that distinctive groups of people share specific attitudes.
- ▶ **Multigroup LCA:** To compare the different profiles across groups, at least partial homogeneity is needed.
- ▶ **Logistic regression:** Class membership with student, school and country background factors.

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## 4 Classes identified

### Profiles identified

- ▶ **Fully egalitarian:** Most likely to agree to all items
- ▶ **Competition-driven sexism:** Most likely to disagree to gender competitive items

### Comparability

- ▶ **Partial homogeneity for all classes** between countries in the same region
- ▶ **Partial homogeneity for 2 main classes** between two regions

## 4 Europe - 3 classes

Conditional probabilities Europe

Items	Fully egalitarian	Competition- driven sexism	Not every way egalitarian
Men and women should have equal opportunities to take part in government	<b>0.994</b>	<b>0.933</b>	0.535
Men and women should have the same rights in every way	<b>0.980</b>	<b>0.921</b>	0.000
Not many jobs available, men should have more right to a job than women(r)	<b>0.930</b>	<b>0.172</b>	0.487
Men are better qualified to be political leaders than women(r)	<b>0.899</b>	<b>0.136</b>	0.578
<i>Class estimated size</i>	<b>0.880</b>	<b>0.097</b>	<b>0.023</b>

*Fit statistics*

AIC = 12613, BIC = 12706, aBIC = 12662, Entropy = 0.883

Multigroup fit statistics Europe

Type	Log-Likelihood	AIC	BIC	aBIC	Entropy	LL Reduction
Complete heterogeneity	-10189.88	20437.76	20630.55	20538.40	0.939	
<b>Partial homogeneity</b>	<b>-10204.65</b>	<b>20443.30</b>	<b>20556.31</b>	<b>20502.29</b>	<b>0.871</b>	<b>0.1%</b>
Complete homogeneity	-10242.16	20514.32	20614.03	20566.37	0.945	0.4%

## 4 South America - 4 classes

Conditional probabilities South America

Items	Fully egalitarian	Competition- driven sexism	Not involved	Not every way egalitarian
Men and women should have equal opportunities to take part in government	<b>0.999</b>	<b>1.000</b>	0.706	0.622
Men and women should have the same rights in every way	<b>0.996</b>	<b>0.967</b>	0.656	0.082
Not many jobs available, men should have more right to a job than women(r)	<b>0.895</b>	<b>0.156</b>	0.379	0.942
Men are better qualified to be political leaders than women(r)	<b>0.928</b>	<b>0.007</b>	0.456	0.937
<i>Class estimated size</i>	<b>0.785</b>	<b>0.148</b>	<i>0.041</i>	<i>0.025</i>

Fit statistics

AIC = 25412, BIC = 25550, aBIC = 25490, Entropy = 0.853

Multigroup fit statistics South America

Type	Log- Likelihood	AIC	BIC	aBIC	Entropy	LL Reduction
Complete heterogeneity	-10189.88	20437.76	20630.55	20538.40	0.939	
<b>Partial homogeneity</b>	<b>-10204.65</b>	<b>20443.30</b>	<b>20556.31</b>	<b>20502.29</b>	<b>0.871</b>	<b>0.1%</b>
Complete homogeneity	-10242.16	20514.32	20614.03	20566.37	0.945	0.4%

## 4 Comparability

Conditional probabilities partial homogeneity region multigroup analysis

Item	Europe			South America		
	Fully egalitarian	Competition-driven sexism	Other	Fully egalitarian	Competition-driven sexism	Other
Men and women should have equal opportunities to take part in government	<b>0.997</b>	<b>0.975</b>	0.575	<b>0.997</b>	<b>0.975</b>	0.385
Men and women should have the same rights in every way	<b>0.980</b>	<b>0.948</b>	0.337	<b>0.980</b>	<b>0.948</b>	0.195
Not many jobs available, men should have more right to a job than women(r)	<b>0.947</b>	<b>0.005</b>	0.488	<b>0.947</b>	<b>0.005</b>	0.786
Men are better qualified to be political leaders than women(r)	<b>0.891</b>	<b>0.261</b>	0.503	<b>0.891</b>	<b>0.261</b>	0.736
<i>Class estimated size</i>	<b>0.873</b>	<b>0.087</b>	0.040	<b>0.787</b>	<b>0.188</b>	0.025

Multigroup fit statistics Regions

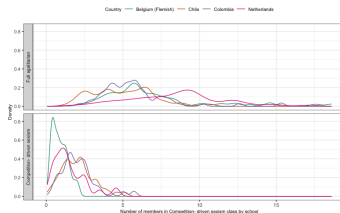
Type	Subtype	Log-Likelihood	AIC	BIC	aBIC	Entropy	LL Reduction
Complete heterogeneity		-29949.65	59957.30	60180.37	60088.21	0.903	
Partial homogeneity	<b>2 classes</b>	<b>-29963.97</b>	<b>59969.94</b>	<b>60131.47</b>	<b>60064.74</b>	<b>0.928</b>	<b>0.0%</b>
	3 classes	-29986.77	60007.54	60138.31	60084.28	0.925	0.1%
Complete homogeneity		-30092.85	60215.71	60331.09	60283.42	0.889	0.4%

## 5 Outline

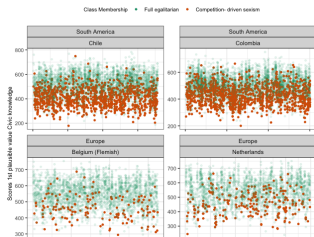
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## 5 Characterization of classes

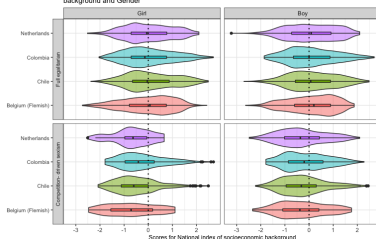
Distribution of number of same class members in the same school



Class membership distribution across civic knowledge



Class membership distribution by National index of socioeconomic background and Gender





## 5 Logistic regression

Predictors	GLM with survey			Multilevel GLM		
	Odds Ratios	CI	p	Odds Ratios	CI	p
Intercept	0.01	0.01 – 0.01	<0.001	0.01	0.00 – 0.02	<0.001
Civic Knowledge [Low Level PV1]	29.26	21.78 – 39.32	<0.001	17.30	16.75 – 17.88	<0.001
Civic Knowledge [Medium Level PV1]	6.15	4.59 – 8.25	<0.001	4.37	4.23 – 4.51	<0.001
Gender [Boy]	2.18	1.91 – 2.49	<0.001	1.88	1.86 – 1.91	<0.001
Paceful protests participation [Not important]	0.93	0.82 – 1.06	0.304	1.14	1.13 – 1.16	<0.001
Religion [With religion]	1.36	1.16 – 1.58	<0.001	1.04	1.02 – 1.05	<0.001
Expected education student [Secondary at most]	0.74	0.63 – 0.87	<0.001	1.28	1.25 – 1.30	<0.001
Immigration [Parents born abroad]	0.77	0.51 – 1.14	0.195	1.94	1.85 – 2.04	<0.001
National Socio Economical Background [Low level]	1.17	0.95 – 1.44	0.130	1.07	1.04 – 1.09	<0.001
National Socio Economical Background [Middle level]	1.04	0.88 – 1.24	0.648	1.03	1.01 – 1.05	0.005
School composition [More disadvantage than affluent students]	1.73	1.45 – 2.06	<0.001	1.74	1.29 – 2.36	<0.001

Random Effects	Multilevel GLM Null	Multilevel GLM
$\sigma^2$	3.29	3.29
$\tau_{00}$	2.85 $id\_s$ IDSCHOOL	2.29 $id\_s$ IDSCHOOL
	0.49 COUNTRY: $id\_s$	0.15 COUNTRY: $id\_s$
	0.22 GROUP:COUNTRY	0.15 GROUP:COUNTRY
	1.36 GROUP	1.06 GROUP
ICC	0.60	0.53
N	2 GROUP	2 GROUP
	4 COUNTRY	4 COUNTRY
	287 $id\_s$	282 $id\_s$
	178 IDSCHOOL	171 IDSCHOOL
Observations	15840	12127

## 5 What is next?

- ▶ It is possible to include more countries in each group?.
- ▶ It is possible to include another group (Asia/Scandinavia)?.
- ▶ Include more items from the same scale?
- ▶ Identify relevant factors that influence the class membership.

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Thank you for your feedback!