

# Comparing Global Gender Inequality Indices:

What can they tell us about development?

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# Gender equality indices

- A range of composite indices have been developed attempting to quantify gender equality or inequality.
- Three gender indices are contrasted in this paper:
  1. The *Global Gender Gap Index* (GGI) - WEF
  2. The *Gender Inequality Index* (GII) - UNDP
  3. The *Social Institutions and Gender Index* (SIGI) - OECD

## Data presentation

Comparison of rankings provided by  
Gender Equality Indices by region

Region	SIGI 2018	GII 2017	GGI 2018	WB index 2018
OECD	1	1	1	1
Europe and Central Asia	2	2	2	2
Latin America and the Caribbean	3	4	3	3
East Asia and the Pacific	4	3	4	4
Sub-Saharan Africa	5	7	5	5
South Asia	6	5	6	6
Middle East and North Africa	7	6	7	7

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# Method – why PCA?

## Objective:

- We want to understand key relationships and implications for development

## Problem:

- We have too many observations and dimensions

## Solution:

- Use PCA to reduce dimensional space to make analyses more effective

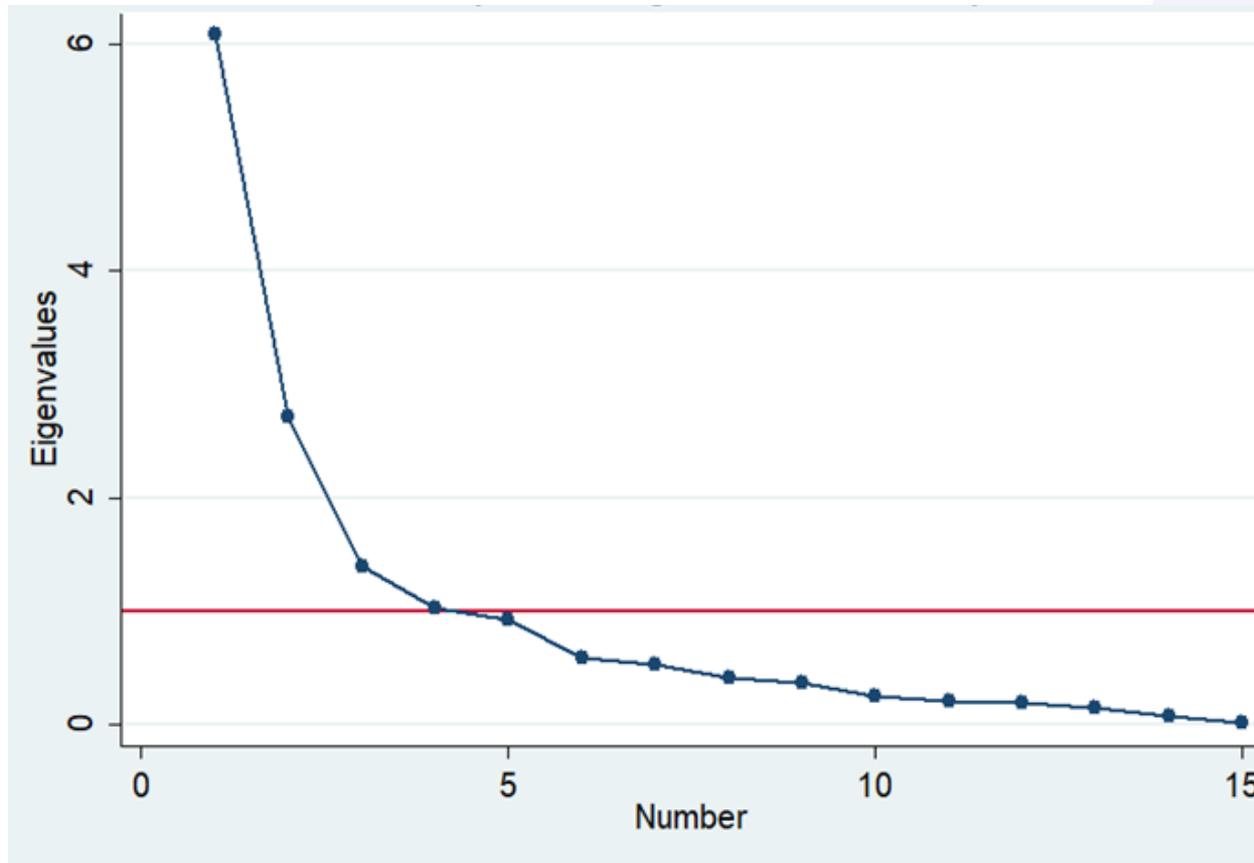
# Data collection

## Summary of gender inequality indices used in the analysis

Variable name	Year	Data Source
Restricted access to productive and financial sources	2018	OECD
Adolescent birth rate	2017	UNDP
Economic participation & opportunity	2017	WEF
Educational attainment	2017	WEF
Female with at least secondary education	2017	UNDP
Restricted physical integrity	2018	OECD
Health and survival	2017	WEF
Labor force participation, male	2017	UNDP
Discrimination in family	2018	OECD
Maternal mortality ratio	2017	UNDP
Political empowerment	2017	WEF
Restricted civil liberties	2018	OECD
Labor force participation rate, female	2017	UNDP
Male with at least secondary education	2017	UNDP
Share of seats in parliament, female	2018	OECD

# Data presentation

Scree plot of eigenvalues of factors after PCA



# Results

Principal components/correlation

Number of obs = 114  
 Number of comp. = 4  
 Trace = 15  
 Rho = 0.7499

Rotation: orthogonal varimax (Kaiser off)

Component	Variance	Difference	Proportion	Cumulative
Comp1	5.55695	3.16671	0.3705	0.3705
Comp2	2.39024	.228401	0.1593	0.5298
Comp3	2.16184	1.02292	0.1441	0.6739
Comp4	1.13891	.	0.0759	0.7499

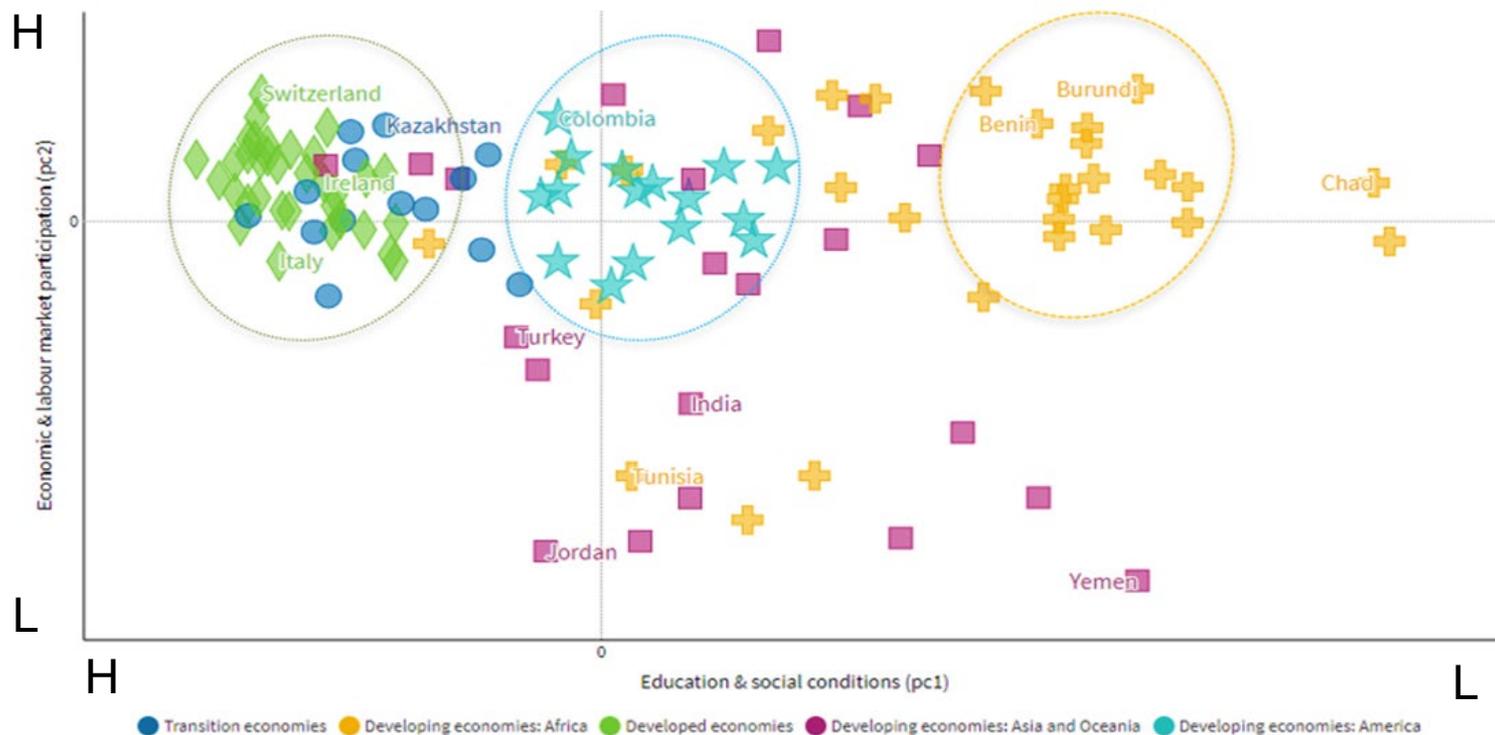
## Retained principal components (eigenvectors)

Factor loadings	Education & Social condition (PC1)	Economic & labour participation (PC2)	Political empowerment (PC3)	Health (PC4)	Other
Female with at least secondary education	-0.408	-	-	-	-
Adolescent birth rate	0.376	-	-	-	-
Educational attainment	-0.307	-	-	-	-
Maternal mortality ratio	0.358	-	-	-	-
Male with at least secondary education	-0.409	-	-	-	-
Labour force participation rate, female	-	0.614	-	-	-
Economic participation & opportunity	-	0.565	-	-	-
Discrimination in family	-	-0.424	-	-	-
Share of seats in parliament, female	-	-	0.643	-	-
Political empowerment	-	-	0.633	-	-
Restricted civil liberties	-	-	-0.309	-	-
Health and survival	-	-	-	0.914	-
Restricted access to productive and financi	-	-	-	-	0.431
Restricted physical integrity	-	-	-	-	0.328
Labour force participation, male	-	-	-	-	-
Proportion in total variance	0.371	0.159	0.144	0.076	0.250

114 countries with data for all 15 sub-indices - sample represents 87 per cent of the world's population.

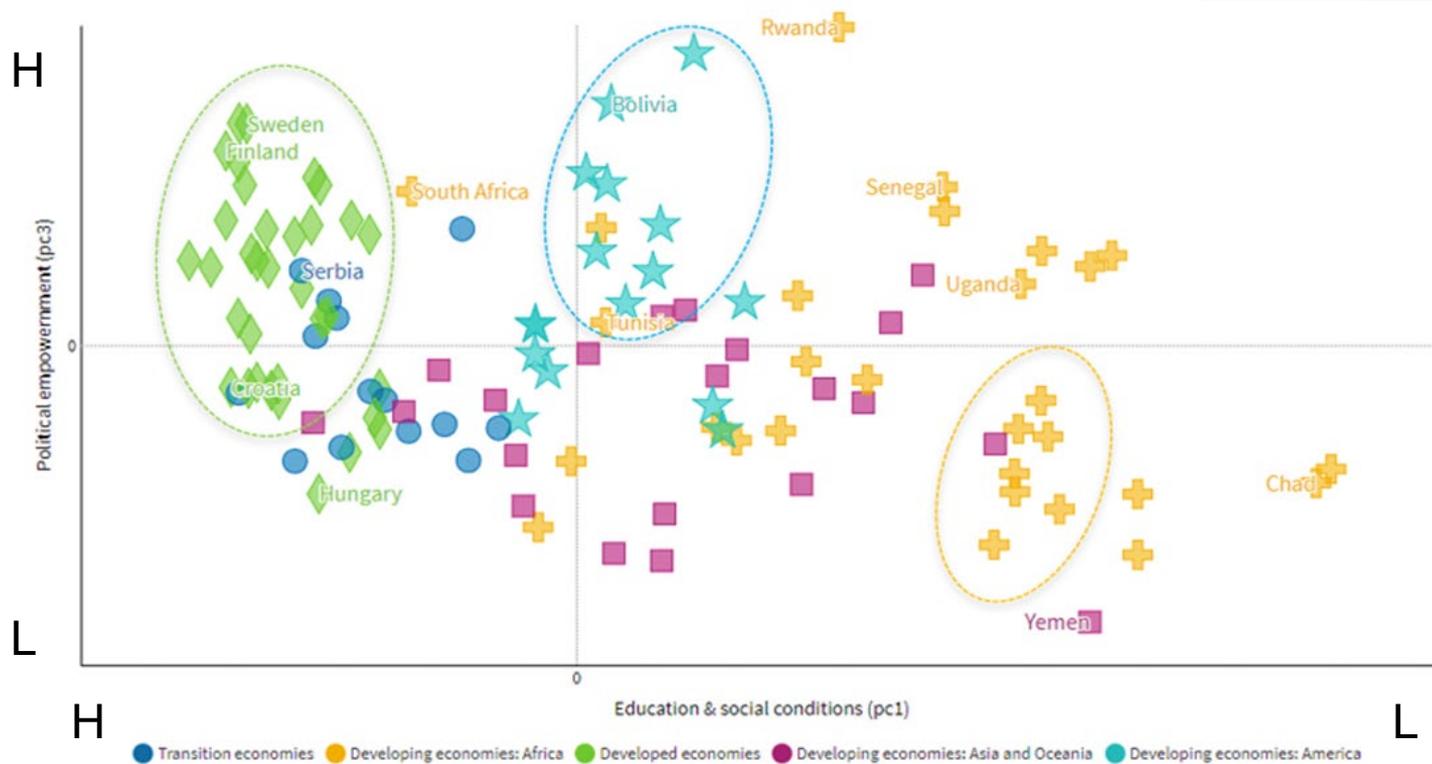
# Analysis #1

Education & social conditions VS  
economic and labour participation



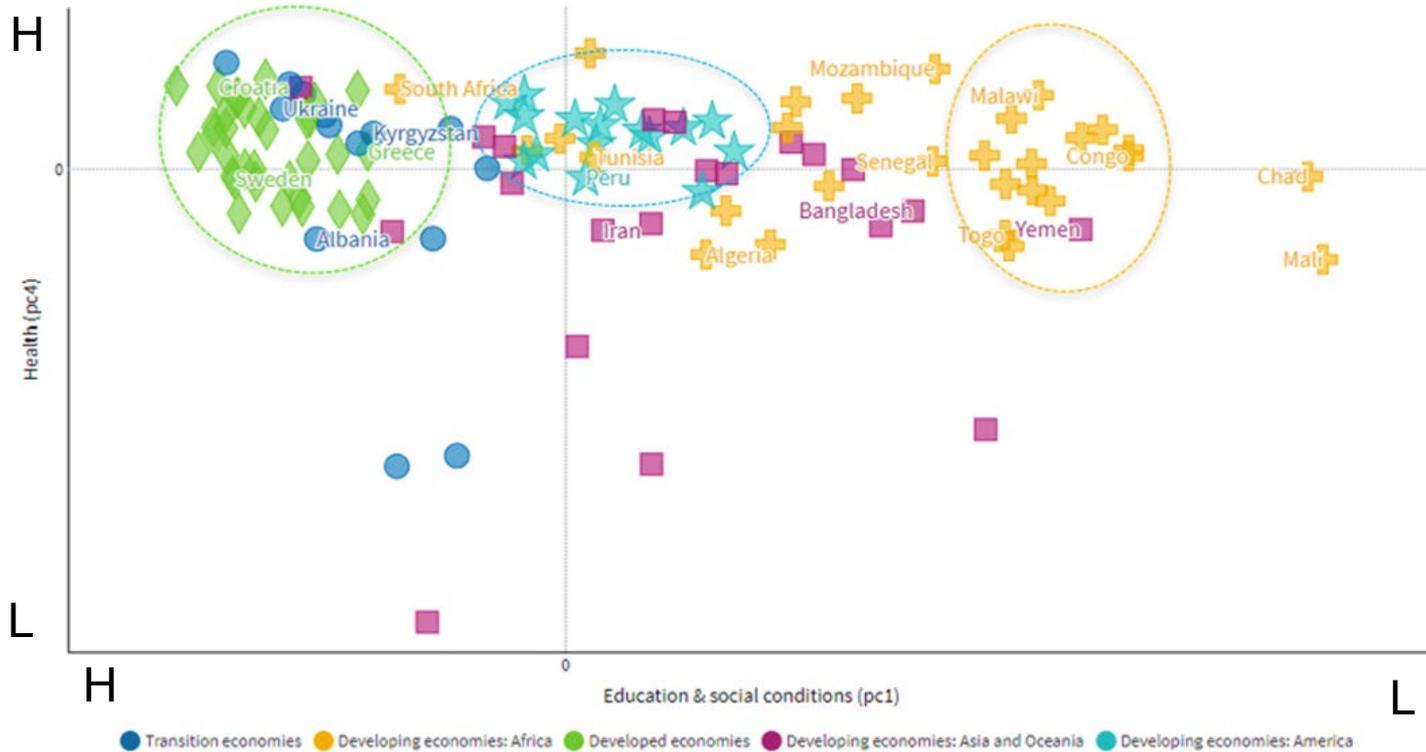
# Analysis #2

## Education & social conditions VS political empowerment



# Analysis #3

## Education & social conditions VS health



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## Relevance to the 2030 Agenda



- **MDGs:** 8 Goals - 21 targets – 60 indicators  
*of which: 13 targets gender related*
  - Mainly health, social conditions & education
  - Only 3 indicators on economic & labour participation
  
- **SDGs:** 17 Goals - 169 targets - 232 indicators  
*of which: 38 targets and 53 indicators gender related*
  - Greater recognition of economic & labour market participation (14 targets - 17 indicators)
  - Political empowerment (3 targets - 4 indicators)
  - Social conditions & education (18 targets - 24 indicators)
  - Health (6 targets - 8 indicators)

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# Conclusions

- Multiple types of gender inequality occur simultaneously within a country
  - Complexity makes effective policy difficult
  - PCA helps to synthesise multiple factors to identify key components of gender equality
- The main factors central to gender equality are:
  1. *Education & social conditions;*
  2. *Economic and labour market participation;*
  3. *Political empowerment; and*
  4. *Health.*
- Principal factors align with SDGs quite well
- Countries must prioritise different factors affecting gender equality to the local context

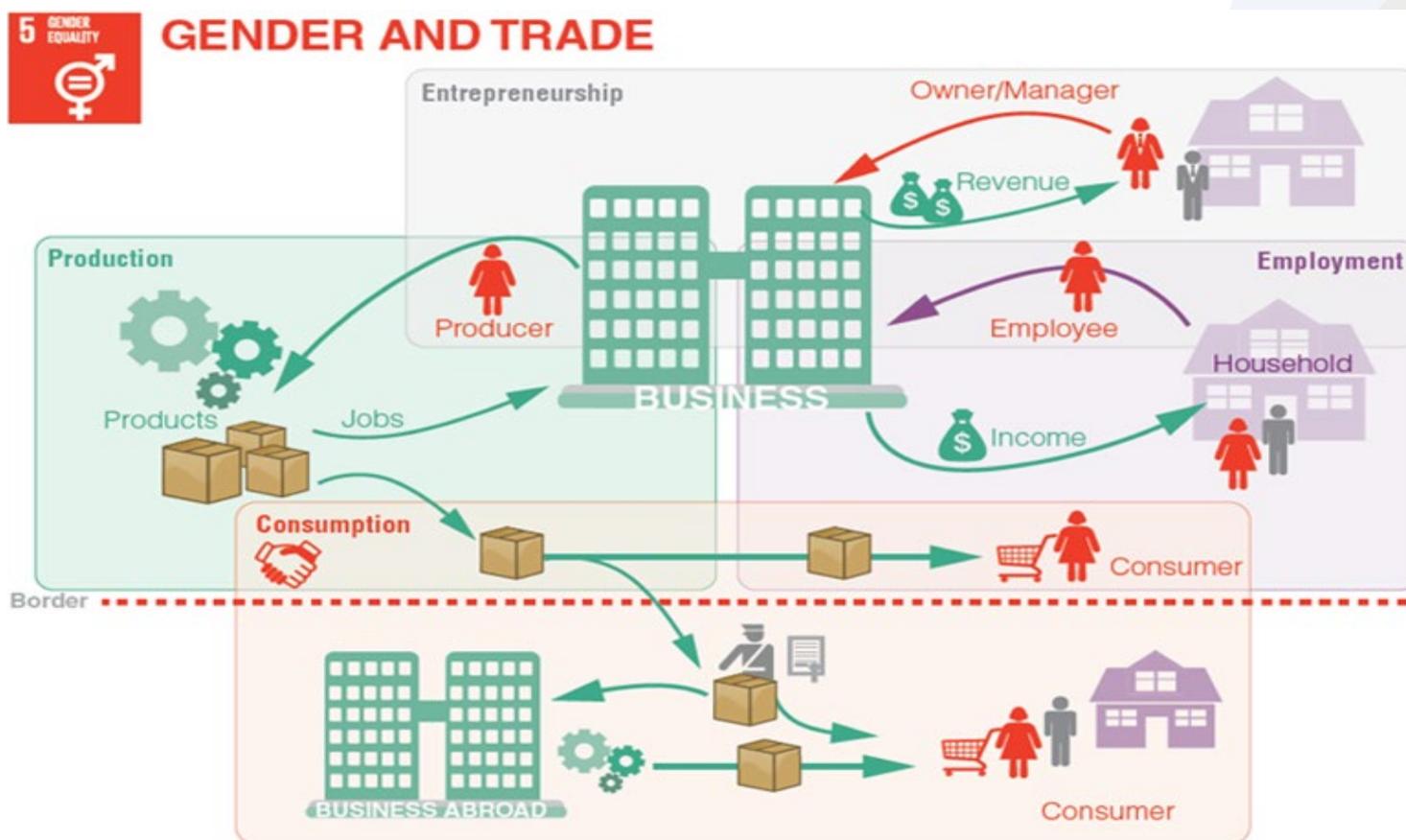
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# Conclusions

- But something is missing...

# Women's empowerment in Trade

Missing from development policy frameworks –



# Thank you

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