

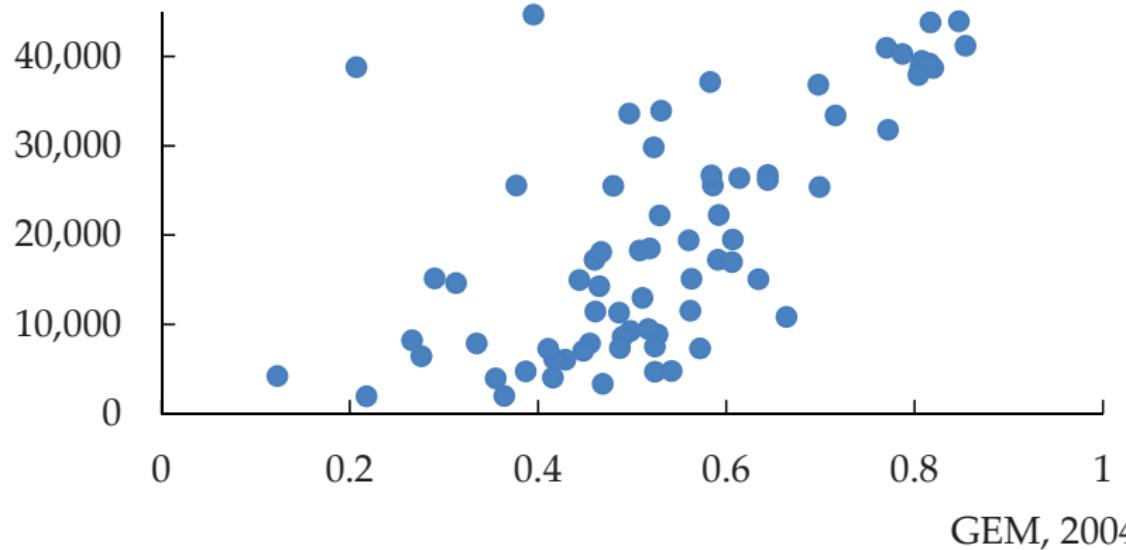
The Economics of Women's Rights

Michèle Tertilt (University of Mannheim)

Marshall Lecture, EEA Meetings in Milano 2022

Female Empowerment Highly Correlated with Development

GDP per capita (\$PPP), 2005



GEM = Gender Empowerment Measure – Index created by the UN

Women in Many Countries Still Lack Basic Rights

Right to ...	% of countries	% low income countries
... sign a contract in same ways as a man	95.8	88.5
... obtain a passport in same ways as a man	75.3	69.2
... work night shift same way as a man	68.9	61.5
... legal protection against domestic violence	24.2	0.0

Data for the year 2000. Various Sources.

Political Economy of Women's Rights

Large literature on consequences of (lack of) women's rights, but less work on the origins of the rights.

- ▶ What are drivers of reforms?
- ▶ How much can economic factors explain?
- ▶ What are the big open questions?

Based on joint work with Matthias Doepe, Hanno Foerster, Anne Hannusch, Laura Montenbruck, and Alessandra Voena.

Structure of the Talk

1. History of women's rights in the United States
2. Mechanisms and existing theories
3. Empirical analysis: women's rights across countries today

History of Women's Rights in the United States

200 Years Ago...



Up until 19th century:
Women lost their legal identity
upon marriage

4 Phases of Women's Rights in the United States

1. Economic Rights

1848

1920

1963

1973

2022



- ▶ Until the mid-19th century, married women could not sign a contract, own property, or decide how family money was spent.
- ▶ This changed with the Married Women's Property Act of New York, 1848, which became a model for other states.



Ernestine Rose (1810) fought for women's property rights in New York.

4 Phases of Women's Rights in the United States

2. Political Rights

1848

1920

1963

1973

2022



Universal Female Suffrage, 1920



The **Woman Suffrage party** opened its headquarters in 1913 in Ohio.



Headquarters of the National Association Opposed to Woman Suffrage.

4 Phases of Women's Rights in the United States

3. Labor Market Rights

1848

1920

1963

1973

2022



John F. Kennedy signs the Equal Pay Act into law on June 10, 1963.

- ▶ Equal Pay Act, 1963
- ▶ The act made it illegal for employers to pay women and men differently for the same work.

4 Phases of Women's Rights in the United States

4. Body Rights

1848

1920

1963

1973

2022



Members of the Supreme Court on April 20, 1972

- ▶ Example: Rights to abortion
- ▶ Roe v Wade, 1973
- ▶ Supreme Court Ruling: 14th Amendment provides a fundamental "right to privacy" → protects right to abortion

4 Phases of Women's Rights in the United States

4. Body Rights

1850-1900

1920

1963

1973

2022



- ▶ Gains in women's rights is not a linear process
- ▶ Dobbs v Jackson Women's Health Organization, 2022
- ▶ abortion is not a constitutional right
→ states have authority to regulate access to abortion



Supreme Court (October 2020 to June 2022)

Mechanisms and Existing Theories

Can Economics Explain the Expansion of Women's Rights?

- ▶ Need to explain political preferences:
Who gains and who loses from women's rights?
- ▶ Which specific channels matter for political preferences?
- ▶ How important are economic drivers relative to alternatives such as “culture” or “enlightenment”?
- ▶ What are the big open questions?

Political Economy of Women's Rights

Political views founded in individual preferences.
Use simple model to illustrate main mechanisms.

1. Bargaining power channel
2. Parental altruism channel
3. Income channel
4. Public policy channel

Political Economy of Women's Rights

Political views founded in individual preferences.

Use simple model to illustrate main mechanisms.

Individual of gender $g \in \{f, m\}$ has utility:

$$V_g(h_f, h_m, X) = u_g(c_g, 1 - n_g, G) + \gamma_g V_C(h_C, X')$$

h_g : human capital

c_g : consumption

n_g : labor supply

G : public good

γ_G : parental altruism

V_C, h_C : children's utility and human capital

X : legal regime (women's rights)

1. Bargaining Power Channel

Women's rights affect bargaining power and intra-household distribution within couples.

$$V_g(h_f, h_m, X) = u_g(c_g, 1 - n_g, G) + \gamma_g V_C(h_C, X')$$

s.t.:

$$c_f = S_f(h_f, h_m, X)I(h_f, h_m, X)$$

$$c_m = (1 - S_f(h_f, h_m, X))I(h_f, h_m, X)$$

...

Greater women's rights increase wives' bargaining power (e.g. through better outside options).

Channel suggests that women support women's rights, and men oppose women's rights.

2. Parental Altruism Channel

Women's rights affect investment in children and children's future welfare.

$$V_g(h_f, h_m, X) = u_g(c_g, 1 - n_g, G) + \gamma_g V_C(h_C, X')$$

s.t.:

$$h_C = F(h_f, h_m, \textcolor{red}{X})$$

$$V_C(h_C, X') = \frac{1}{2} (V_f(h'_f, \textcolor{red}{X'}) + V_m(h'_m, \textcolor{red}{X'}))$$

...

Political preferences depend on:

- ▶ Importance of human capital investment for children's welfare.
- ▶ Equity concerns for one's children.
- ▶ Number of daughters vs. sons.

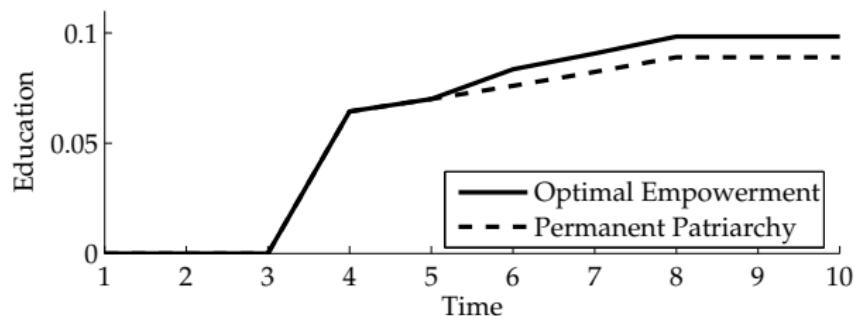
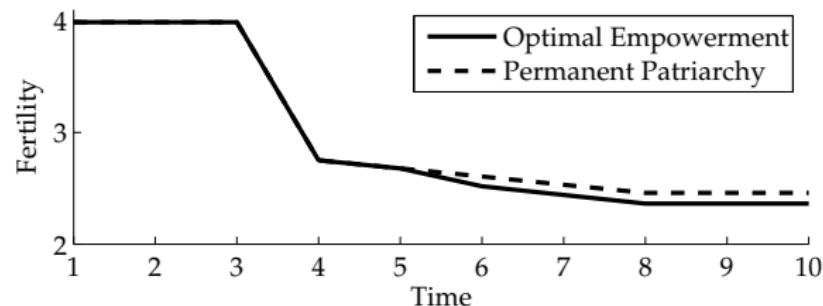
Historical Expansion of Economic Rights in US

Doepke & Tertilt, QJE 2009

- ▶ Starting point: economic rights proceeded political rights.
- ▶ What was the incentive of men to share power with women?
- ▶ Formal model where men vote on women's rights.
- ▶ Men prefer own wife to have no rights (**bargaining channel**).
But want rights for daughters and other women in the economy (**parental altruism channel**).
- ▶ Rises in returns to HK changes trade-off between the two channels and triggers reform.

Computed Example of Optimal Empowerment

(returns to education assumed to increase over time)



3. Income Channel

(Some) women's rights affect women's labor supply, and hence family income, and possibly wages.

$$V_g(h_f, h_m, X) = u_g(c_g, 1 - n_g, G) + \gamma_g V_C(h_C, X')$$

s.t.:

$$I(h_f, h_m, X) = n_f h_f w_f(X) + n_m h_m w_m(X)$$

...

Political preferences depend on:

- ▶ Own and spouses' labor supply.
- ▶ Substitutability of own labor with women's labor.

Political support **does not** primarily depend on gender; e.g., men with working spouses and men whose labor is complementary to women's labor benefit from more rights.

Alternative Theory Based on Income Channel

Geddes and Lueck (AER 2002)

- ▶ Emphasis on women's role in the labor market.
- ▶ Men get larger consumption share when women have no rights (**bargaining channel**), but transaction costs in the family reduce family income.
- ▶ Total family income larger when women have more rights (**income channel**).
- ▶ Reforms triggered by increases in the returns to female market work.

Income Channel Also Important for Labor Rights

Foerster, Hannusch, Doepke and Tertilt (work in progress)

- ▶ Many restrictive labor laws were introduced between 1880 and 1940.
- ▶ Precisely at a time where women were starting to enter the formal labor force.
- ▶ Increased competition in the labor market (**income channel**) led a majority of men to favor restrictive labor legislation.
- ▶ Paper is about introduction, not removal of discriminatory labor laws.

4. Public Policy Channel

Women's (voting) rights affect majorities and hence public policy.

$$V_g(h_f, h_m, X) = u_g(c_g, 1 - n_g, \textcolor{red}{P}) + \gamma_g V_C(h_C, X')$$

s.t.:

$$\textcolor{red}{P} = F(h_f, h_m, \textcolor{red}{X})$$

...

Political preferences depend on:

- ▶ Similarity of own preference for public goods and taxes with women's preferences.

Technological change and increases in FLFP can reduce gender gap in preferences for public goods/taxes.

Historical Expansion of Political Rights

Bertocchi (EER 2011)

- ▶ Gender differences in the optimal tax rate
(public policy channel).
- ▶ Small preference in favor of women's rights
(altruism channel).
- ▶ Decline in the gender wage gap reduced the gender difference in the optimal tax rate and thus triggers reform.

Summary of Theories of Women's Rights

Legal Rights about	Historical Reforms	Cross-Section Today
economic	Geddes and Lueck (2002) Doepke and Tertilt (2009), Fernandez (2014)	?
political	Jones (1991), Bertocchi (2011) Braun and Kvasnicka (2013)	?
labor	Foerster, Hannusch, Doepke and Tertilt (in progress)	?
own body	?	several papers in sociology

Empirical Analysis: Women's Rights Across Countries Today

Empirical Analysis of Women's Rights Across Countries

- ▶ We use the World Bank's "Women, Business, and the Law database" as a starting point.
- ▶ Panel data for 190 countries, 1970-2020.
- ▶ Data on many specific laws.
- ▶ Add information from other sources (especially on suffrage and abortion rights).
- ▶ Construct one overall rights index, and 4 sub-indices: economic, political, labor & body rights.
- ▶ Each index based on multiple rights (each 0-1).

Index of Rights – Definitions

Economic Rights based on 16 distinct laws

- ▶ Can a woman sign a contract in the same way as a man?
- ▶ Can a woman open a bank account in the same way as a man?

Political Rights based on 3 legal rights

- ▶ Suffrage (right to vote)
- ▶ Right to stand for election

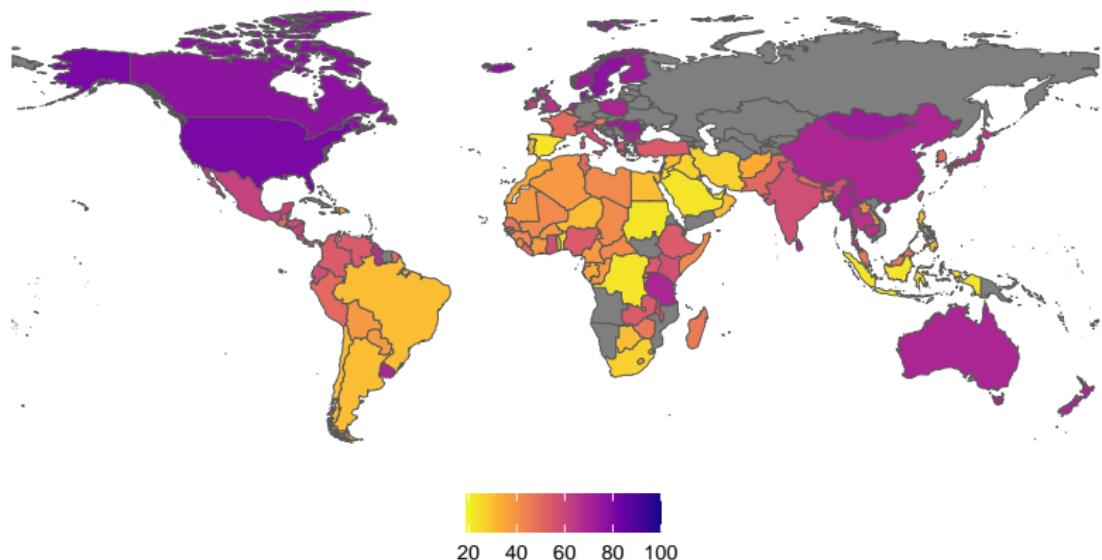
Labor Rights based on 6 different labor market laws

- ▶ Can a woman get a job in the same way as a man?
- ▶ Does the law prohibit discrimination in employment based on gender?

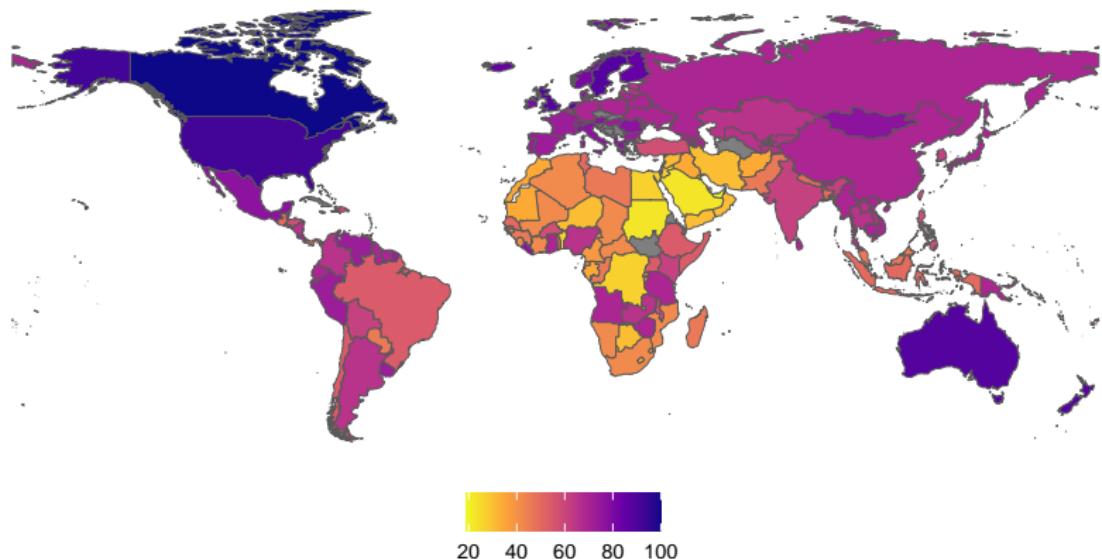
Body Rights based on 4 types of rights

- ▶ Is there legislation on sexual harassment in employment?
- ▶ Is there legislation specifically addressing domestic violence?

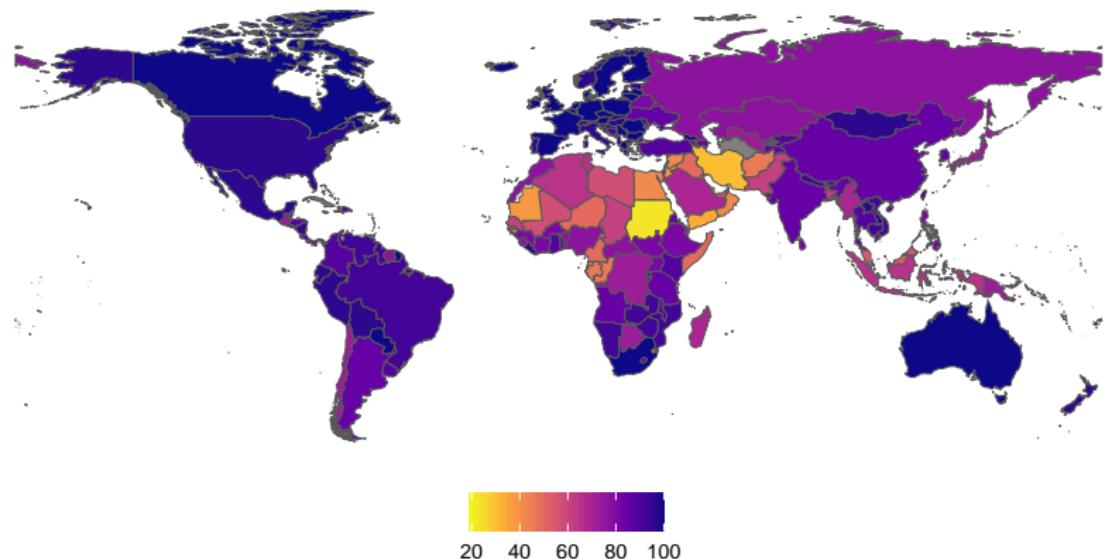
Women's Rights in 1971



Women's Rights in 1991

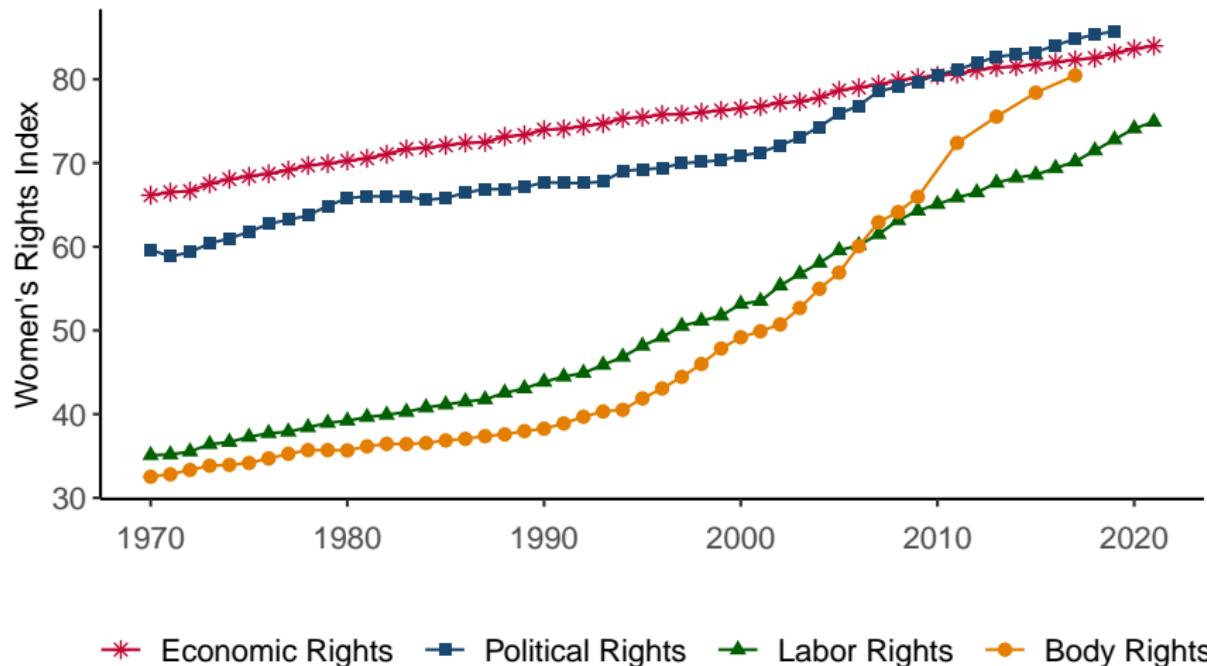


Women's Rights in 2019



Worldwide Increase in Women's Rights

All types of rights have increased steadily over the last 50 years.



Cross-Country Regression Analysis

- ▶ OLS regressions with and w/o country and time fixed effects.
- ▶ Separate regression for each of the 4 indices as outcome variable.
- ▶ Explanatory variables considered:
 - ▶ economics: GDP, TFR, FLFP
 - ▶ “culture:” religion/country fixed effects
 - ▶ “enlightenment:” time fixed effects

1. Economic Rights: Regression Results

	Dependent Variable: Economic Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.3***	-0.1	0.0	-0.1	0.0
Total fertility rate		-7.0***	-2.0***	-6.6***	-6.4***
FLFP (% total LFP)		115.9***	47.4***	99.5***	89.0***
B. Interactions with Religion					
Majority Catholic × GDP p.c.					0.0
Majority Muslim × GDP p.c.					-0.5***
Majority Buddhist × GDP p.c.					-0.3*
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7796	5027	5027	3590	3590
Adjusted R^2	0.057	0.581	0.935	0.580	0.597

Economic rights highly correlated with development,
but explains little variation in the data.

1. Economic Rights

	Dependent Variable: Economic Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.3***	-0.1	0.0	-0.1	0.0
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TFR and FLFP account for much of the variation in the data
(points to income channel and parental altruism channel).

1. Economic Rights

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	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.3***	-0.1	0.0	-0.1	0.0
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Adjusted R^2	0.057	0.581	0.935	0.580	0.597

Culture and (much less) enlightenment explain the rest.

1. Economic Rights

	Dependent Variable: Economic Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.3***	-0.1	0.0	-0.1	0.0
Total fertility rate		-7.0***	-2.0***	-6.6***	-6.4***
FLFP (% total LFP)		115.9***	47.4***	99.5***	89.0***
B. Interactions with Religion					
Majority Catholic × GDP p.c.					0.0
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Majority Buddhist × GDP p.c.					-0.3*
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7796	5027	5027	3590	3590
Adjusted R^2	0.057	0.581	0.935	0.580	0.597

Adding religion does not change much.

1. Economic Rights

	Dependent Variable: Economic Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.3***	-0.1	0.0	-0.1	0.0
Total fertility rate		-7.0***	-2.0***	-6.6***	-6.4***
FLFP (% total LFP)	115.9***	47.4***	99.5***	89.0***	
B. Interactions with Religion					
Majority Catholic × GDP p.c.					0.0
Majority Muslim × GDP p.c.					-0.5***
Majority Buddhist × GDP p.c.					-0.3*
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7796	5027	5027	3590	3590
Adjusted R^2	0.057	0.581	0.935	0.580	0.597

But religion slows down the (positive) effect of development.

2. Political Rights

	Dependent Variable: Political Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.1	0.0	-0.3***	0.0	0.2**
Total fertility rate		-2.3***	-1.4***	-1.6**	-1.4**
FLFP (% total LFP)		73.3***	81.9***	75.7***	54.3***
B. Interactions with Religion					
Majority Catholic × GDP p.c.					-0.2
Majority Muslim × GDP p.c.					-1.1***
Majority Buddhist × GDP p.c.					-0.5**
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7138	4714	4714	3538	3538
Adjusted R^2	0.009	0.164	0.774	0.220	0.309

Political rights not correlated with GDP, but correlation with TFR and FLFP significant. Account for less of the variation compared to economic rights. Religion relatively more important.

2. Political Rights

	Dependent Variable: Political Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.1	0.0	-0.3***	0.0	0.2**
Total fertility rate		-2.3***	-1.4***	-1.6**	-1.4**
FLFP (% total LFP)		73.3***	81.9***	75.7***	54.3***
B. Interactions with Religion					
Majority Catholic × GDP p.c.					-0.2
Majority Muslim × GDP p.c.					-1.1***
Majority Buddhist × GDP p.c.					-0.5**
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7138	4714	4714	3538	3538
Adjusted <i>R</i> ²	0.009	0.164	0.774	0.220	0.309

Religion continues to interact with development.

3. Labor Rights

	Dependent Variable: Labor Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.6***	0.4***	-0.3***	0.4***	0.6***
Total fertility rate		-4.3***	1.8***	-2.2**	-2.0**
FLFP (% total LFP)	111.0***	-19.2	69.5***	49.3***	
B. Interactions with Religion					
Majority Catholic × GDP p.c.					-0.3
Majority Muslim × GDP p.c.					-1.1***
Majority Buddhist × GDP p.c.					-0.8***
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	7796	5027	5027	3590	3590
Adjusted R^2	0.123	0.322	0.835	0.385	0.432

Largely similar results as for economic rights. Effect of GDP continues to be significant even after adding TFR and FLFP.

4. Body Rights

	Dependent Variable: Body Rights Index				
	(1)	(2)	(3)	(4)	(5)
A. Economic Variables					
GDP p.c. (in 1000s)	0.5***	0.2***	0.3***	0.3***	0.3***
Total fertility rate		-6.0***	2.2***	-4.4***	-4.2***
FLFP (% total LFP)		60.0***	21.5	43.1***	34.1**
B. Interactions with Religion					
Majority Catholic × GDP p.c.					0.2
Majority Muslim × GDP p.c.					-0.4***
Majority Buddhist × GDP p.c.					-0.3
Time FEs	No	No	Yes	Yes	Yes
Country FEs	No	No	Yes	No	No
Religion FEs	No	No	No	Yes	Yes
Observations	5895	3615	3615	3149	3149
Adjusted R^2	0.099	0.286	0.790	0.434	0.444

Time FEs (enlightenment?) more important than for other rights.
Effect of religion larger than for other rights.

Summary of Findings

- ▶ All rights (except for political) correlated with GDP pc.
- ▶ FLFP and fertility highly correlated with women's rights (suggestive for income and parental altruism channels).
- ▶ Economics interacts with culture: Certain religions appear to slow down effectiveness of economic channels.
- ▶ Economic channels most important for economic rights, then labor rights, then body rights, then political rights.
- ▶ Body rights: effect of time FE and muslim religion particularly large.

Robustness Checks

These results do not depend on:

- ▶ Sample size differences
- ▶ Controlling for OPEC memberships
- ▶ Inclusion of time FEs
- ▶ The order in which we add economic vs. religious variables

Factors Specific to Individual Laws

We included in the baseline regression several other factors (one at a time): +/- indicates the sign of a significant coefficient.

Factor/Law	Economic	Political	Labor	Body
Female Population Share				
Employment Share Agriculture		-		
Membership in int. Women NGOs				+
% Women in Parliament	+	n/a	+	+
Government Effectiveness				+

Conclusion and Open Questions

Economic channels are important!

- ▶ They explain much of the historical expansion of women's economic rights.
- ▶ Empirical analysis suggests that economic factors important for understanding cross-country differences in rights.

But many open questions:

- ▶ No application of economic models to cross-section so far.
- ▶ Little work on different types of rights yet.
- ▶ No models of reversals, lack of enforcement, male backlash.

Appendix

Index of Rights – Definitions

Economic Rights

Index based on 16 distinct laws, for example

- ▶ Can a woman obtain a divorce in the same way as a man?
- ▶ Can a woman open a bank account in the same way as a man?
- ▶ Can woman be head of household in same way as a man?

Political Rights

Index based on 3 legal rights

- ▶ Suffrage (right to vote)
- ▶ Right to stand for election
- ▶ Indicator if share of 20% women in parliament was ever surpassed

Index of Rights – Definitions

Labor Rights

Index based on 6 different labor market laws, for example

- ▶ Can a woman get a job in the same way as a man?
- ▶ Does the law prohibit discrimination in employment based on gender?

Body Rights

Index based on 4 types of rights, for example

- ▶ Are there criminal penalties or civil remedies for sexual harassment in employment?
- ▶ Is there legislation specifically addressing domestic violence?
- ▶ Right to obtain an abortion