

# Perceptions of Relative Deprivation and Women's Empowerment

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# Introduction

## Research Question

How do perceptions of ones relative economic status affect **gender attitudes**? We consider support for:

- ▶ Women's economic participation
- ▶ Women's empowerment with respect to decision-making in their community and home

## Motivation

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- ▶ Little knowledge of how inequality and feelings of relative deprivation affect women's empowerment
  - ▶ Feelings of relative economic vulnerability can engender social intolerance (Andersen and Fetner, 2008; Healy et al., 2017) and thus reduce support for women's empowerment
  - ▶ But economic vulnerability can also make the benefits of women's empowerment more salient:
    - ▶ More household income and efficient land management: Goldstein and Udry (2008), Seymour (2017), Dillon and Voena (2018)
    - ▶ Better health, nutrition, and education outcomes: Beegle et al. (2001), Smith and Haddad (2001), Smith et al. (2003), Qian (2008), Lépine and Strobl (2013), Sraboni et al. (2014) Dinçer et al. (2014), Imai et al. (2014), Ekbrand and Halleröd (2018),



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- ▶ Attributing causality is challenging (Forsythe et al., 2000; Duflo, 2012; Kabeer and Natali, 2013)

Papua New Guinea (PNG) survey and experiment

## The context: Papua New Guinea (PNG)

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- ▶ 87 percent of the population living in rural areas (Bourke and Harwood, 2009)
- ▶ Poverty rate of 40 percent (Gibson, 2012)
- ▶ Gender relations:
  - ▶ Domestic violence and aggression towards women and girls (Bradley and Kesno, 2001; Eves et al., 2010; Jolly et al., 2012; Wardlow, 2006)
  - ▶ Men: Major owner of agricultural assets and decision-makers over economic activities
  - ▶ Women: Not inhibited from working and earning money outside of the household; comprise 85 percent of good/ good vendors (Stanley, 2018)
  - ▶ Women are still responsible for defined female roles, which affects their decisions regarding off-farm work (Overfield, 1998; Eves et al., 2018; Koczberski, 2007)

## The 2018 PNG survey

- ▶ The Papua New Guinea Household Survey on Food Systems
- ▶ Sample: 1,372 individuals (779 women, 593 men) from 884 different households in 4 survey areas (East Sepik, West Sepik, Madang, and the Autonomous Region of Bougainville), randomized into treatment
- ▶ Gender module (completed by both the household head and their spouse), which began with a priming experiment

## The priming experiment

- ▶ Individuals' perceptions of their relative economic standing can be influenced by researchers (Haisley et al., 2008; Mo, 2012; Healy et al., 2017; Mo, 2018)
- ▶ Ask: "Annual income is the amount of cash income you earn from all agricultural and non-agricultural activities. It includes the approximate value of items that you produce and consume as a family or give as a gift, or which you have sold. How much income did your family earn last year in KINA?"

Income Bracket	Control (No Poverty Prime)	Treatment (Poverty Prime)
1	0-250 kina	0-2,000 kina
2	251-500 kina	2,001-4,000 kina
3	501-1,500 kina	4,001-8,000 kina
4	1,501-3,000 kina	8,001-16,000 kina
5	More than 3,000 kina	More than 16,000 kina

Control: feel that their income was more typical (at the median)

Treatment: feel as if their income was in the bottom of the income distribution

Empirical strategy

## Empirical strategy

$$G_{ijse} = \beta_0 + \beta_1 P_{ijse} + \beta_2 \mathbf{X}_{ijse} + \omega_e + \phi_s + \epsilon_{ijse} \quad (3.1)$$

- ▶  $i$  indexes individuals,  $j$  indexes households,  $s$  indexes communities, and  $e$  indexes enumerators
- ▶  $G_{ijse}$  is the extent of disagreement or agreement with a gender-related statement (on a scale from 1 to 5)
  - ▶ Re-coded so larger values indicate more egalitarian/ progressive gender attitudes
  - ▶ Standardized using mean and standard deviation of control group
- ▶  $P_{ijse}$  is a dummy for receiving a poverty prime
- ▶  $\mathbf{X}_{ijse}$  is a vector of individual-, household-, and community-level controls with imbalance across treatment and control groups



## Main Outcomes: Gender attitudes (1–5 scale), Part I

### *Attitudes toward women's economic participation*

- ▶ Extent of disagreement - In your opinion, when money is scarce, to what extent should boys have more education than girls? (“Prioritize boys for education”)
- ▶ Extent of disagreement - In your opinion, if jobs are scarce, to what extent should they be reserved for men rather than women? (“Reserve jobs for men”)

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### *Attitudes about women's role in decision-making*

- ▶ Extent of disagreement - In your opinion, to what extent should men have the final word about decisions affecting the community? (“Men should make community decisions”)
- ▶ Extent of disagreement - In your opinion, to what extent should a husband make all the decisions in the household about how to manage assets like farm equipment? (“Husband should manage household assets”)

## Main Outcomes: Gender attitudes (1–5 scale), Part II

### *Attitudes about how women's work affects others*

- ▶ Extent of disagreement - If a women earns money outside the home, a man somewhere will be less able to provide for his own family. (“Women crowd out men for jobs”)
- ▶ Extent of disagreement - When a wife earns money through work outside the home, her children are negatively affected. (“Women’s work harms children”)

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### *Degree of Social Conservatism*

- ▶ Extent of disagreement - A good woman always supports her husband's opinions. (“Women should support husband's opinions”)
- ▶ Extent of disagreement - In your opinion, to what extent is it important for young women to abide by traditions, and behave like their mothers generation (labeled Young women should abide by tradition. (“Young women should abide by tradition”)

## Results

Table 4.1: Effect of the poverty prime on attitudes toward women's economic participation

	Extent of disagreement...					
	"Prioritize boys for education"			"Reserve jobs for men"		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Controls added iteratively</i>						
Basic covariates with imbalance	x	x	x	x	x	x
Enumerator FE		x	x		x	x
Community FE			x			x
<i>Panel A: Women</i>						
Dummy - poverty prime	0.061 (0.072)	0.091 (0.069)	0.078 (0.071)	0.120 (0.078)	0.137* (0.075)	0.144* (0.077)
Control group mean	0.019	0.019	0.019	0.017	0.017	0.017
R <sup>2</sup>	0.120	0.239	0.336	0.075	0.199	0.314
N	752	752	752	747	747	747
<i>Panel B: Men</i>						
Dummy - poverty prime	0.199** (0.091)	0.163* (0.085)	0.209** (0.089)	0.156* (0.087)	0.134 (0.082)	0.181** (0.086)
Control group mean	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013
R <sup>2</sup>	0.066	0.251	0.378	0.073	0.231	0.359
N	561	561	561	559	559	559

Notes: Standard errors are in parentheses. \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .

Table 4.2: Effect of the poverty prime by pre-treatment perceptions of relative poverty (POP)

	Extent of disagreement...			
	Economic participation		Community and household decision-making	
	"Prioritize boys for education"	"Reserve jobs for men"	"Men should make community decisions"	"Husband should manage household assets"
	(1)	(2)	(3)	(4)
<i>Panel A: Women</i>				
Treatment effect, average or above POP	0.123	0.207**	0.01	0.225***
P-value (average or above)	0.129	0.018	0.893	0.004
Control group mean: average or above POP	-0.020	-0.078	0.046	0.239
Treatment effect, below average POP	-0.070	-0.067	0.003	-0.150
P-value (below average)	0.630	0.669	0.985	0.288
Control group mean: below average POP	0.032	0.050	-0.083	-0.138
$R^2$	0.336	0.317	0.297	0.346
N	752	747	777	762
<i>Panel B: Men</i>				
Treatment effect, average or above POP	0.251**	0.240**	0.081	0.014
P-value (average or above)	0.013	0.013	0.368	0.875
Control group mean: average or above POP	0.026	-0.002	0.240	0.344
Treatment effect, below average POP	0.082	-0.012	0.188	0.172
P-value (below average)	0.662	0.949	0.278	0.328
Control group mean: below average POP	-0.025	-0.016	0.012	0.005
$R^2$	0.378	0.361	0.486	0.465
N	561	559	578	576

Notes: Standard errors are in parentheses. \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .

Table 4.3: Effect of the poverty prime on attitudes about women's role in decision-making

	Extent of disagreement...					
	"Men should make community decisions"			"Husband should manage household assets"		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Controls added iteratively</i>						
Covariates with imbalance	x	x	x	x	x	x
Enumerator FE		x	x		x	x
Community FE			x			x
<i>Panel A: Women</i>						
Dummy - poverty prime	0.019 (0.070)	0.032 (0.068)	0.008 (0.068)	0.116* (0.070)	0.131* (0.067)	0.139** (0.069)
Control mean	-0.051	-0.051	-0.051	-0.046	-0.046	-0.046
R <sup>2</sup>	0.033	0.155	0.297	0.120	0.251	0.340
N	777	777	777	762	762	762
<i>Panel B: Men</i>						
Dummy - poverty prime	0.177** (0.085)	0.093 (0.075)	0.101 (0.080)	0.036 (0.086)	-0.017 (0.075)	0.039 (0.081)
Control mean	0.063	0.063	0.063	0.080	0.080	0.080
R <sup>2</sup>	0.182	0.415	0.485	0.158	0.402	0.466
N	578	578	578	576	576	576

Notes: Standard errors are in parentheses. \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .



Table 4.4: Effect of the poverty prime on opinions about how women's work affects others

	Extent of disagreement...					
	"Women crowd out men for jobs"			"Women's work harms children"		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Controls added iteratively</i>						
Basic covariates with imbalance	x	x	x	x	x	x
Enumerator FE		x	x		x	x
Community FE			x			x
<i>Panel A: Women</i>						
Dummy - poverty prime	0.002 (0.076)	-0.005 (0.076)	0.025 (0.078)	0.070 (0.079)	0.068 (0.076)	0.091 (0.075)
Control group mean	-0.019	-0.019	-0.019	-0.032	-0.032	-0.032
R <sup>2</sup>	0.165	0.231	0.342	0.121	0.252	0.413
N	734	734	734	681	681	681
<i>Panel B: Men</i>						
Dummy - poverty prime	-0.131 (0.080)	-0.093 (0.076)	-0.039 (0.081)	0.057 (0.075)	0.094 (0.064)	0.106 (0.070)
Control group mean	0.041	0.041	0.041	0.034	0.034	0.034
R <sup>2</sup>	0.078	0.225	0.328	0.179	0.430	0.486
N	582	582	582	583	583	583

Notes: Standard errors are in parentheses. \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .

Table 4.5: Effect of the poverty prime on degree of social conservatism

	Extent of disagreement...					
	"Women should support husband's opinions"			"Young women should abide by tradition"		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Controls added iteratively</i>						
Covariates with imbalance	x	x	x	x	x	x
Enumerator FE		x	x		x	x
Community FE			x			x
<i>Panel A: Women</i>						
Dummy - poverty prime	-0.008 (0.064)	-0.001 (0.063)	0.005 (0.066)			
Control group mean	-0.093	-0.093	-0.093			
R <sup>2</sup>	0.095	0.183	0.278			
N	777	777	777			
<i>Panel B: Men</i>						
Dummy - poverty prime	-0.033 (0.090)	0.056 (0.070)	0.096 (0.073)	0.038 (0.090)	0.062 (0.085)	0.108 (0.089)
Control group mean	0.130	0.130	0.130	0.010	0.010	0.010
R <sup>2</sup>	0.112	0.496	0.587	0.081	0.231	0.364
N	593	593	593	586	586	586

Notes: \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .

## Conclusion

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- ▶ Such feelings prompt women, but not men, to support the increased involvement of women in household decision-making
- ▶ Suggests societal income inequality may trigger greater intra-household tensions

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FROM THE AMERICAN PEOPLE

## Appendix



Table 5.1: Effect of the poverty prime on income bucket selected

	(1)	(2)	(3)
<i>Controls added iteratively</i>			
Basic covariates with imbalance	x	x	x
Enumerator FE		x	x
Community FE			x
<i>Panel A: Women</i>			
Dummy - poverty prime	-1.423*** (0.078)	-1.422*** (0.075)	-1.421*** (0.076)
$R^2$	0.419	0.502	0.583
N	779	779	779
<i>Panel B: Men</i>			
Dummy - poverty prime	-1.371*** (0.084)	-1.327*** (0.078)	-1.351*** (0.083)
$R^2$	0.509	0.609	0.657
N	593	593	593

*Source:* Authors' calculations based on PNG survey 2018.

*Notes:* The outcome variable is the answer to the question "How much income did your family earn last year in KINA:", on a five-rung ladder (increasing with income). Our basic controls include all covariates with imbalance. Standard errors are in parentheses. \*\*\* indicates  $p < 0.01$ ; \*\* indicates  $p < 0.05$ ; and \* indicates  $p < 0.10$ .

Table 5.2: Summary statistics of outcome (1–5 range) variables by gender

	Women		Men		p-value, difference (5)
	Mean (1)	N (2)	Mean (3)	N (4)	
Extent of disagreement - In your opinion, when money is scarce, to what extent should boys have more education than girls? ("Prioritize boys for education")	0.045	752	0.092	561	0.409
Extent of disagreement - In your opinion, if jobs are scarce, to what extent should they be reserved for men rather than women? ("Reserve jobs for men")	0.062	747	0.072	559	0.858
Extent of disagreement - In your opinion, to what extent should men have the final word about decisions affecting the community? ("Men should make community decisions")	-0.063	777	0.155	578	0.000
Extent of disagreement - In your opinion, to what extent should a husband make all the decisions in the household about how to manage assets like farm equipment? ("Husband should manage household assets")	-0.005	762	0.118	576	0.030
Extent of disagreement - If a women earns money outside the home, a man somewhere will be less able to provide for his own family. ("Women crowd out men for jobs")	-0.052	734	-0.009	582	0.451
Extent of disagreement - When a wife earns money through work outside the home, her children are negatively affected. ("Women's work harms children")	0.009	681	0.062	583	0.347
Extent of disagreement - A good woman always supports her husband's opinions. ("Women should support husband's opinions")	-0.106	777	0.122	593	0.000
Extent of disagreement - In your opinion, to what extent is it important for young women to abide by traditions, and behave like their mothers' generation? ("Young women should abide by tradition")	—	—	0.044	586	—

Source: Authors' calculations based on PNG survey 2018.

Table 5.3: Individual-level summary statistics by gender

	Women		Men		p-value, difference (5)
	Mean (1)	N (2)	Mean (3)	N (4)	
How much income did your family earn last year in KINA ("Income bracket")	2.252	779	2.433	593	0.016
Compared to your neighbors, do you and your family earn [much more, a little more, about the same, a little less, or much less] ("Post-treatment perception of relative poverty")	0.028	763	0.018	575	0.852
Dummy - poverty prime	0.487	779	0.492	593	0.829
Dummy - married	0.932	778	0.973	593	0.001
Dummy - age 16-24	0.102	767	0.032	593	0.000
Dummy - age 25-35	0.417	767	0.312	593	0.000
Dummy - age 36-50	0.366	767	0.433	593	0.012
Dummy - age 51-64	0.095	767	0.180	593	0.000
Dummy - age 65+	0.020	767	0.042	593	0.014
Dummy - highest level of education: no schooling	0.182	779	0.069	593	0.000
Dummy - highest level of education: some school	0.175	779	0.162	593	0.535
Dummy - highest level of education: completed primary	0.610	779	0.683	593	0.005
Dummy - highest level of education: completed secondary	0.015	779	0.034	593	0.026
Dummy - highest level of education: completed university	0.018	779	0.052	593	0.000
Dummy - relationship to household head: Head	0.119	779	1.000	593	0.000
Dummy - relationship to household head: Spouse	0.881	779	0.000	593	0.000
Dummy - occupation: agriculture	0.634	779	0.779	593	0.000

Source: Authors' calculations based on PNG survey 2018.

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