

Culture, Intra-household Distribution and Individual Poverty

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Motivation

Cultural traits and economics

- Big surge of economic research on the importance of **culture** and family institutions (Baland et al., 2020, Nunn, 2020, Bau and Fernández, 2022, Giuliano, 2020)
- In particular, on how traditional family structures often have persistent effects on household decisions (Jayachandran, 2021)
- Increasing evidence on the link between women's outcomes and norms such as
 - ▶ **patrilineality** (Lowes, 2020, Loper, 2021)
 - ▶ **bride price** (Corno et al., 2020)
 - ▶ **dowry** (Calvi and Keskar, 2021)

Motivation

Cultural traits and gender inequality

- At the same time, much evidence on [intra-household inequality](#) in low and middle income countries
 - ▶ mismatch between individual and household poverty (Brown et al., 2019)
- Possible that culture explains a substantial part of within-household inequity

Objectives

Cultural traits and gender inequality

- This paper suggests a first step in this direction
 - ▶ to quantify individual poverty
 - ▶ and assess how intra-household distribution varies with traditional family norms
- Use of recent implementation of collective models of consumption to identify the [resource sharing process](#) (Browning et al., 2013, Bargain and Donni, 2012, Dunbar et al., 2013)
- Focus on [patrilocality and matrilocality](#)
 - ▶ practice of living after marriage with the groom's vs the bride's parents
 - ▶ We focus on [ancestral](#) rather than actual post-marriage residence
 - actual arrangements may reflect many other aspects pertaining to empowerment heterogeneity
 - local policies may alter actual practices or make them inoperative (Bau 2021 or La Ferrara and Milazzo, 2017)
 - fundamentally: focus on persistence of potentially different gender norms (Giuliano, 2020; Bau and Fernández, 2022)

- **Mechanisms:** persistent effect related to origin or practice of the norm
 - ▶ greater productive role attributed to sons (Alesina et al., 2013)
 - ▶ patrilocal women leave parents' house: less investment on girls (Sundaram and Vanneman, 2008, Bau, 2021)
 - ▶ presence of husbands' relatives: better outside options if disagreement; pressure and sex behavior monitoring (favorable for patrilineality: Lowes 2020, Loper 2021)
- Current **practice** of patrilocality correlates with lower education, a lower marriage age and low levels of autonomy to women (e.g. Dyson and Moore 1983 for northern India, Garg and Morduch 1998 for Ghana)
- Patrilocality **ancestry** also related to
 - ▶ domestic violence (Alesina et al., 2021)
 - ▶ ability to take up legal reforms helping divorce (Bargain et al., 2020)
 - ▶ cross-country contemporaneous opinions about gender roles (Jayachandran, 2015)

Empirical approach

Resource sharing estimations

We rely on Dunbar, Lewbel, Pendakur (2013, DLP) extension of the [collective model](#) to infer the actual sharing process from a subset of assignable goods (clothing)

- Individual resource share $\eta_i(z, P)$ ($i = c, f, m$) vary with:
 - ▶ z : demographic factors
 - ▶ P : dummy for belonging to ethnic group with patrilocal tradition
- Minimalist structure:
 - ▶ focus on [private assignable goods](#): clothing of individual type i , denoted k_i
 - ▶ *observed* household budget share on k_i :

$$\begin{aligned}W^{k_i} &= \eta_i \cdot (\alpha_i + \beta_i(x + \log \eta_i - \log N_i)) \\ \partial W^{k_i} / \partial x &= \eta_i \cdot \beta_i\end{aligned}$$

- DLP: 'similar across people' (SAP) assumption puts additional restriction on preferences ('shape invariance', Lewbel 2010): $\beta_i = \beta$ for $i = f, m, k$

Empirical application

- Main application on [Ghana and Malawi](#)
 - ▶ both patrilocality and matrilocality norms
 - ▶ almost mutually exclusive (hardly any ambilocal or neolocal), hence ideal setting to confront these norms
- Studies using within-country variation often lack external validity (Giuliano, 2020)
 - ▶ Here two African contexts
 - ▶ different set-ups with contrasted norm prevalences: patrilocality (matrilocality) prevails in Ghana (Malawi)
- Very preliminary results for Latin American countries: [Bolivia](#), [Brazil](#), and [Mexico](#)
- Expenditure surveys:
 - ▶ Ghana Living Standards Survey, 7th wave (2016/2017)
 - ▶ Malawi Integrated Household Survey, 4th wave (2016/2017)
 - ▶ Bolivian Encuesta de Hogares (pooled 2014-2019)
 - ▶ Pesquisa de Orcamentos Familiares (2017/2018) - Brazil
 - ▶ Encuesta Nacional de Ingresos y Gastos de los hogares (2018) - Mexico

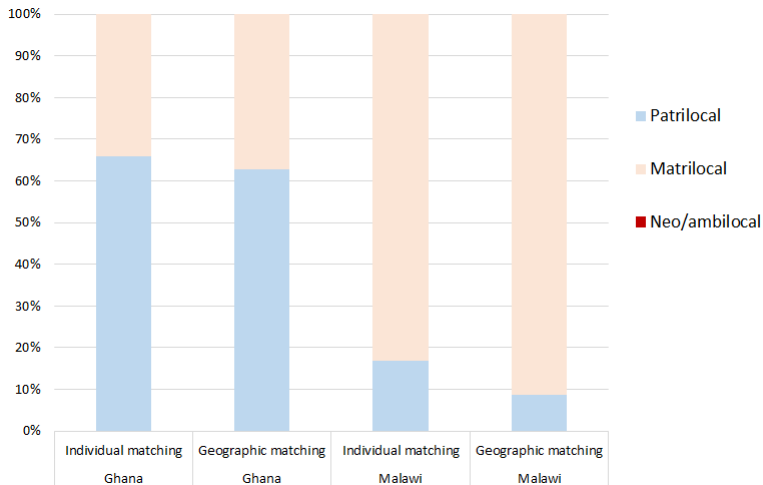
Empirical approach

Data: Matching traditional residency norms

- Data work to [match surveys with norms](#)
- Individual matching based on ethnic ancestral norm
 - ▶ ancestral norm recorded in Murdok's Ethnographic Atlas
 - ▶ matching methods from Nunn and Wantchekon (2011), Giuliano and Nunn (2021), Alesina et al. (2021)
- Sensitivity analysis: geographical matching (only alternative available for Latin American countries)
 - ▶ based on regions where households live
 - ▶ using Ancestral Characteristics Database of Giuliano and Nunn (2018)

Empirical approach

Data: Matching traditional residency norms



Results

Average resource shares

- **Results: per-person resource shares**
- pattern of gender inequality (Dunbar et al. 2013; Penglase 2021: Malawi; Bargain et al. 2015 for Côte d'Ivoire; etc).

	Ghana		Malawi	
	<i>kfm</i>	<i>fm</i>	<i>kfm</i>	<i>fm</i>
	(1)	(2)	(3)	(4)
Resource shares				
Per child	0.068 (0.029)	- -	0.149 (0.062)	- -
Per woman	0.244 (0.111)	0.315 (0.134)	0.287 (0.073)	0.374 (0.120)
Per man	0.354 (0.101)	0.425 (0.127)	0.299 (0.061)	0.481 (0.104)
% of HHs with non-flat Engel curve	0.999	1.000	1.000	0.989
% of patrilocality	0.675	0.595	0.170	0.169
N	6204	1552	7462	967

Source: authors' estimations using the data from Ghana Living Standards Survey 2016/2017 and Malawi Integrated Household Survey 2016. Notes: Table reports baseline mean per person resource shares by household compositions for each country. Columns (1) and (3) report estimation results for households with children, women and men (*kfm*). Columns (2) and (4) report results for households with women and men only (*fm*). Standard deviations in parantheses.

Results

Effect of patrilocality on women's resource shares

- **Relative effect of patrilocality:** a gap of 1.8-2.6 (3.2-4.1) points in Ghana (Malawi)
- relative to the average per-woman resource shares, ancestral patrilocality accounts for a reduction of women's resources by 9 (11) percent overall in Ghana (Malawi).

	Ghana		Malawi	
	<i>kfm</i>	<i>fm</i>	<i>kfm</i>	<i>fm</i>
Marginal effects on per person resource shares				
<i>Women's resource shares:</i>				
Patrilocal (=1)	-0.026 *** (0.004)	-0.018 *** (0.005)	-0.032 *** (0.007)	-0.041 *** (0.010)
Proportion of boys	-0.007 * (0.004)	-	-0.005 (0.007)	-
<i>Children's resource shares:</i>				
Patrilocal (=1)	-0.015 *** (0.003)	-	0.004 (0.004)	-
Proportion of boys	0.000 (0.001)	-	0.000 (0.004)	-
% of HHs with non-flat Engel curve	0.999	1.000	1.000	0.989
% of patrilocality	0.675	0.595	0.170	0.169
N	6204	1552	7462	967

Results

Preliminary results for Latin American countries

- Effects of patrilocality are smaller and less significant than for Malawi and Ghana
- Trace of effect of patrilocality in women's shares in Brazil and on children's shares in Bolivia

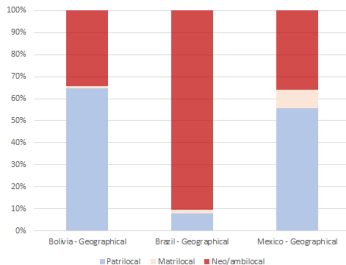
	Bolivia		Brazil		Mexico	
	kfm	fm	kfm	fm	kfm	fm
Marginal effect of patrilocality on per person resource shares						
Women's resource shares						
Patrilocal (=1)	-0,003 (0,003)	-0,003 (0,003)	-0,022 * (0,012)	-0,020 * (0,011)	-0,003 (0,003)	-0,003 (0,003)
Children's resource shares						
Patrilocal (=1)	-0,009 ** (0,004)	-0,010 (0,004)	-0,020 (0,015)	-0,022 (0,016)	0,002 (0,003)	0,002 (0,003)

Results

Preliminary results for Latin American countries

Possible hypothesis

- Geographical matching of cultural ancestral norms
- Distribution of locality traits in the population. Patrilocality vs. matrilocality in Ghana and Malawi and Patrilocality vs. ambi/neolocality in Bolivia, Brazil, and Mexico



- Difference in the colonization process of the regions - transmission?

Concluding Remarks

- Women's resource allocation likely impaired in patrilocal societies
- Not pressure from actual practice but mere **persistent effect** of the norm on resource division
- Differences between regions. Further exploration needed.

Thank you!

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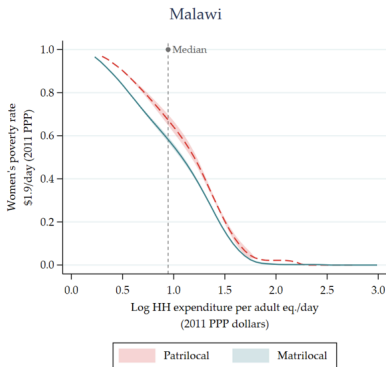
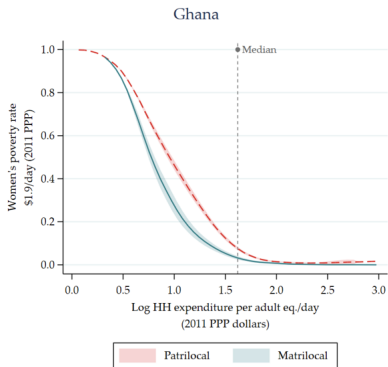
Appendix

Results

Implications for individual poverty

- implication for women's poverty
- possible to calculate x_f
- compared to standard international poverty lines: \$1.9 PPP

Women



Empirical approach

Empowerment and traditions in Ghana and Malawi

- Ghana:
 - ▶ 29 ethnic groups: a large one (Akan) and several small ones (Baule, Chamba and Ga) are matrilineal, the rest of the country is patrilineal
 - ▶ Bau (2021) points to investment in patrilineal boys' education due to old age security, reduced after pension reform
 - ▶ La Ferrara and Milazzo (2017) show that Akan's matrilineal tradition made them overinvest in children's education as a compensation for not transmitting land to their sons, reduced after new possibility to bequest
- Malawi:
 - ▶ Part of the Matrilineal belt, but heterogeneity among 9 ethnic groups
 - ▶ In particular among the large ones: matrilineal Chewas and Nyanja vs Tumbuka, which are traditionally patrilineal
 - ▶ Dessy et al. (2022): patrilineality induces a gender bias against women in terms of education and decision-making power
 - ▶ matrilineality (correlated with matrilineality) induces more autonomy for women (Lowe, 2020; Loper, 2021, Robinson and Gottlieb, 2021)

Alternative approaches

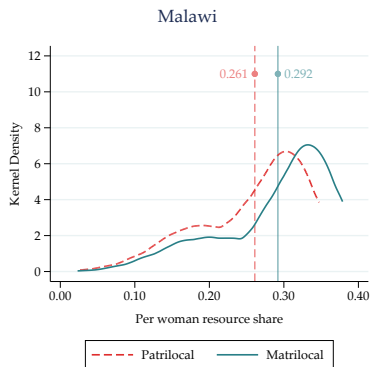
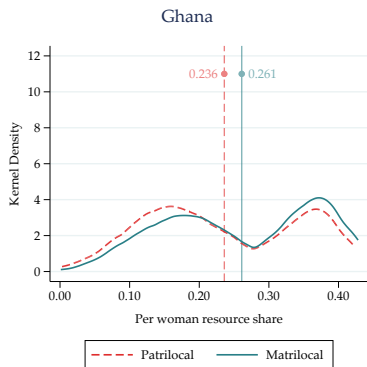
Measuring power and individual access to resources

- Variables directly associated to women or children, for instance
 - ▶ female/child nutritional outcomes (Haddad and Kanbur, 1990, Hoddinott and Skoufias, 2004)
 - ▶ health outcomes (Thomas, 1997)
 - ▶ rarely individualized food expenditures (Brown et al., 2021)), etc
- Yet not a comprehensive view of control over resources within household
 - ▶ surveys measuring individual consumption are costly and extremely rare for poor countries
 - ▶ a survey on subgroups in polygamous household of Senegal (De Vreyer and Lambert, 2020)
 - ▶ fully individualized for Bangladesh (Bargain et al., 2022))
- Decision power measures ('final say' questions)
 - ▶ (Lépine and Strobl, 2013, Bergolo and Galván, 2018, De Brauw et al., 2014):
 - ▶ depend on survey conditions (e.g presence of husband)
 - ▶ maybe delegation of power (Baland and Ziparo, 2020)
 - ▶ does not allow quantifying the link between customs and women's post-marital poverty

Results

Effect of patrilocality on women's resource shares

- marginal effects were for mean characteristics
- here using population heterogeneity



Results

Marginal effects on resource shares

	Ghana		Malawi	
	<i>kfm</i>	<i>fm</i>	<i>kfm</i>	<i>fm</i>
	(1)	(2)	(3)	(4)
Marginal effects on per person resource shares				
<i>Women's resource shares:</i>				
Patrilocal (=1)	-0.026 *** (0.004)	-0.018 *** (0.005)	-0.032 *** (0.007)	-0.041 *** (0.010)
Mean age of kids	-0.007 (0.006)	- -	0.008 (0.007)	- -
Proportion of boys	-0.007 * (0.004)	- -	-0.005 (0.007)	- -
Urban (=1)	0.006 (0.007)	0.013 (0.008)	-0.013 (0.023)	-0.014 (0.026)
<i>Children's resource shares:</i>				
Patrilocal (=1)	-0.015 *** (0.003)	- -	0.004 (0.004)	- -
Mean age of kids	-0.003 (0.002)	- -	-0.012 *** (0.004)	- -
Proportion of boys	0.000 (0.001)	- -	0.000 (0.004)	- -
Urban (=1)	0.006 (0.004)	- -	0.003 (0.011)	- -
% of HHs with non-flat Engel curve	0.999	1.000	1.000	0.989
% of patrilocality	0.675	0.595	0.170	0.169
N	6204	1552	7462	967

Source: authors' estimations using the data from Ghana Living Standards Survey 2016/2017 and Malawi Integrated Household Survey 2016. Notes: Table reports marginal effect of main sharing rule determinants on per person resource shares by household compositions for each country. Columns (1) and (3) report estimation results for households with children, women and men (*kfm*). Columns (2) and (4) report results for households with women and men only (*fm*). Standard errors in parentheses. *, **, *** indicate 10%, 5% and 1% significance level.

Results

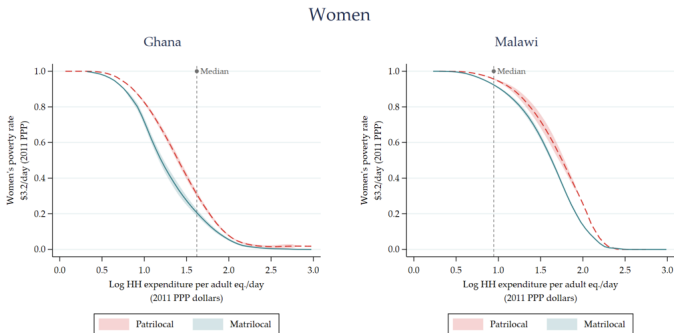
Robustness checks

	Ghana			Malawi		
	Baseline	Geographic matching of ethnographic data	Alternative model specification	Baseline	Geographic matching of ethnographic data	Alternative model specification
	(1)	(2)	(3)	(4)	(5)	(6)
(a) Resource shares						
Children	0.145 (0.054)	0.132 (0.050)	0.150 (0.055)	0.324 (0.082)	0.333 (0.083)	0.309 (0.080)
Women	0.349 (0.095)	0.347 (0.096)	0.400 (0.089)	0.322 (0.056)	0.307 (0.056)	0.326 (0.056)
Men	0.506 (0.124)	0.522 (0.124)	0.450 (0.113)	0.354 (0.086)	0.360 (0.088)	0.365 (0.085)
Per child	0.068 (0.029)	0.062 (0.028)	0.071 (0.031)	0.149 (0.062)	0.153 (0.063)	0.142 (0.060)
Per woman	0.244 (0.111)	0.243 (0.111)	0.278 (0.114)	0.287 (0.073)	0.274 (0.074)	0.290 (0.073)
Per man	0.354 (0.101)	0.366 (0.105)	0.317 (0.096)	0.299 (0.061)	0.304 (0.063)	0.309 (0.060)
(b) Marginal effect of patrilocality on per person resource shares						
Women's resource shares	-0.026 *** (0.004)	-0.034 *** (0.004)	-0.021 *** (0.003)	-0.032 *** (0.007)	-0.033 *** (0.010)	-0.031 *** (0.007)
Children's resource shares	-0.015 *** (0.003)	-0.016 *** (0.003)	-0.014 *** (0.002)	0.004 (0.004)	0.015 *** (0.005)	0.004 (0.003)
% of HHs with non-flat Engel curve	0.999	0.999	1.000	1.000	1.000	1.000
% of patrilocality	0.675	0.645	0.679	0.170	0.089	0.170
N	6204	6204	6204	7462	7462	7462

Results

Implications for individual poverty

- implication for women's poverty
- possible to calculate x_f
- compared to standard international poverty lines: \$3.2 PPP



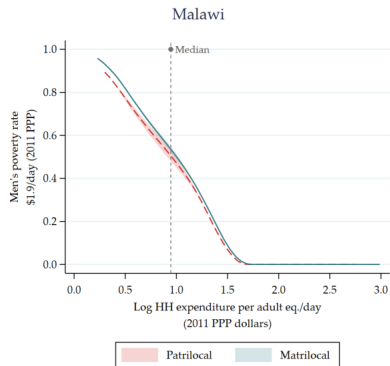
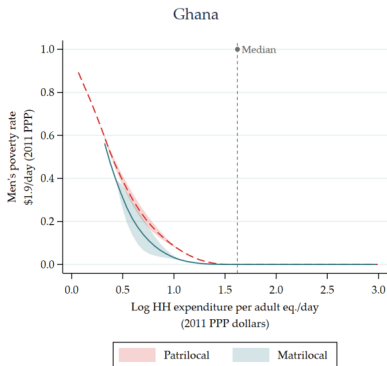
Results

Implications for individual poverty

- implication for men's poverty
- possible to calculate x_m
- compared to standard international poverty lines: \$1.9 PPP



Men

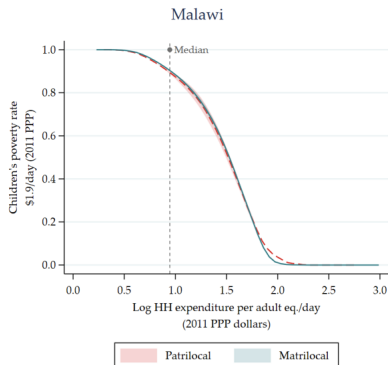
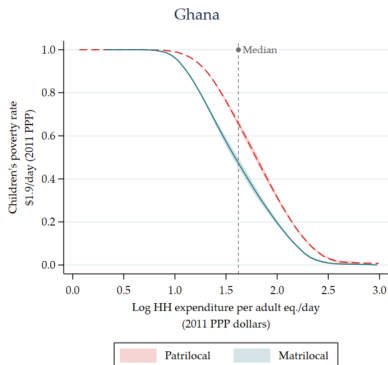


Results

Implications for individual poverty

- implication for child poverty
- possible to calculate x_k deflated per-adult equivalent
- compared to international poverty lines: \$1.9 PPP

Children (adult eq.)



Results

Implications for individual poverty

	Ghana			Malawi		
	All	Matrilocal	Patrilocal	All	Matrilocal	Patrilocal
	(1)	(2)	(3)	(4)	(5)	(6)
(a) Household poverty rates (%)						
Per capita	0.124 (0.329)	0.046 (0.210)	0.191 (0.393)	0.703 (0.457)	0.702 (0.457)	0.710 (0.454)
Per adult eq.	0.095 (0.293)	0.032 (0.175)	0.151 (0.358)	0.627 (0.483)	0.627 (0.484)	0.633 (0.482)
(b) World Bank poverty rate (%)						
	0.127			0.692		
(c) Individual poverty rates (%)						
Children (per child)	0.587 (0.492)	0.448 (0.497)	0.699 (0.459)	0.906 (0.291)	0.907 (0.291)	0.902 (0.297)
Children (per adult eq.)	0.437 (0.496)	0.287 (0.453)	0.557 (0.497)	0.820 (0.384)	0.821 (0.384)	0.814 (0.389)
Women	0.104 (0.306)	0.040 (0.197)	0.163 (0.370)	0.508 (0.500)	0.500 (0.500)	0.566 (0.496)
Men	0.029 (0.169)	0.007 (0.085)	0.049 (0.216)	0.448 (0.497)	0.450 (0.498)	0.432 (0.495)
(d) Misclassification (fraction of poor individuals in non-poor households)						
Children (per child)	0.794 (0.404)	0.891 (0.312)	0.668 (0.471)	0.248 (0.432)	0.269 (0.444)	0.273 (0.445)
Children (per adult eq.)	0.723 (0.447)	0.826 (0.379)	0.600 (0.490)	0.168 (0.374)	0.164 (0.370)	0.158 (0.364)
Women	0.305 (0.461)	0.361 (0.482)	0.188 (0.391)	0.068 (0.252)	0.039 (0.193)	0.082 (0.274)
Men	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.001 (0.031)	0.001 (0.038)	0.000 (0.000)
N	11,996	4,635	7,361	11,280	9,394	1,886

Sources: Panels (a), (b) and (d): authors' estimations using the data from Ghana Living Standards Survey 2016/2017 and Malawi Integrated Household Survey 2016. Panel (b): World Bank data extracted from the PovcalNet database.

Panel (a) reports poverty headcount ratios for the poverty line of \$1.9 (2011 PPP) using per capita or per adult equivalent measures, interpreted as individual poverty when intrahousehold inequality of consumption is ignored. The per-adult