

MEASURING PATRIARCHY: MESO- LEVEL VARIATIONS IN THE STRENGTH OF PATRIARCHY IN SUB-SAHARAN AFRICA

AJIT ZACHARIAS, *LEVY ECONOMICS INSTITUTE OF BARD COLLEGE*

CO-AUTHORS: CHALACHEW DESTA (U.ADDIS ABABA), THOMAS MASTERSON
(LEVY), ABENA D. ODURO (U.GHANA), LUIZA NASSIF PIRES (LEVY), AND
FERNANDO RIOS-AVILA (LEVY)

INTRODUCTION

- As a social force, patriarchy operates at several interdependent levels:
 - Outcomes (e.g. gender differences in pay and education)
 - Structures (e.g. living arrangements of adult men and women, and occupational segregation)
 - Ideology (e.g. values regarding educational opportunities for boys and girls)
 - Agency (e.g. women's collective action and decision-making power)
- Focus on structures and ideology:
 - shaping power relations within the family
 - meso-level (subnational) variations in sub-Saharan Africa
- Recent research on the history of family, feminist economic research on gender attitudes and patriarchal norms and subnational disparities in sub-Saharan Africa

OVERVIEW

- Subnational indices of patriarchal structures relevant to power relations within the household
- Subnational indices of patriarchal ideology
- Preliminary look at the congruence or lack thereof between the strength of patriarchal structures and strength of patriarchal ideology
- Countries studied: Ethiopia, Ghana, Mali, South Africa and Tanzania

PATRIARCHAL STRUCTURES

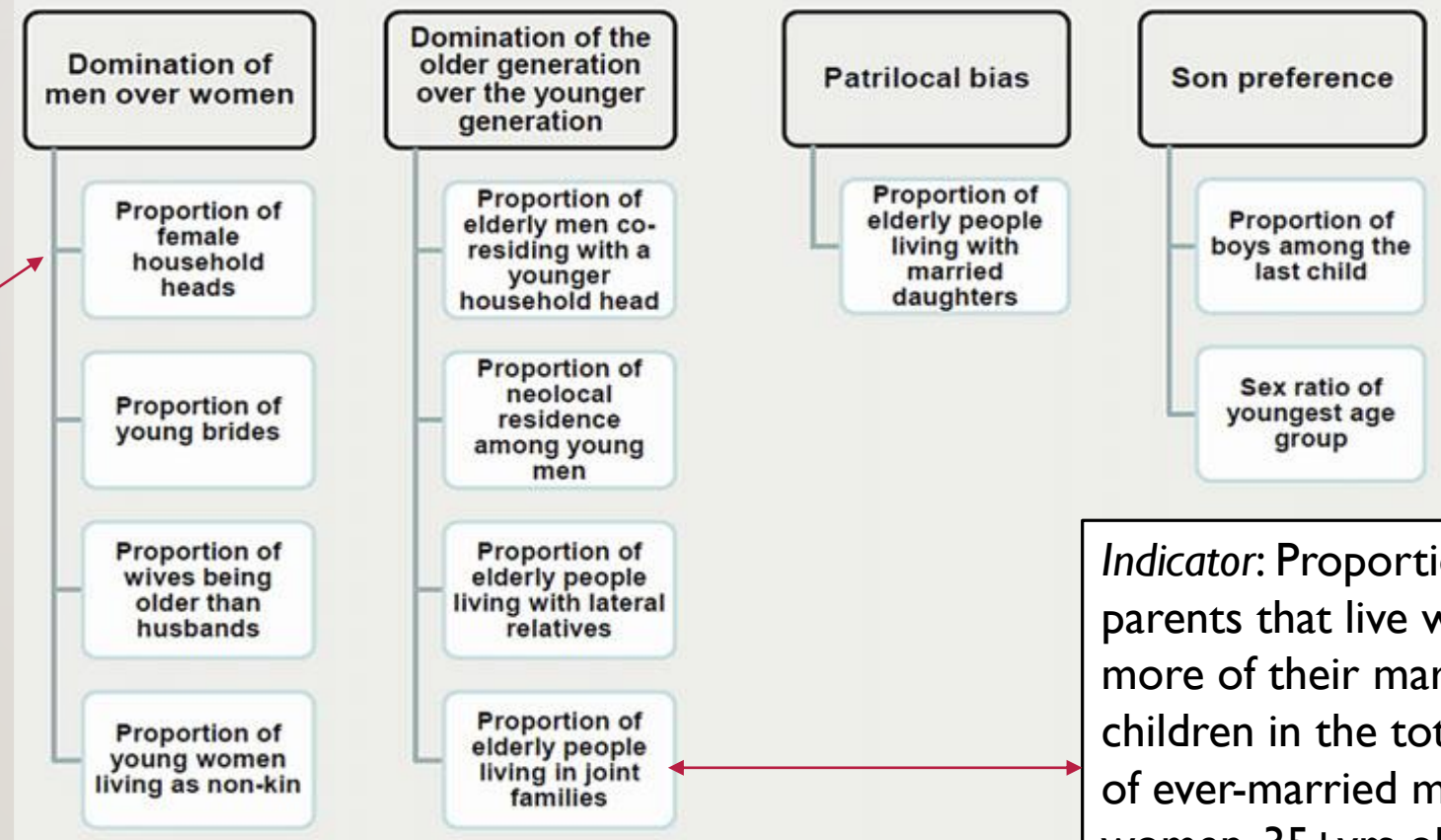


PATRIARCHAL STRUCTURES: CONCEPT

- Therborn 2004 concept of patriarchy: The rule of the father (primarily over the daughters) and the rule of the husband
 - Parental rule: inheritance patterns, the power of the offspring to choose their marital partner and move away from the paternal household
 - Rule of the husband: household headship and characteristics of spouses such as age
 - Physical sacrifice or suffering imposed selectively on girls and women
- Theoretical focus is on *social norms* regarding these but, in practice, what we observe are, e.g., patterns of marriage and household structure

Therborn, Goran. (2004). *Between sex and power: Family in the world, 1900-2000*. Routledge.

MEASUREMENT VIA SUB-INDICES AND INDICATORS: OVERVIEW



Indicator: Proportion of all female household heads among all adult (aged 20+) household heads of family households
Expected association with patriarchy: Negative

Indicator: Proportion of parents that live with one or more of their married children in the total number of ever-married men and women, 35+yrs old
Expected association with patriarchy: Positive

Source: Gruber, S., & Szoltysek, M. (2016). The patriarchy index: A comparative study of power relations across historical Europe. *The History of the Family*, 21(2), 133–174.

MALE DOMINATION SUB-INDEX

Indicator	Expected association with patriarchy
Proportion of all female household heads among all adult (aged 20+) household heads of family households	<i>Negative</i> : only men can be household heads
Proportion of ever-married women in the 15–19 age group	<i>Positive</i> : a lower female age at marriage facilitates male domination
Proportion of wives who are older than their husbands	<i>Negative</i> : the husband is always older than his wife
Proportion of young women living as non-kin	<i>Negative</i> : a woman cannot live outside the home of her or her husband's relatives.

GENERATIONAL DOMINATION SUB-INDEX

Indicator	Expected association with patriarchy
Proportion of men in households with a younger male head in the total number of men that are not heads and live in family households headed by men	<i>Negative</i> : the oldest man is always the household head.
Proportion of ever-married household heads among ever-married men in the 20–29 age group in family households	<i>Negative</i> : sons cannot establish their own household on marriage.
Proportion of adult, post-educ (21+) men that are lateral relatives of each other in the total number of all adult, post-educ men in family households	<i>Positive</i> : intensely patriarchal areas some men will not establish their own households at all, or will have to wait until late in life
Proportion of parents that live with one or more of their married children in the total number of ever-married men and women, 35+	<i>Positive</i> : stem and joint families are characteristic of patriarchy

PATRILOCALITY SUB-INDEX

Indicator	Expected association with patriarchy
Proportion of fathers and mothers living with at least one married daughter in the same household among parents who live with at least one married child in the same household	<i>Negative</i> : all daughters move into their husband's father's house.

SON PREFERENCE SUB-INDEX

Indicator	Expected association with patriarchy
Proportion of boys among the last child in the 10–14 age group in family households	<i>Positive:</i> after the birth of a daughter, parents will try to have another child
Sex ratio (number of boys to 100 girls) in the youngest age group (0–4 years).	<i>Positive:</i> increasing patriarchy will lead to higher female mortality or the under-registration of females

CALCULATING THE INDICES OF PATRIARCHAL STRUCTURES

- The index value, p , for each indicator I that is

- positively* associated with patriarchy:

$$p = 10I/\max(I)$$

- negatively* associated with patriarchy:

$$p = 10 - 10I/\max(I)$$

- positively* associated with patriarchy and has a *reference value*, I^* :

$$p = \frac{10 \max(I - I^*, 0) I}{\max(I) - I^*}$$

I^* for son-preference indices:

0.51 for share of boys among the last-born children (10-14 years of age) and 105 boys per 100 girls for sex ratio.

- Each sub-index is the arithmetic sum of the index values of its indicators, divided by the number of indicators in the sub-index (values between 0 and 10).
- The index of patriarchal structures is the sum of its sub-indices (values between 0 and 40)

DATA FOR THE INDICES OF PATRIARCHAL STRUCTURE: IPUMS INTERNATIONAL

Country	Year	Sample size	Number of regions
Ethiopia	2007	7,424,118	11
Ghana	2010	2,466,289	10
Mali	2009	1,493,585	9
South Africa	2011	4,420,693	9
Tanzania	2012	4,498,022	30

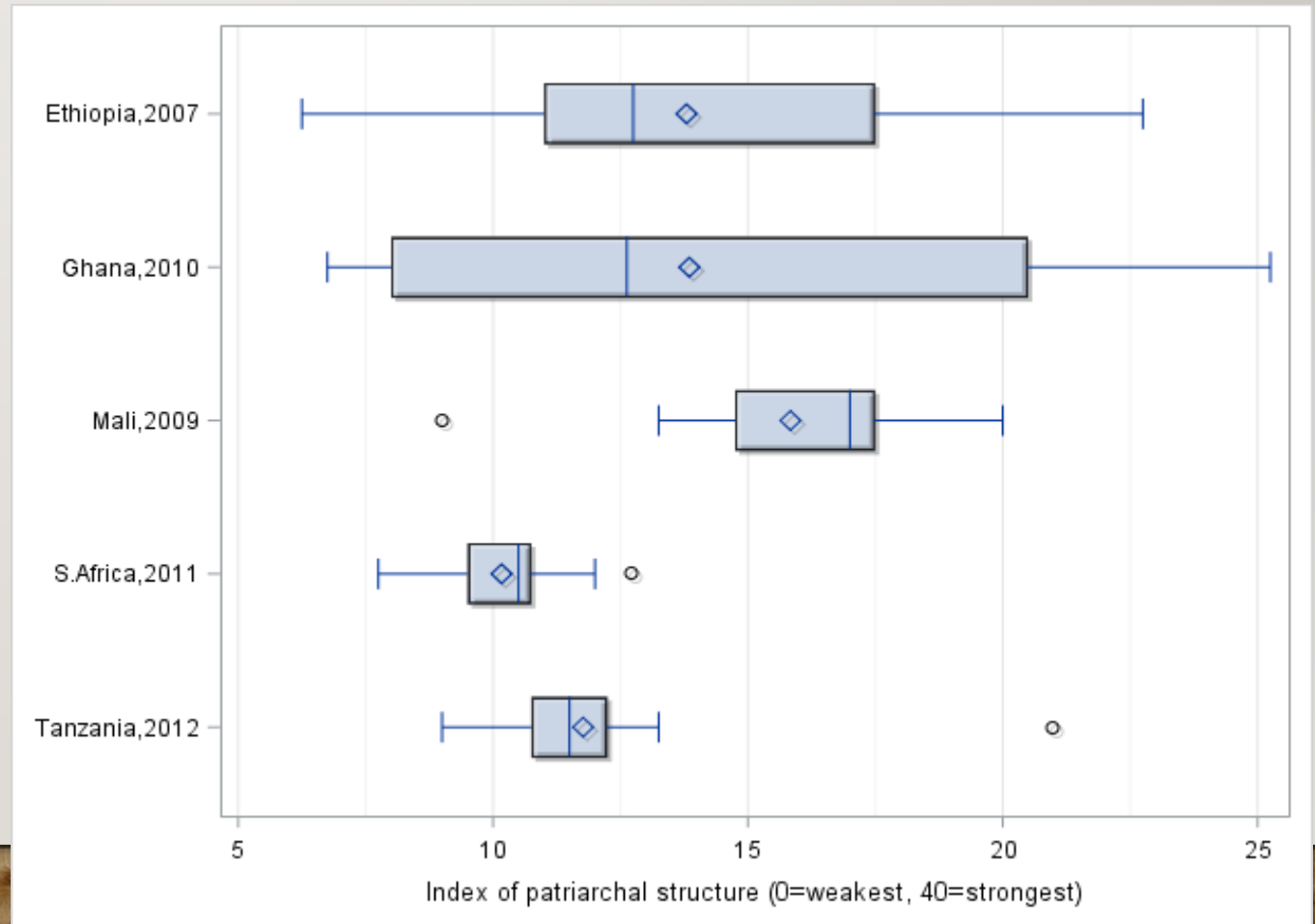
The indices are calculated using the region-level averages of indicator variables for each region.

Note: Indices of son preference were not included for South Africa because the values for the indicator variables were below their respective reference values for all the regions.

Public-use microdata (1-in-10 sample) from the national censuses made available by the University of Minnesota. *Minnesota Population Center. Integrated Public Use Microdata Series, International: Version 7.3 [dataset]. Minneapolis, MN: IPUMS, 2020. <https://doi.org/10.18128/D020.V7.3>*

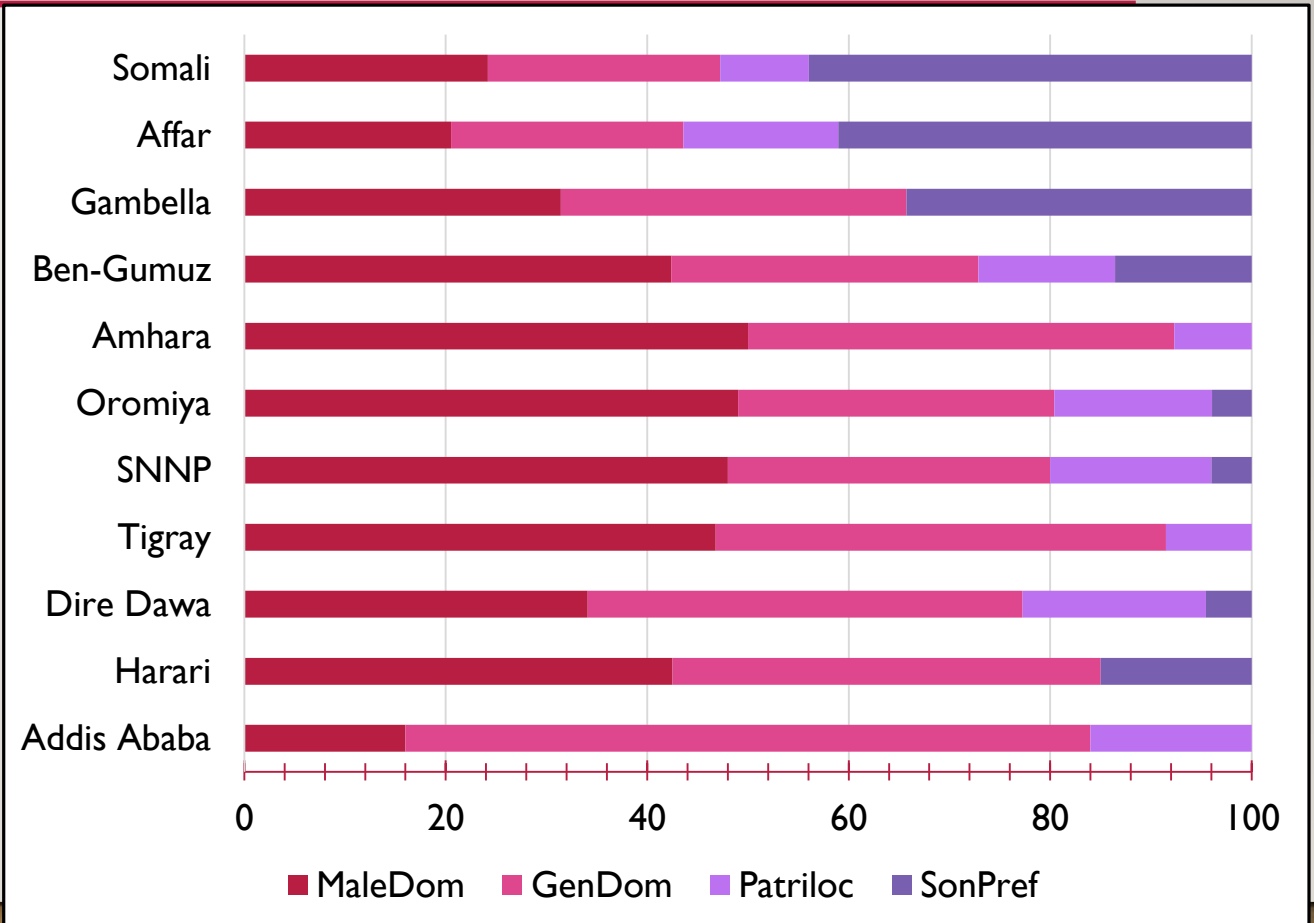
ESTIMATES OF THE INDEX OF PATRIARCHAL STRUCTURE: OVERVIEW

- Shows the distribution of the values of the index across the regions in each country.
- The gap between the regions appears to be the highest in Ghana, followed by Ethiopia.
- Regional gaps seems to be the lowest in Tanzania, followed by South Africa.
- Mali occupies the intermediate position in terms of the regional gaps.
- Ignoring the outliers, it is striking that South Africa and Tanzania do not overlap with Mali at all.
- On average, strength of patriarchal structure appears to be the highest in Mali. Ethiopia and Ghana shows roughly similar intermediate values. South Africa and Tanzania shows somewhat similar and lowest values.



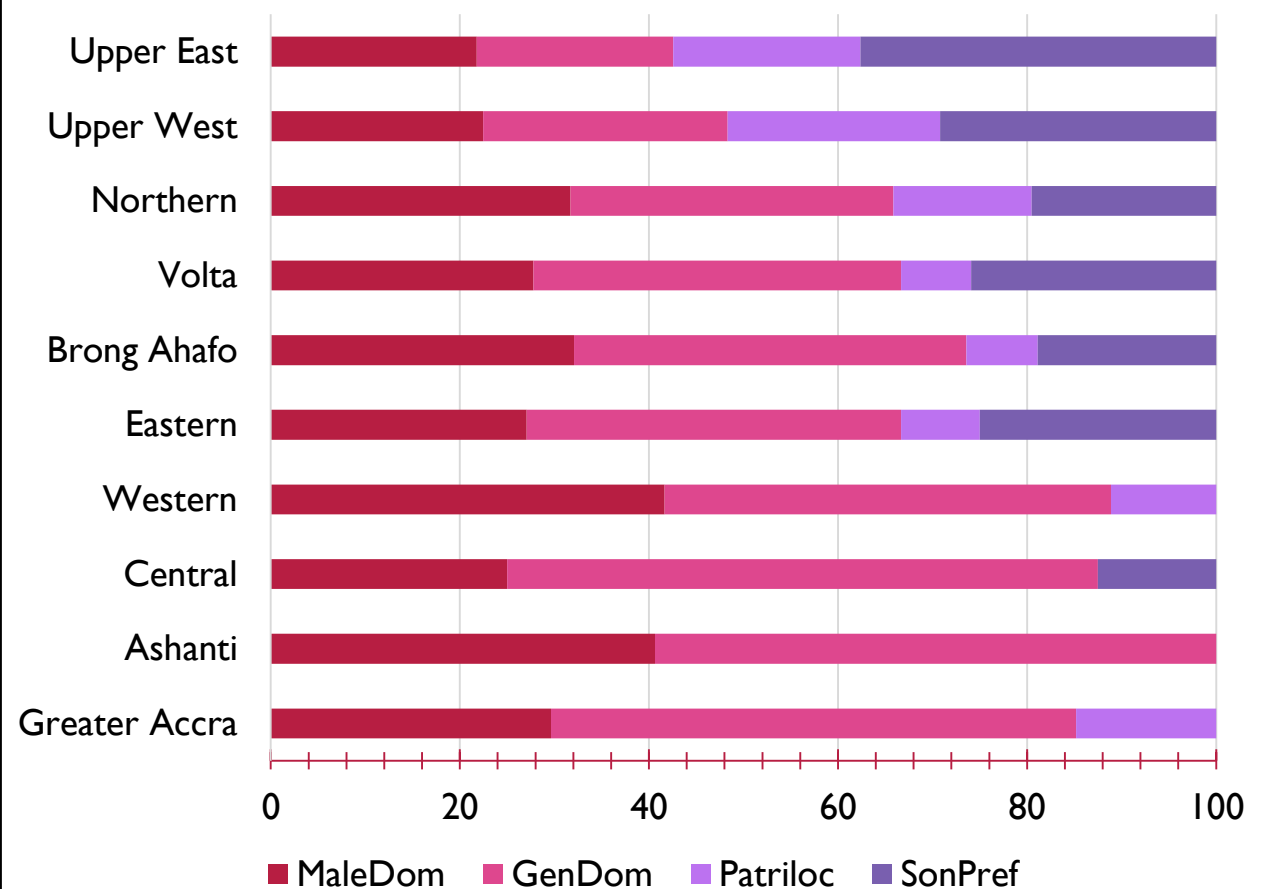
COMPOSITION OF THE INDEX OF PATRIARCHAL STRUCTURE: ETHIOPIA, 2009

- Shows the composition of the index of each region in terms of its sub-indices (percentage share)
- Regions are sorted from the lowest value of the index (Addis) to the highest value (Somali).
- The male domination sub-index (MaleDom) has the lowest share of the index in Addis.
- Higher levels of patriarchy are associated with strong son preference. Note that the sub-index of son-preference does not appear for Addis, Amhara and Tigray
- Generational domination (GenDom) is an important component of the patriarchal structure at all levels of the index.



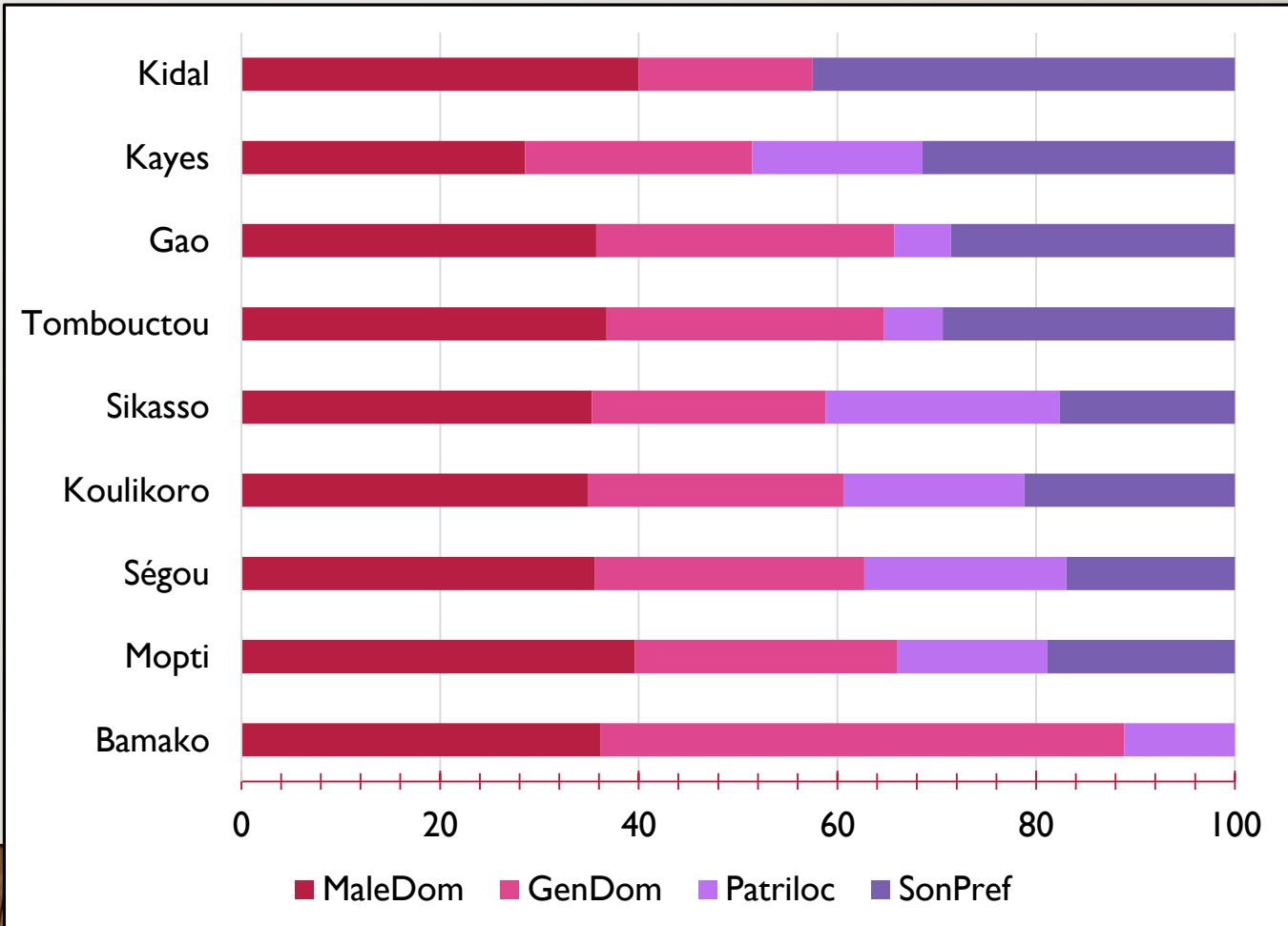
COMPOSITION OF THE INDEX OF PATRIARCHAL STRUCTURE: GHANA, 2010

- Shows the composition of the index of each region in terms of its sub-indices (percentage share)
- Regions are sorted from the lowest value of the index (Accra) to the highest value (U.East).
- The male domination sub-index (MaleDom) has the lowest share of the index in the Central region; but, the value of that sub-index is the same as in Accra.
- Higher levels of patriarchy are associated with strong son preference. Note that the sub-index of son-preference does not appear for Accra, Ashanti and Western
- Generational domination (GenDom) is an important component of the patriarchal structure at all levels of the index.



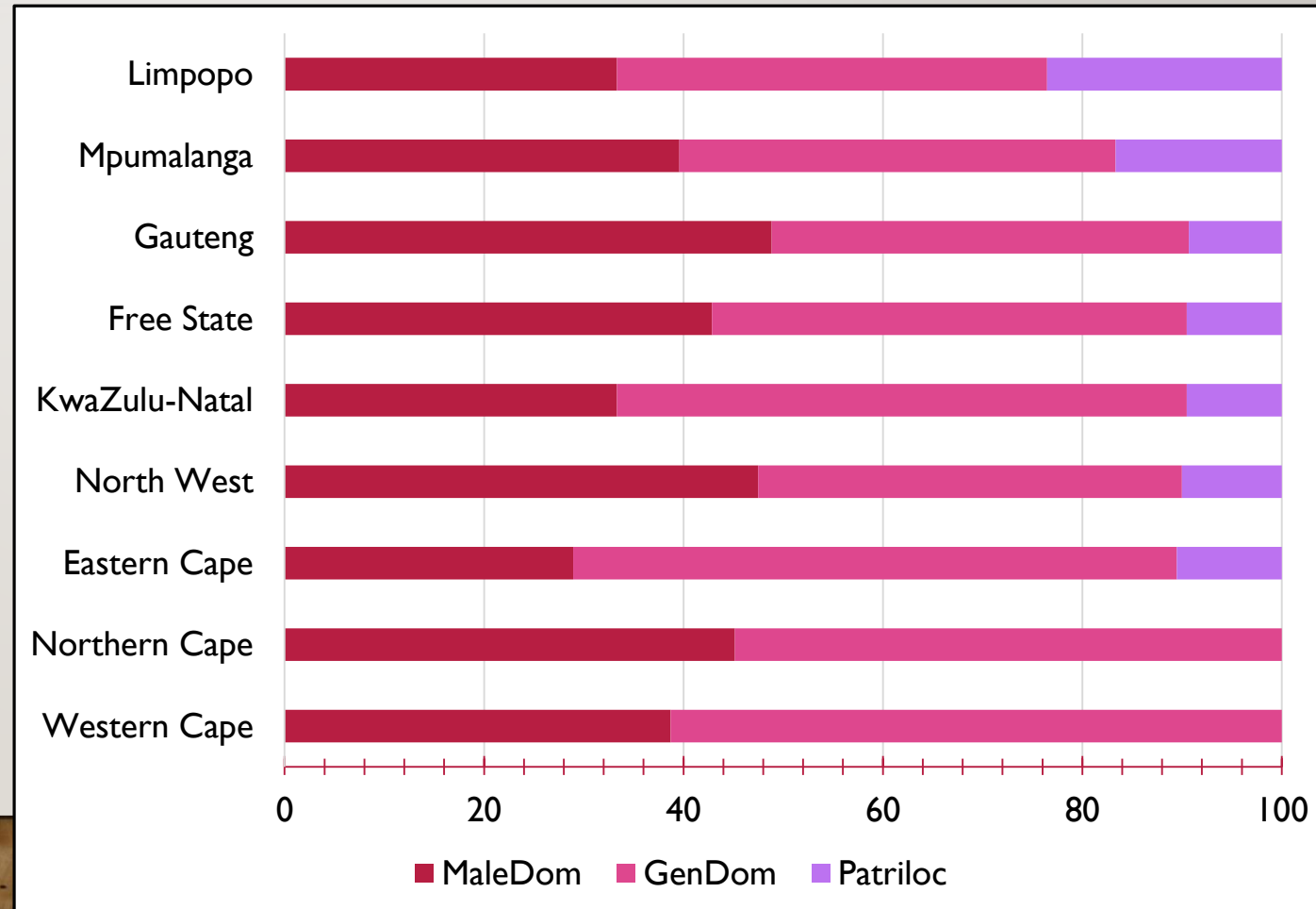
COMPOSITION OF THE INDEX OF PATRIARCHAL STRUCTURE: MALI, 2009

- Shows the composition of the index of each region in terms of its sub-indices (percentage share)
- Regions are sorted from the lowest value of the index (Bamako) to the highest value (Kidal).
- The male domination sub-index (MaleDom) has the lowest share of the index in the Central region; but, the value of that sub-index is the same as in Accra.
- Higher levels of patriarchy are associated with strong son preference. Bamako alone shows a value of zero for this sub-index.
- Generational domination (GenDom) is an important component of the patriarchal structure at all levels of the index.

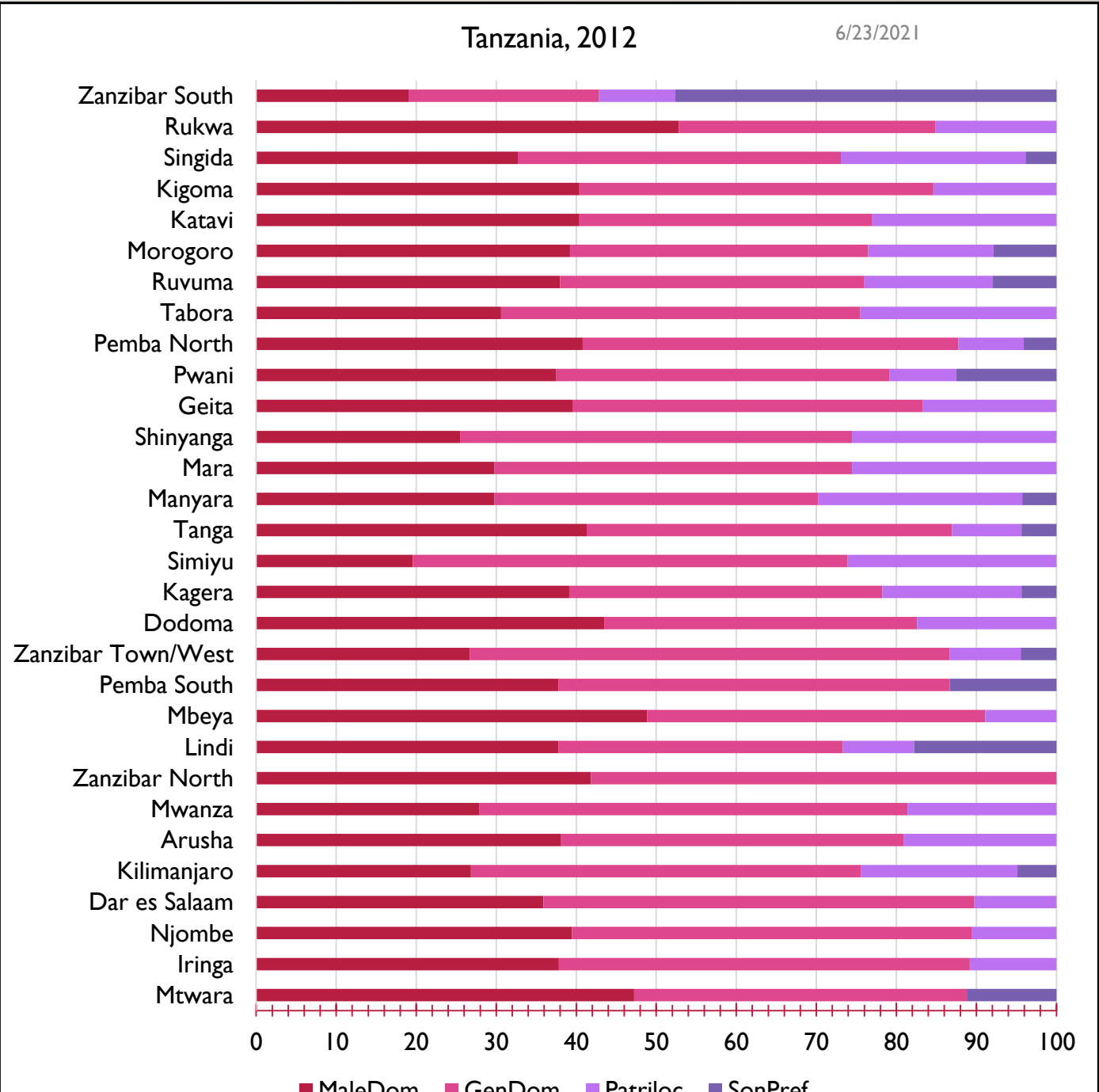


COMPOSITION OF THE INDEX OF PATRIARCHAL STRUCTURE: SOUTH AFRICA, 2011

- Shows the composition of the index of each region in terms of its sub-indices (percentage share)
- Regions are sorted from the lowest value of the index (W. Cape) to the highest value (Limpopo).
- The male domination sub-index (MaleDom) weighs less than the generational domination (GenDom) in all regions except Gauteng.
- Top two levels of patriarchy are associated with the highest levels of patrilocality. This index is zero in the lowest two.



- Shows the composition of the index of each region in terms of its sub-indices (percentage share)
- Regions are sorted from the lowest value of the index (Mtwara) to the highest value (Zanzibar South).
- Zanzibar South is a stark outlier in terms of the overall index because of its high value of the sub-index of son preference.
- Higher levels of patriarchy are not associated with strong son preference. 16 out of 30 regions shows a value of zero for this sub-index.
- Generational domination (GenDom) is generally the largest component of the patriarchal structure.



SUMMARY: PATRIARCHAL STRUCTURE

- Male domination and generational domination are, on average, equally important in shaping the strength of patriarchal structure.
- Generational domination carries more weight than male domination in the regions with lower strength of patriarchal structure in all countries except Tanzania.
- Son preference accounts for a sizeable portion of the strength of patriarchal structure in some regions of Ethiopia (e.g. Somali), Ghana (e.g. Upper East) and Mali (e.g. Kidal). However, Tanzania (with the exception of Zanzibar South) and South Africa are largely free of this form of patriarchy.
- Patrilocality appears to contribute the least to the strength of patriarchal structures

IDEOLOGY



CONCEPT

- Althusser-Jameson-Butler
 - A set of conscious or unconscious socially-constructed beliefs held by the individual
 - Generated and reproduced through the individual's voluntary and involuntary social interactions via formal and informal institutions (e.g. school, family, friendships etc.)
 - Constitutes concrete individuals as concrete subjects (“interpellation”)
- Patriarchal ideology: the set of such beliefs that pertains to relations between genders and gender roles
- Hard to quantify and develop metrics for the strength of ideology

MEASUREMENT: GENERAL APPROACH

- Assume that responses to questions on gender attitudes and roles by participants in surveys proxy their ideology
 - By its very nature, ideology can also influence the survey participant to respond to particular questions in a particular manner (e.g. a wife-beater may express the belief that such behavior is never justified in the survey).
- Use responses to questions in a variety of domains as indicator variables (may help alleviate the problem just noted)
 - E.g. not just attitudes regarding violence against women but also, say, equal opportunity in education and employment
- Develop metrics to measure the strength of patriarchal ideology via composite indices or statistical models (Seguino 2011, Dildar 2015, Benstead 2020).

Seguino, Stephanie. 2011. "Help or Hindrance? Religion's Impact on Gender Inequality in Attitudes and Outcomes." *World Development* 39 (8): 1308–21.

Dildar, Yasemin. 2015. "Patriarchal Norms, Religion, and Female Labor Supply: Evidence from Turkey." *World Development* 76 (December): 40–61

Benstead, Lindsay J. (2020). Conceptualizing and measuring patriarchy: The importance of feminist theory. *Mediterranean Politics*, 3(1), 1–13.

LATENT VARIABLE MODEL

- Consider a set of variables, X_1, X_2, \dots, X_k that represent responses of individuals to a set of k questions on attitudes or opinions
- We assume that the responses by the individual i to the k questions is a function of the latent variable P^* that express the strength of patriarchal ideology plus some random error, e

$$X_{ki} = F_k(P_i^*, e_i)$$

- The model allows us to ascertain a function to determine a proxy for the latent variable as a function of the responses to all k questions

$$P_i = G(X_{1i}, X_{2i}, \dots, X_{ki})$$

- We estimate the region-level ideology variable by averaging over the P_i for the individuals in the region

DOMAINS AND INDICATORS I

Domains	Indicators				
	Ghana	S.Africa	Mali	Tanzania	Ethiopia
Education	University is more important for a boy				Funding scarce: Schooling for boys vs girls
Employment	Jobs scarce: Men should have more right to a job				
	Men make better business executives than women do				
		Problem if women have more income than husband			
		Job best way for women to be independent			
		Pre-school child suffers with working mother			
Asset ownership			Women have equal right to land		

DOMAINS AND INDICATORS II

Domains	Indicators				
	Ghana	S.Africa	Mali	Tanzania	Ethiopia
Political leadership and rights	Men make better political leaders than women do		Men only as leaders vs. women leaders		
	Democracy: Women have the same rights as men.				Women have equal rights vs. subject to traditional laws
Marriage	Justifiable: Divorce				
	Child needs a home with father and mother				
	Marriage is an out-dated institution				
	Woman as a single parent				
Household responsibilities	Being a housewife just as fulfilling		Better if woman takes care of household		
Sexual and reproductive freedom	Justifiable: Abortion				
	Justifiable: Sex before marriage				
Violence against women	Justifiable: Man to beat his wife				

DATA FOR THE INDICES OF PATRIARCHAL IDEOLOGY: WVS AND AFROBAROMETER SURVEY

Country	Survey-Year	Sample size	Number of regions
Ethiopia	Afrobarometer 2013	2,386	11
Ghana	World values 2007	1,534	10
Mali	Afrobarometer 2018	1,200	8
South Africa	World values 2013	3,531	9
Tanzania	Afrobarometer 2017	2,400	30

Missing values were imputed for responses in Ethiopia (7%), Ghana (12%), and South Africa (15%) using the fully-conditional-specification (FCS) method (percentages in the brackets indicate the share of respondents with imputed responses in the total number of respondents in the sample). No imputation was necessary for Mali and Tanzania.

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: Round Seven - Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat.

doi.org/10.14281/18241.1

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2014. World Values Survey: Round Five - Country-Pooled Datafile.

Afrobarometer data: <https://afrobarometer.org/>

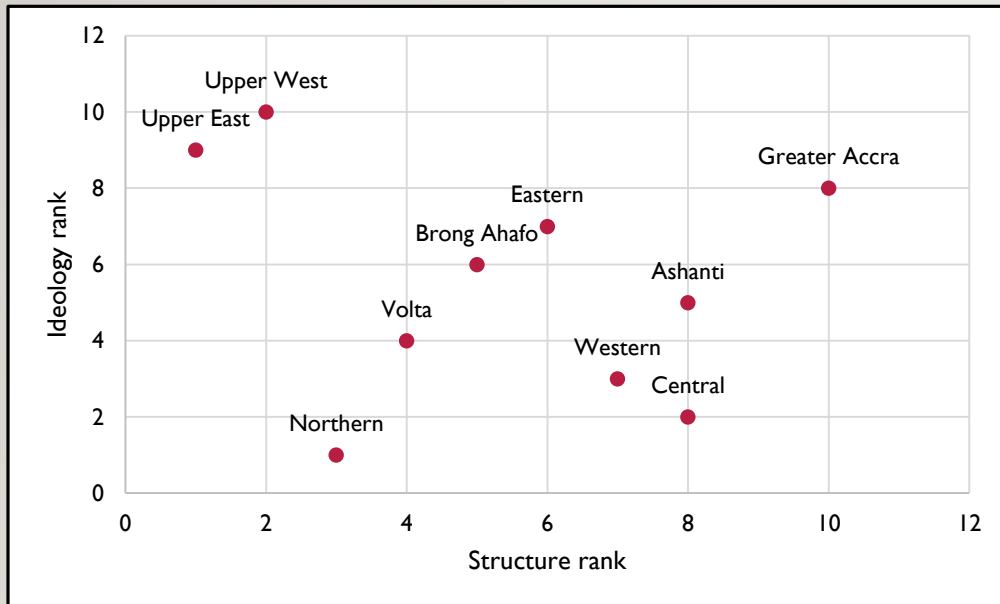
DOMAINS AND INDICATORS: SUMMARY

Domains	Number of indicators				
	Ghana	S.Africa	Mali	Tanzania	Ethiopia
Education	1	1	0	0	1
Employment	2	5	1	1	0
Asset ownership	0	0	1	1	0
Political leadership and rights	2	2	1	1	2
Marriage	4	1	0	0	0
Household responsibilities	1	1	1	1	0
Sexual and reproductive freedom	1	2	0	0	0
Violence against women	1	1	1	1	1

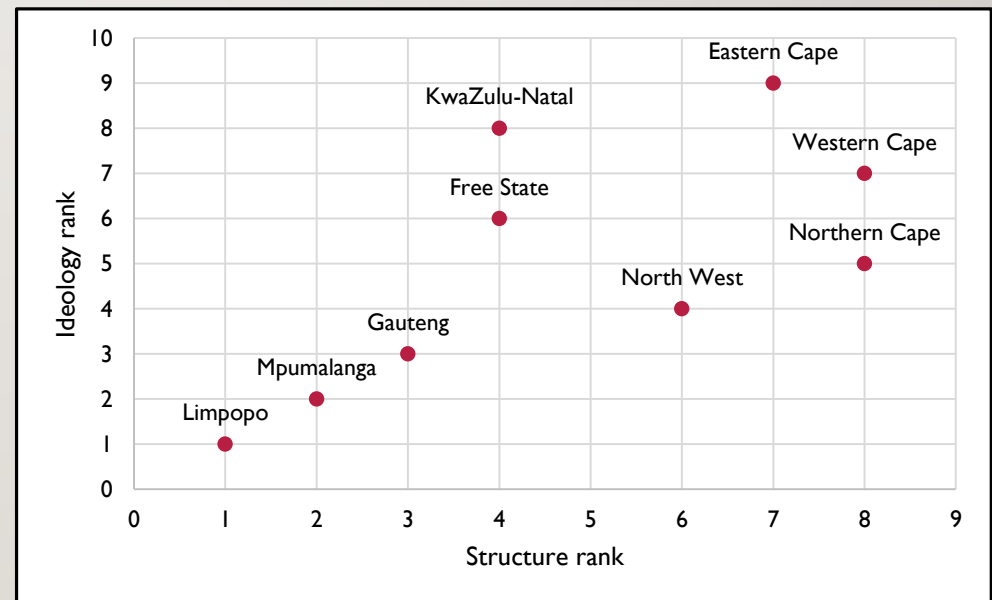
- All countries have indicators for political leadership and rights, and violence against women
- Ghana and South Africa has indicators for all the domains, except asset ownership (7 domains)
- Mali and Tanzania has no indicators for education, marriage and, sexual and reproductive freedom (5 domains)
- Ethiopia has no indicators for employment, asset ownership, marriage, household responsibilities, and sexual and reproductive freedom (3 domains)

RANKS IN THE STRENGTH OF IDEOLOGY VS. STRENGTH OF STRUCTURE

GHANA



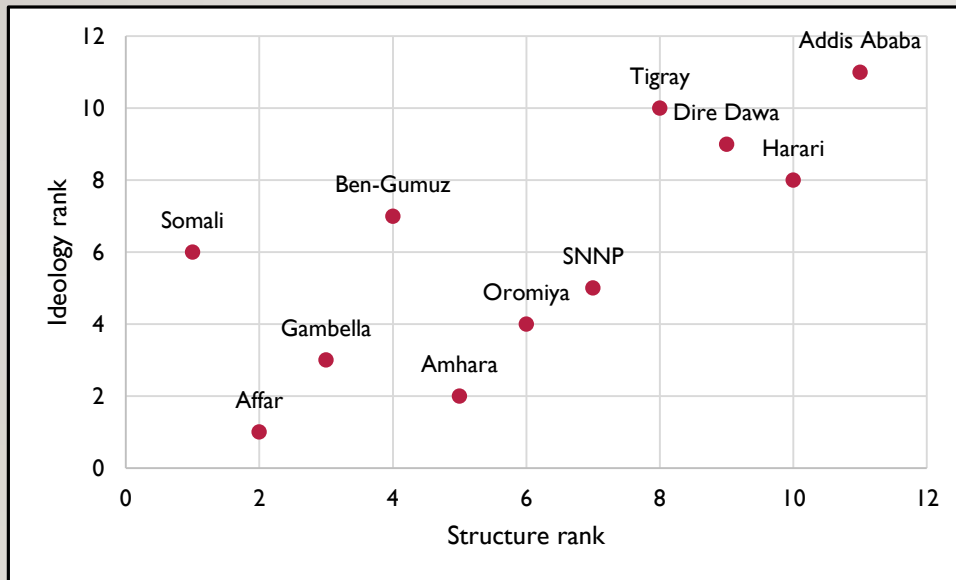
SOUTH AFRICA



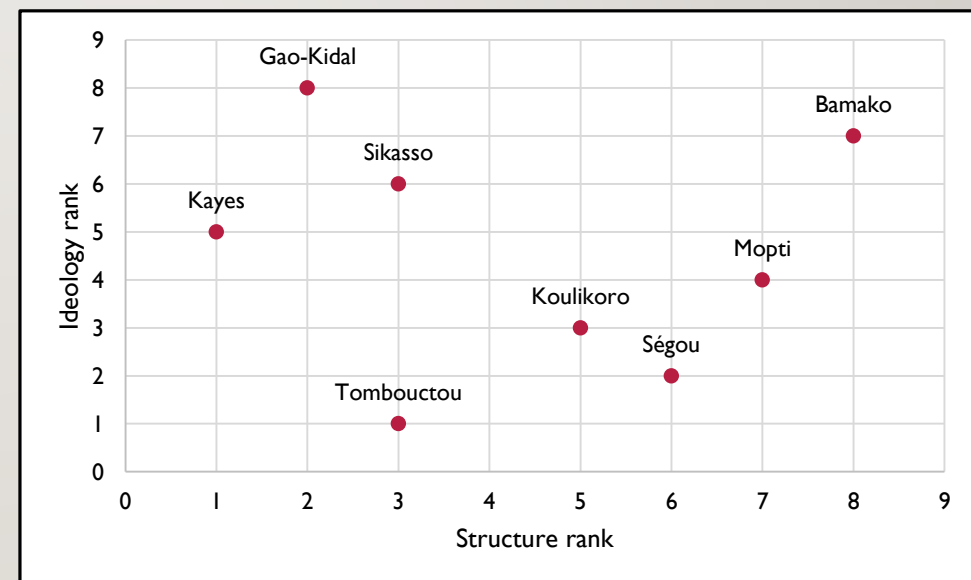
Rank 1 indicates the highest strength of patriarchy

RANKS IN THE STRENGTH OF IDEOLOGY VS. STRENGTH OF STRUCTURE

ETHIOPIA

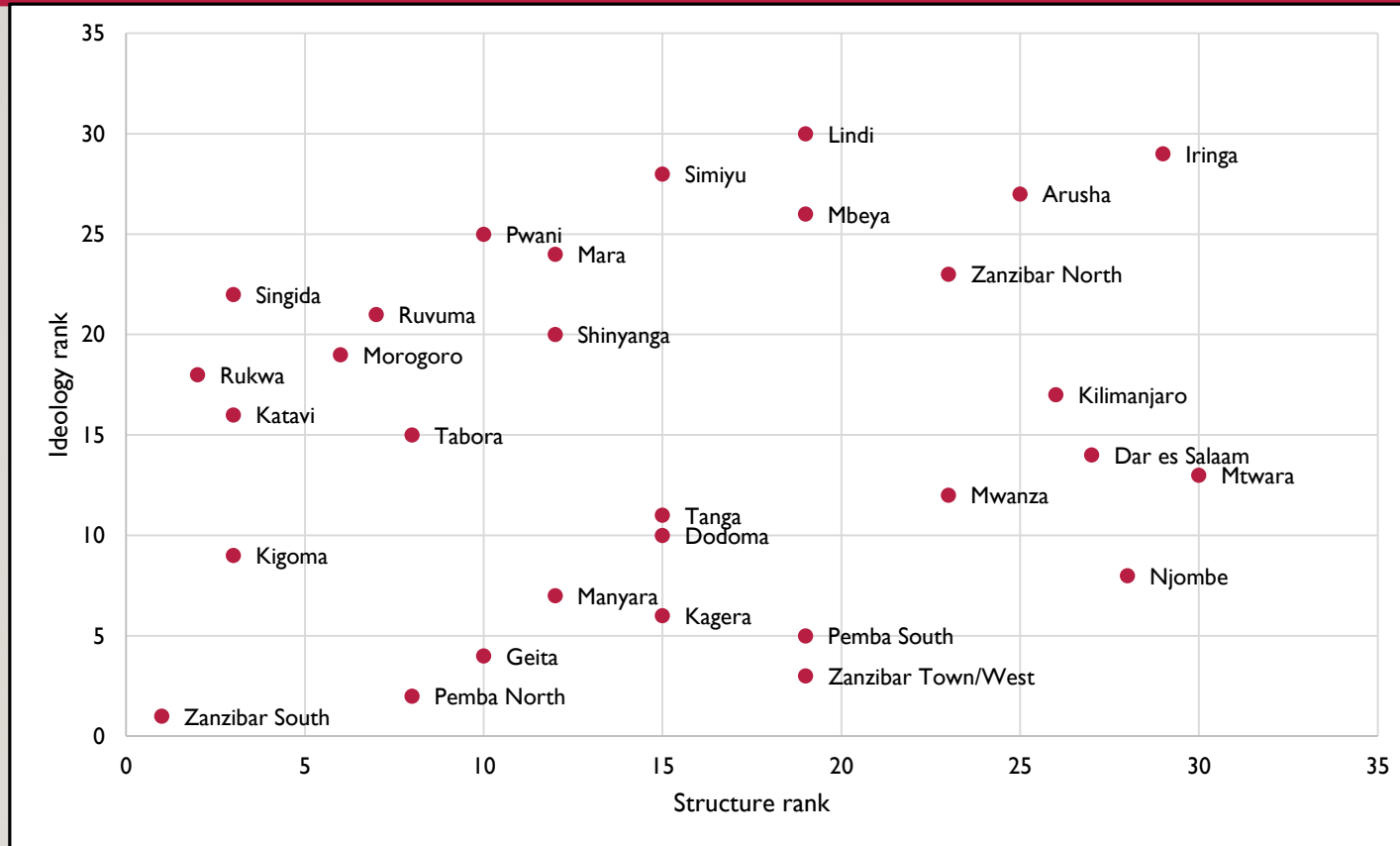


MALI



Rank 1 indicates the highest strength of patriarchy

RANKS IN THE STRENGTH OF IDEOLOGY VS. STRENGTH OF STRUCTURE: TANZANIA



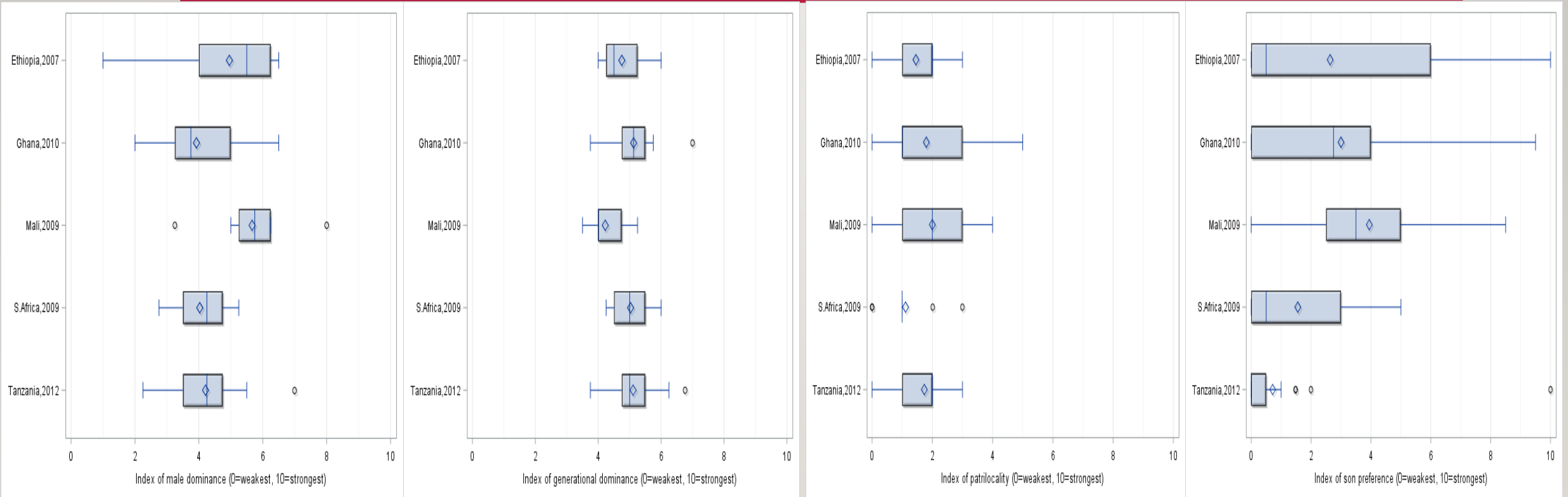
Rank 1 indicates the highest strength of patriarchy

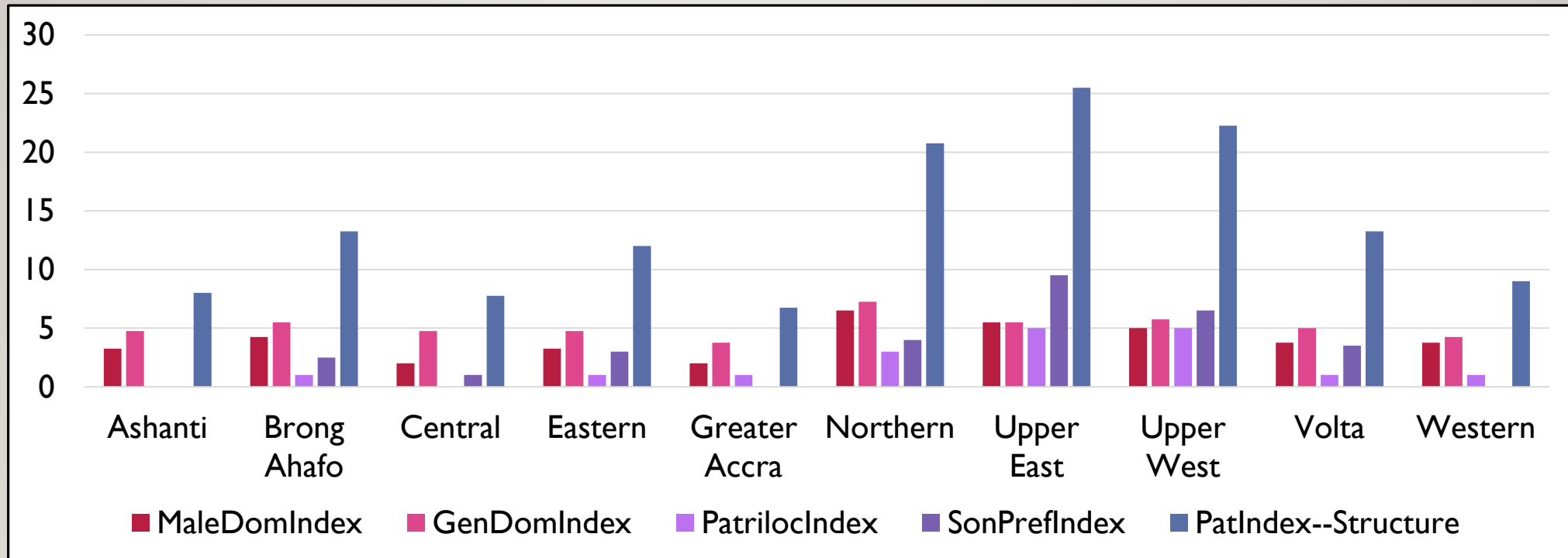
CONCLUSION

- Regional variations in the strength of patriarchal structures and ideology are considerable
- Generational domination is equally important as male domination in determining the strength patriarchal structures
- There is a positive association between the strength of structures and strength of ideology, though the relationship appears to be complex:
 - Regions that shows the greatest strength of structure sometimes show the least strength of ideology (e.g. the Upper West and Upper East regions in Ghana)
- Factors related to agency may mediate the relationship—future research!

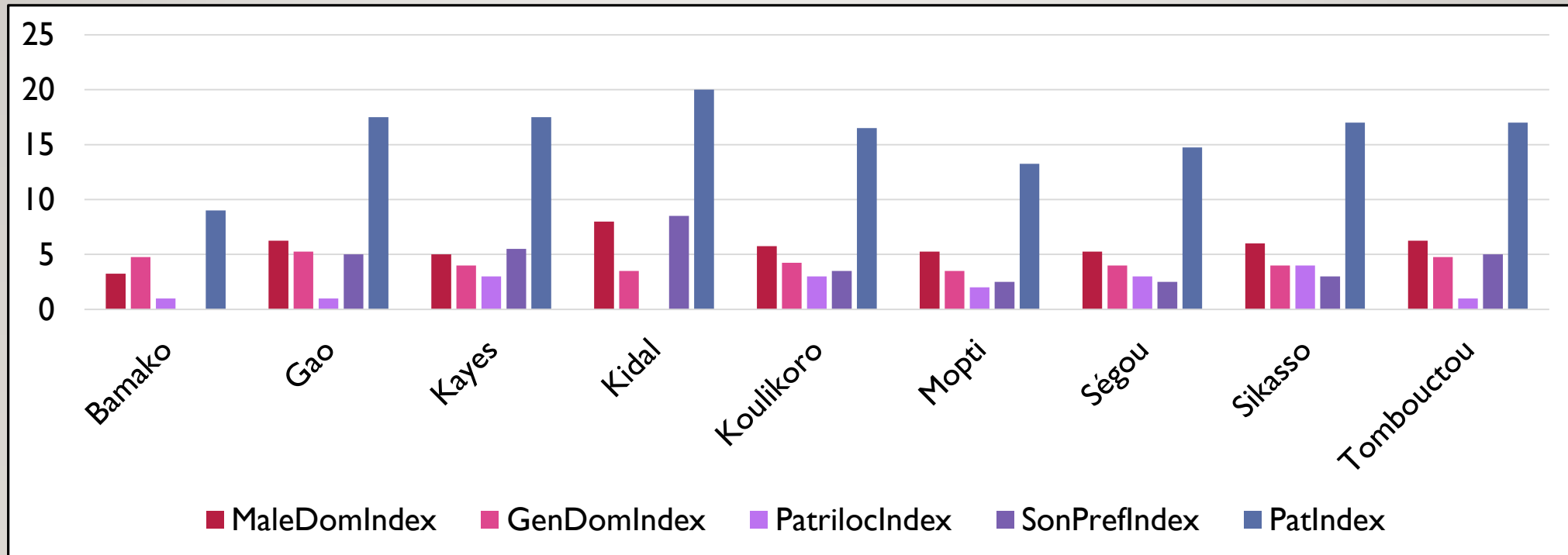
SUB-INDICES OF PATRIARCHAL STRUCTURE

Indices are estimated separately for the regions of each country

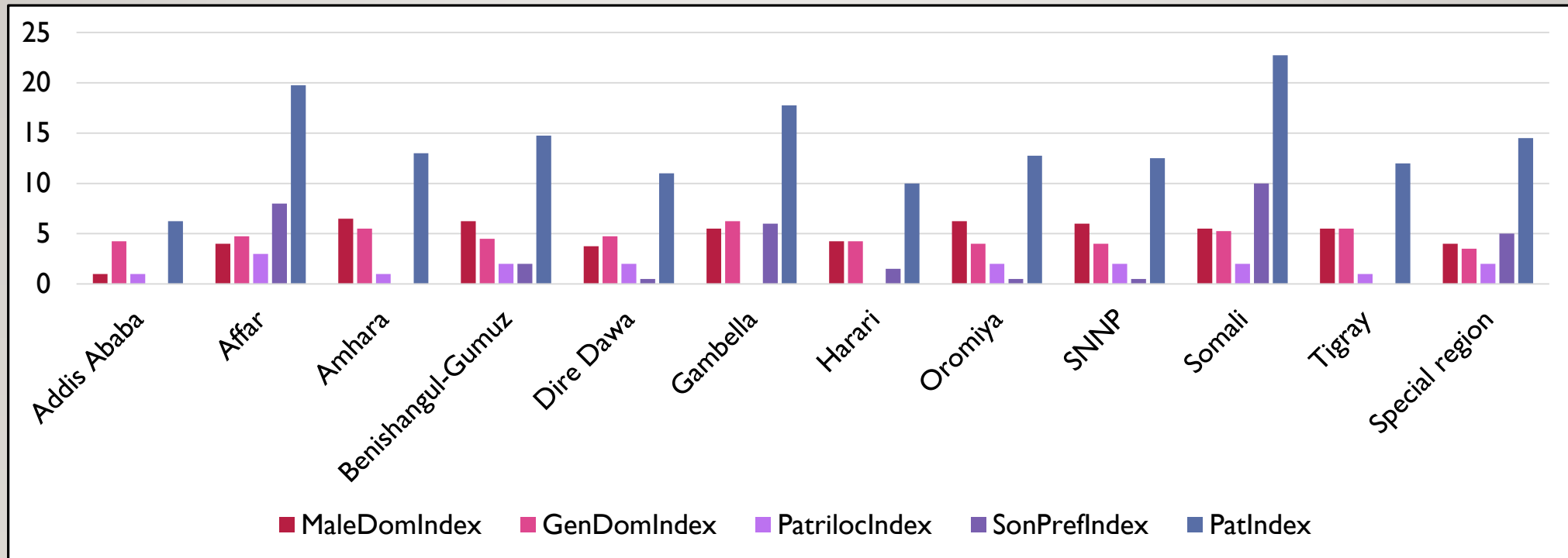




SUB-INDICES AND INDEX OF PATRIARCHAL STRUCTURES: MALI



SUB-INDICES AND INDEX OF PATRIARCHAL STRUCTURES: ETHIOPIA



SUB-INDICES AND INDEX OF PATRIARCHAL STRUCTURES:TANZANIA

