GAAP 2 phase

Gender, Agriculture & Assets Project

Led by **IFPRI**

Who is empowered?

Predictors of empowerment in Bangladesh and Ghana

Elena Martinez and Greg Seymour
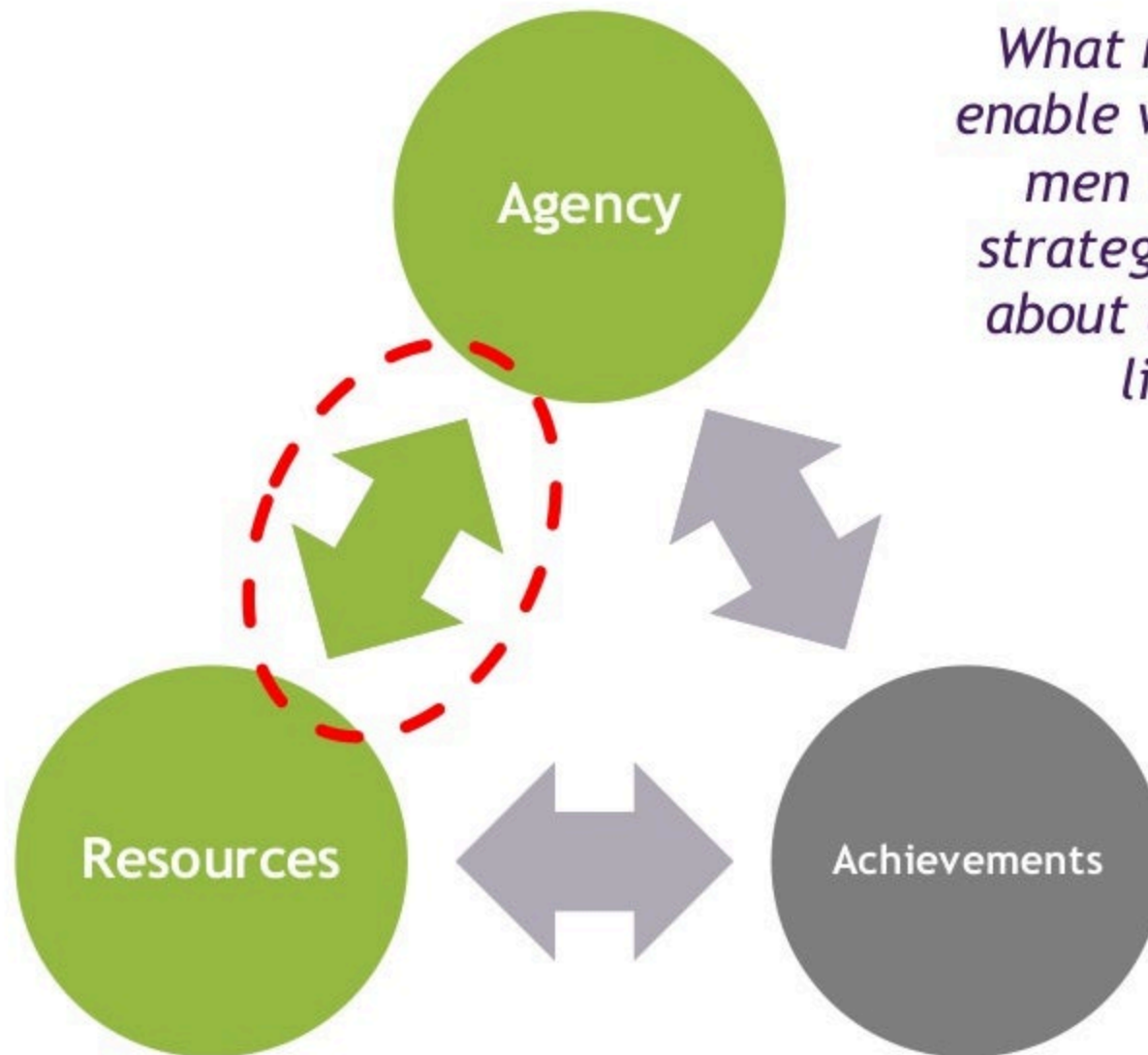
International Food Policy Research Institute

CGIAR Research Program on Agriculture for Nutrition and Health

Seeds of Change 2019

Canberra, Australia

April 4, 2019

What is empowerment?

Agency

Resources

Achievements

What resources enable women and men to make strategic choices about their own lives?

Kabeer (1999)

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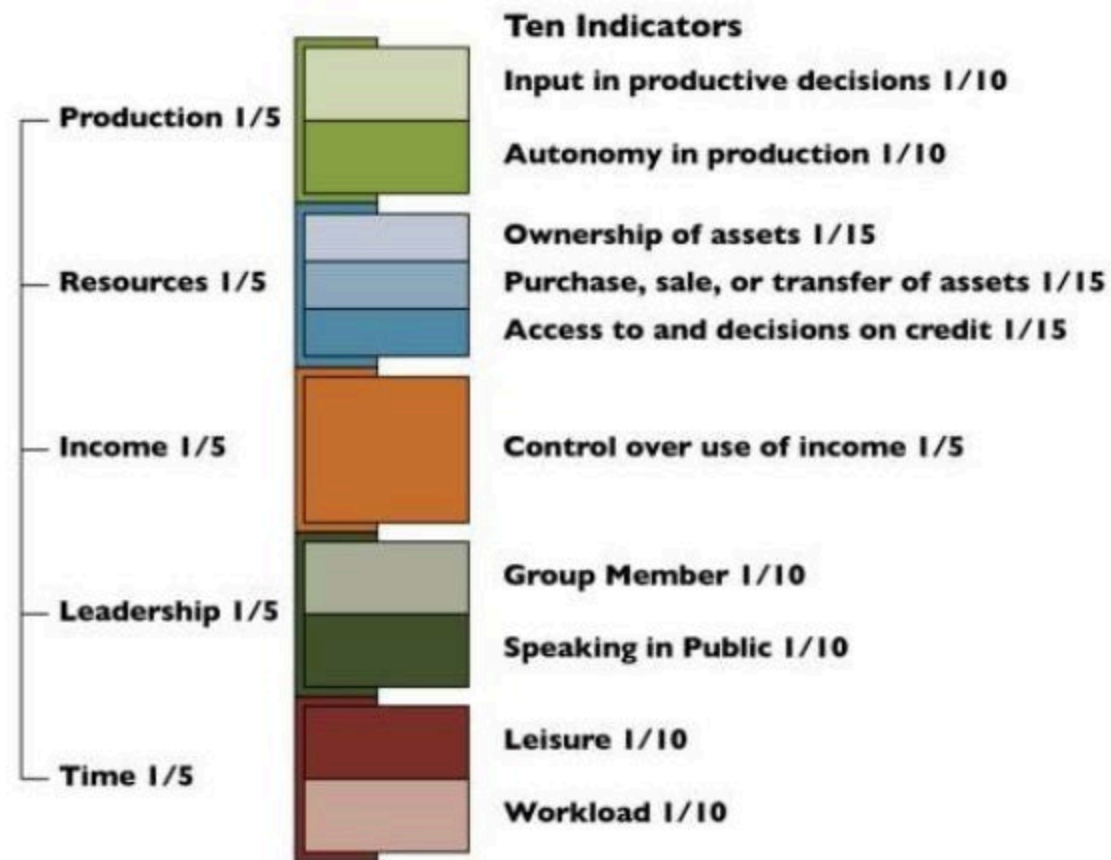
Data: Population-based Feed the Future baseline surveys

- Ghana (2012), representative for the FTF Zone of Influence (ZOI)
  - Collected by the Institute of Statistical, Social and Economic Research and USAID
- Bangladesh (2011-12), nationally representative for rural
  - Collected by DATA, IFPRI, and USAID
  - Bangladesh Integrated Household Survey (BIHS)

GHANA ZOI

RURAL BANGLADESH

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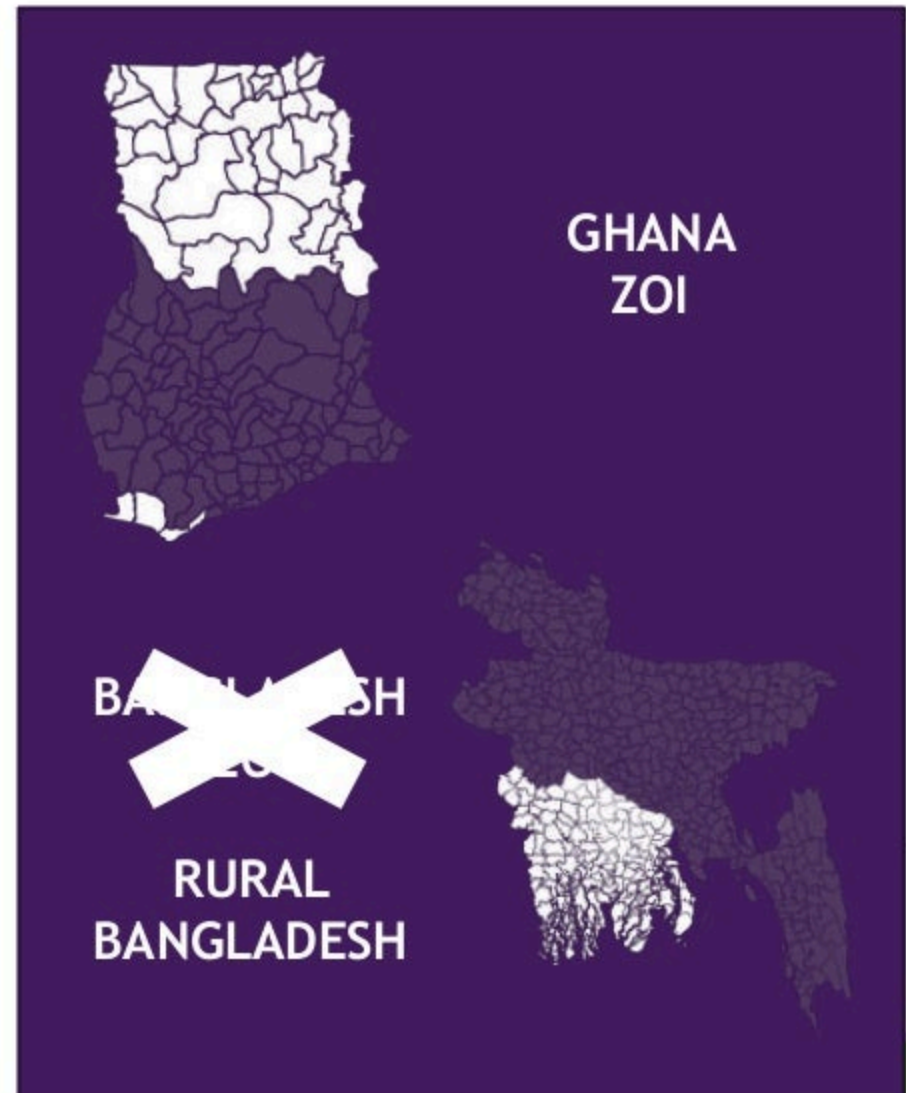
# Women's Empowerment in Agriculture Index (WEAI)

- ▶ Measures empowerment and inclusion of women in the agricultural sector

- ▶ Launched in 2012 by USAID, IFPRI & OPHI

- ▶ Survey-based index, constructed using interviews of the **primary male** and **primary female** adults in the same household

- ▶ An aggregate index in two parts:
  - ▶ Five Domains of Empowerment (5DE)
  - ▶ Gender Parity Index (GPI)

Production 1/5
Resources 1/5
Income 1/5
Leadership 1/5
Time 1/5

Ten Indicators
Input in productive decisions 1/10
Autonomy in production 1/10
Ownership of assets 1/15
Purchase, sale, or transfer of assets 1/15
Access to and decisions on credit 1/15
Control over use of income 1/5
Group Member 1/10
Speaking in Public 1/10
Leisure 1/10
Workload 1/10

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Methods

▶ Estimated predictors of women's and men's empowerment score using fractional logistic regression

  ▶ Empowerment score = (# indicators individual is adequate in)/10

  ▶ Fractional variable, range=[0,1]

▶ Estimated predictors of adequacy in each indicator of empowerment using Poisson or OLS regression

▶ Resources: individual, household, and community characteristics

  ▶ Individual: literacy, marital status, age

  ▶ Household: ethnic group, wealth/asset quintile, household hunger scale, dependency ratio, household size, household type

  ▶ Community: rural/urban, region

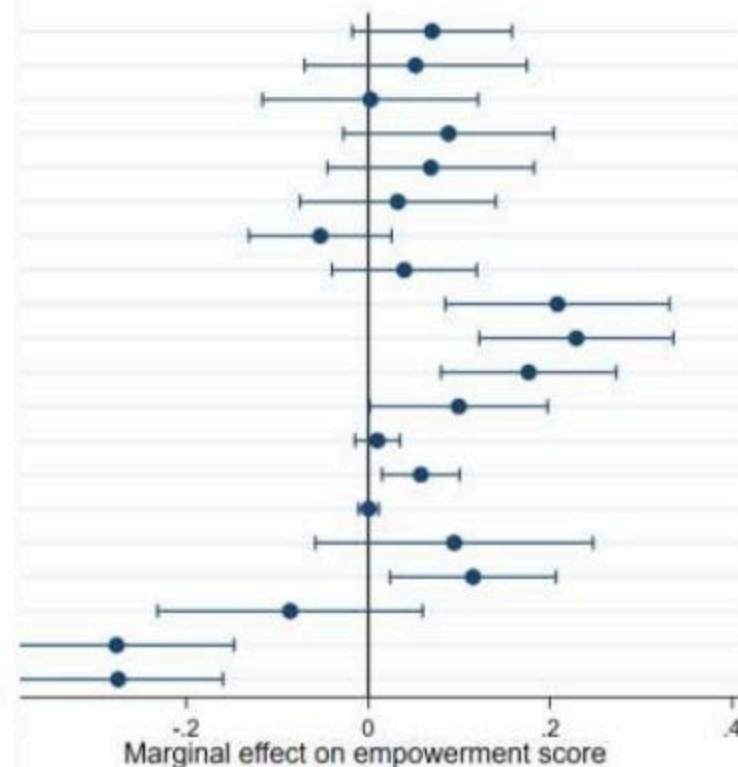# Study population
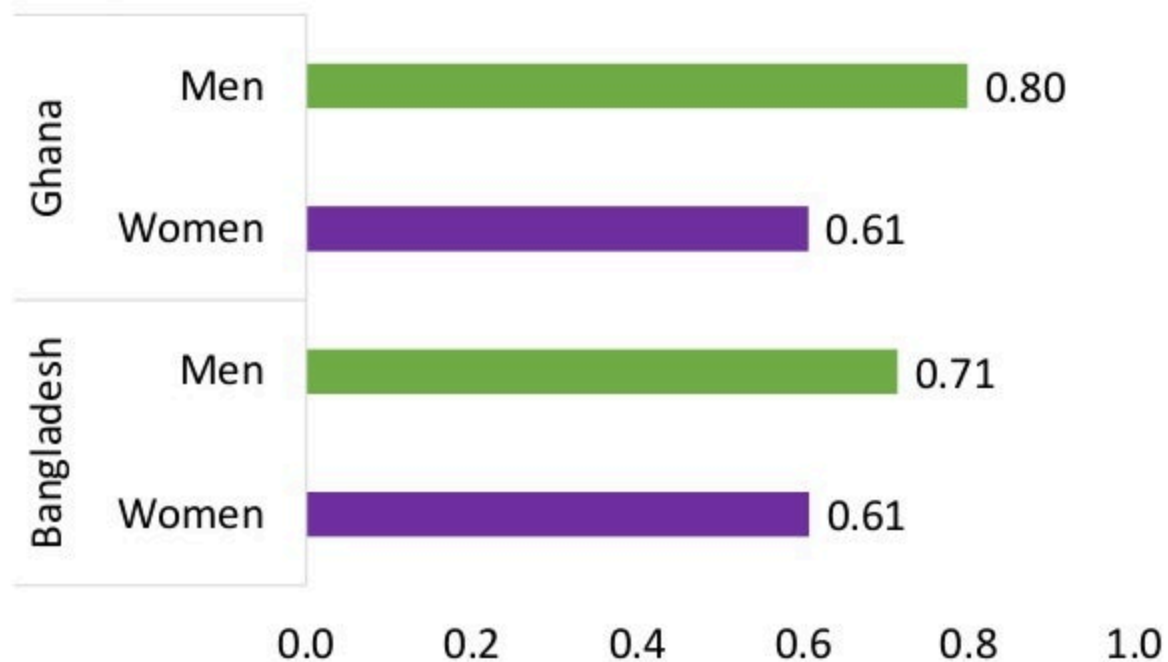
		Average empowerment score
Ghana	Men	0.80
	Women	0.61
Bangladesh	Men	0.71
	Women	0.61

Study population

	Bangladesh		Ghana	
	Women	Men	Women	Men
Average age (years)	37	44	38	44
Currently married (%)	95	95	90	87
Literate (%)	49	47	10	25
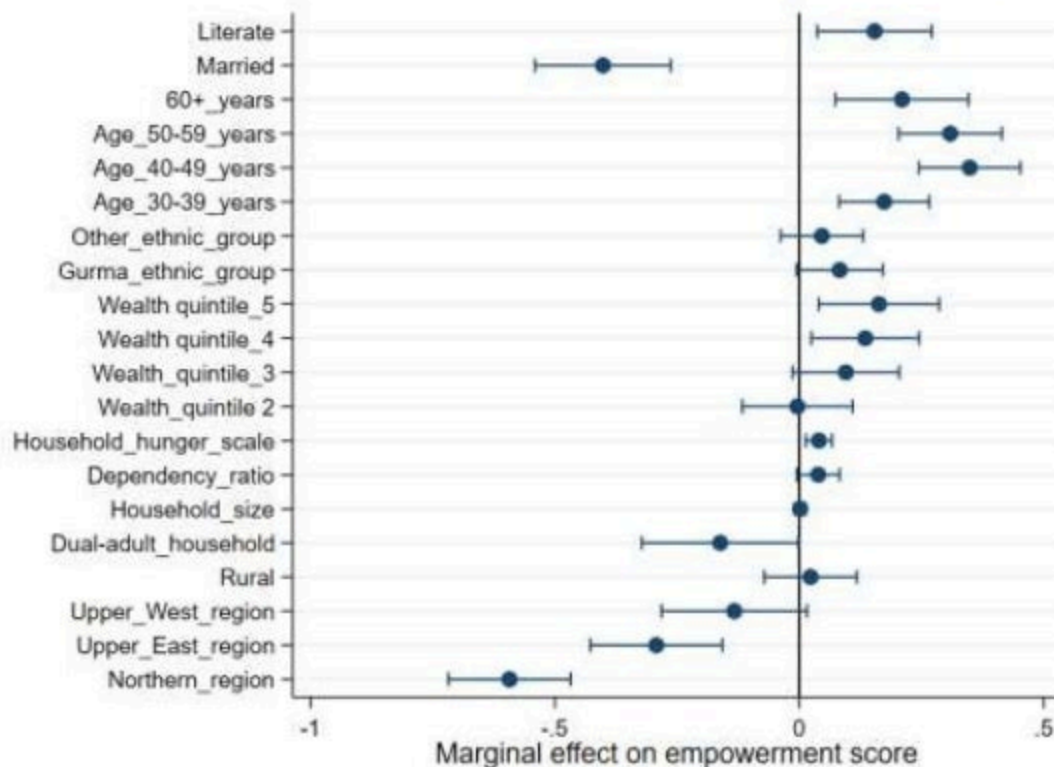
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Empowerment score: Ghana

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

Being literate is associated with higher empowerment score, but only for women

WOMEN (N=2,784)   MEN (N=3,046)

Able to read and write

Literate
Married
60+_years
Age_50-59_years
Age_40-49_years
Age_30-39_years
Other_ethnic_group
Gurma_ethnic_group
Wealth quintile_5
Wealth quintile_4
Wealth_quintile_3
Wealth_quintile 2
Household_hunger_scale
Dependency_ratio
Household_size
Dual-adult_household
Rural
Upper_West_region
Upper_East_region
Northern_region

Marginal effect on empowerment score
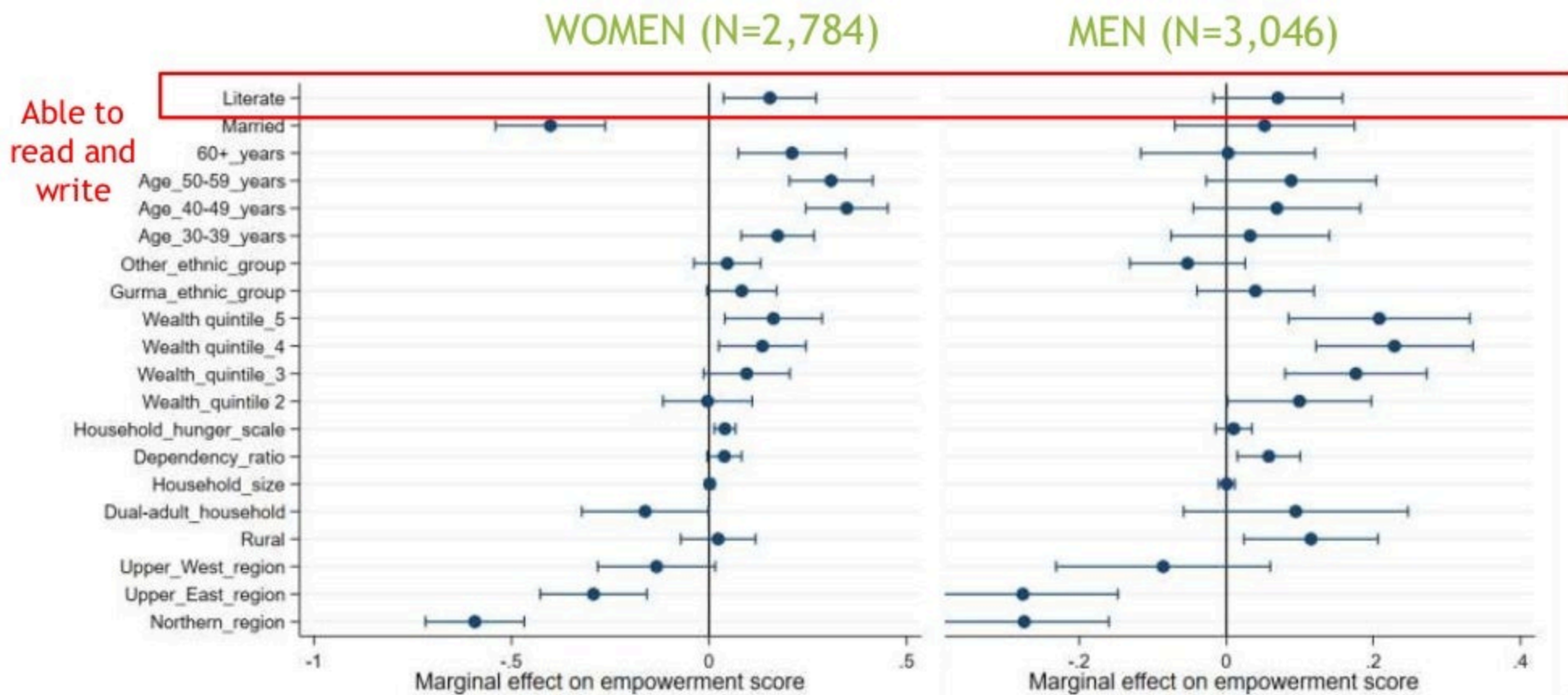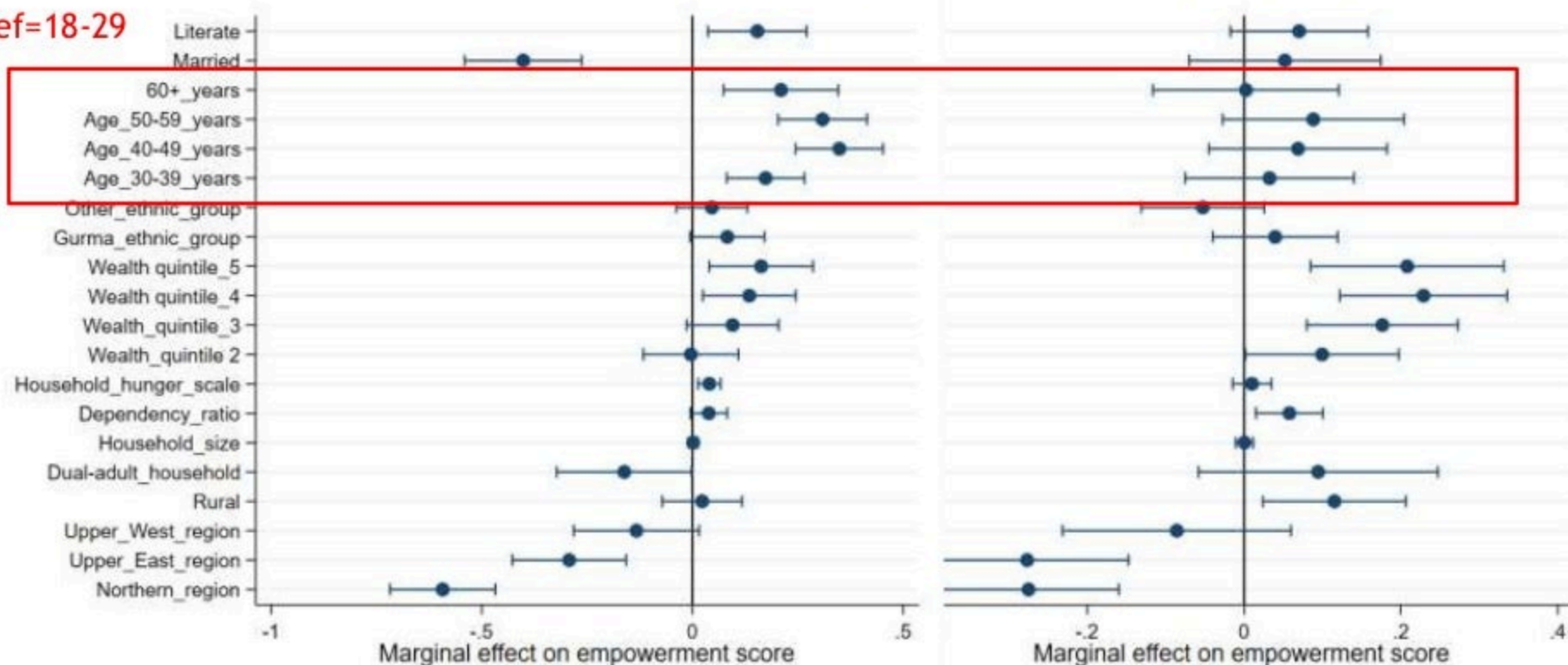
Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

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Being older is associated with higher empowerment score, but only for women


WOMEN (N=2,784)   MEN (N=3,046)

Ref=18-29

Literate, Married, 60+_years, Age_50-59_years, Age_40-49_years, Age_30-39_years, Other_ethnic_group, Gurma_ethnic_group, Wealth quintile_5, Wealth quintile_4, Wealth_quintile_3, Wealth_quintile 2, Household_hunger_scale, Dependency_ratio, Household_size, Dual-adult_household, Rural, Upper_West_region, Upper_East_region, Northern_region
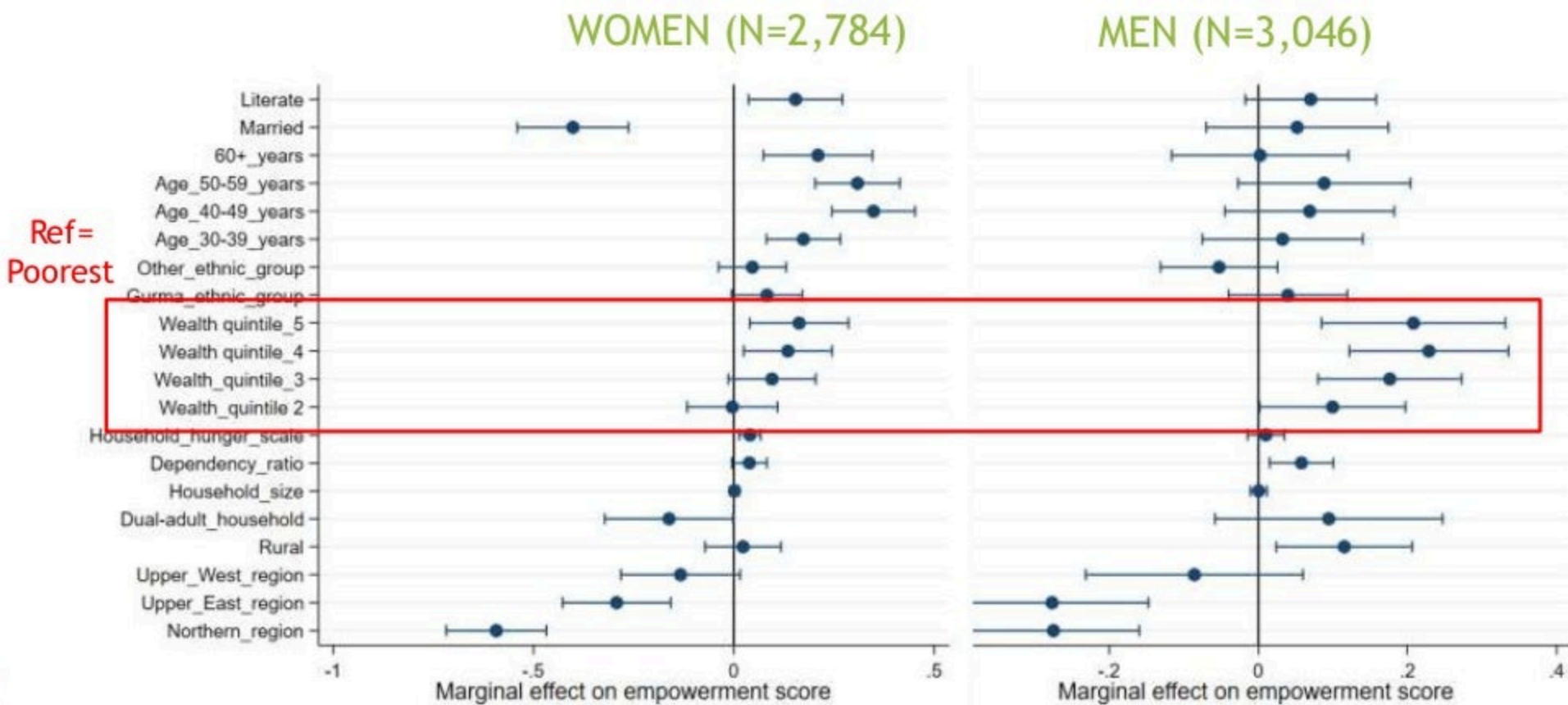
Marginal effect on empowerment score

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

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Being married is associated with lower empowerment score, but only for women
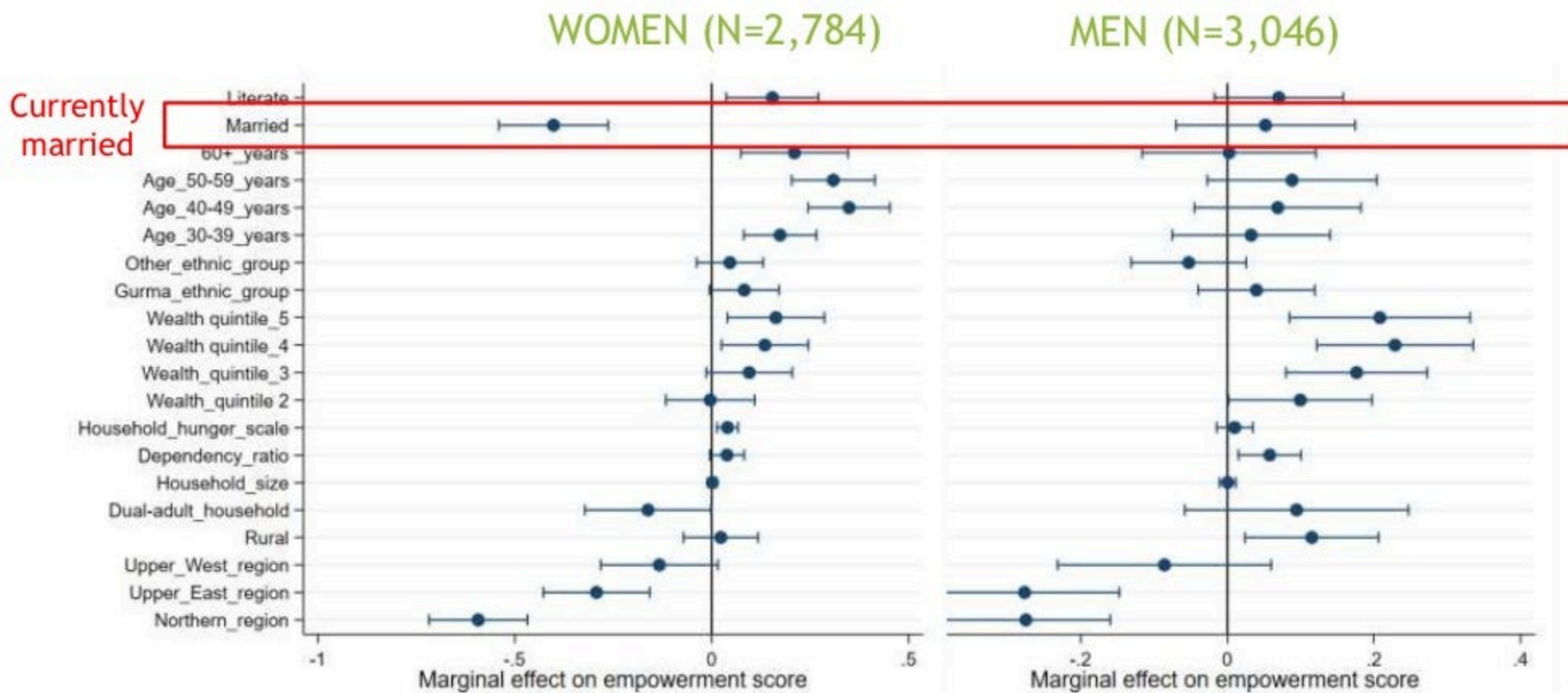
WOMEN (N=2,784)   MEN (N=3,046)

Currently married

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

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Being wealthy is associated with higher empowerment score for men and women

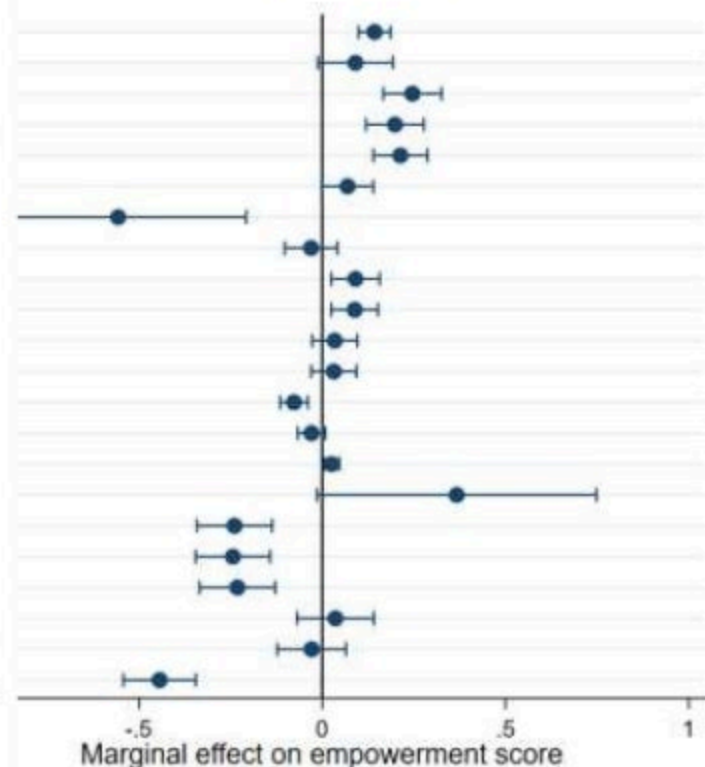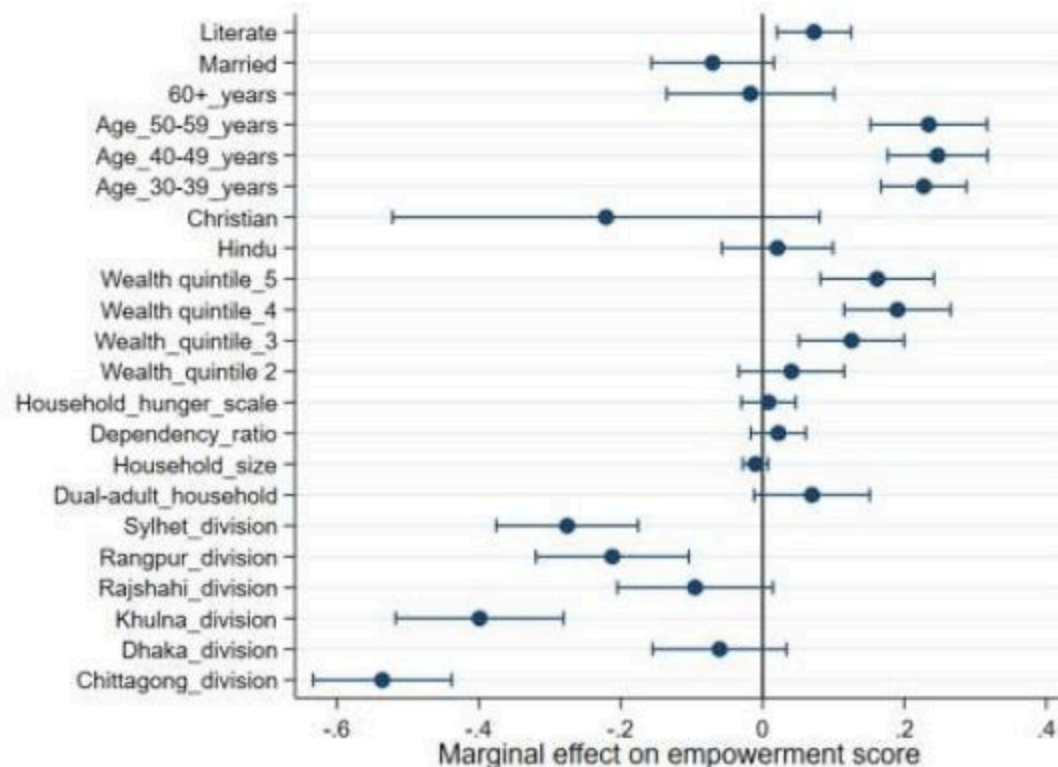WOMEN (N=2,784)   MEN (N=3,046)

Ref = Poorest

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

Empowerment score: Bangladesh

WOMEN (N=5,400)   MEN (N=4,530)

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

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Being literate is associated with empowerment score for both men and women

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

Being married is not associated with empowerment score

WOMEN (N=5,400)　　　　MEN (N=4,530)

Currently married

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

GAAP2

Being older is associated with empowerment score for both men and women
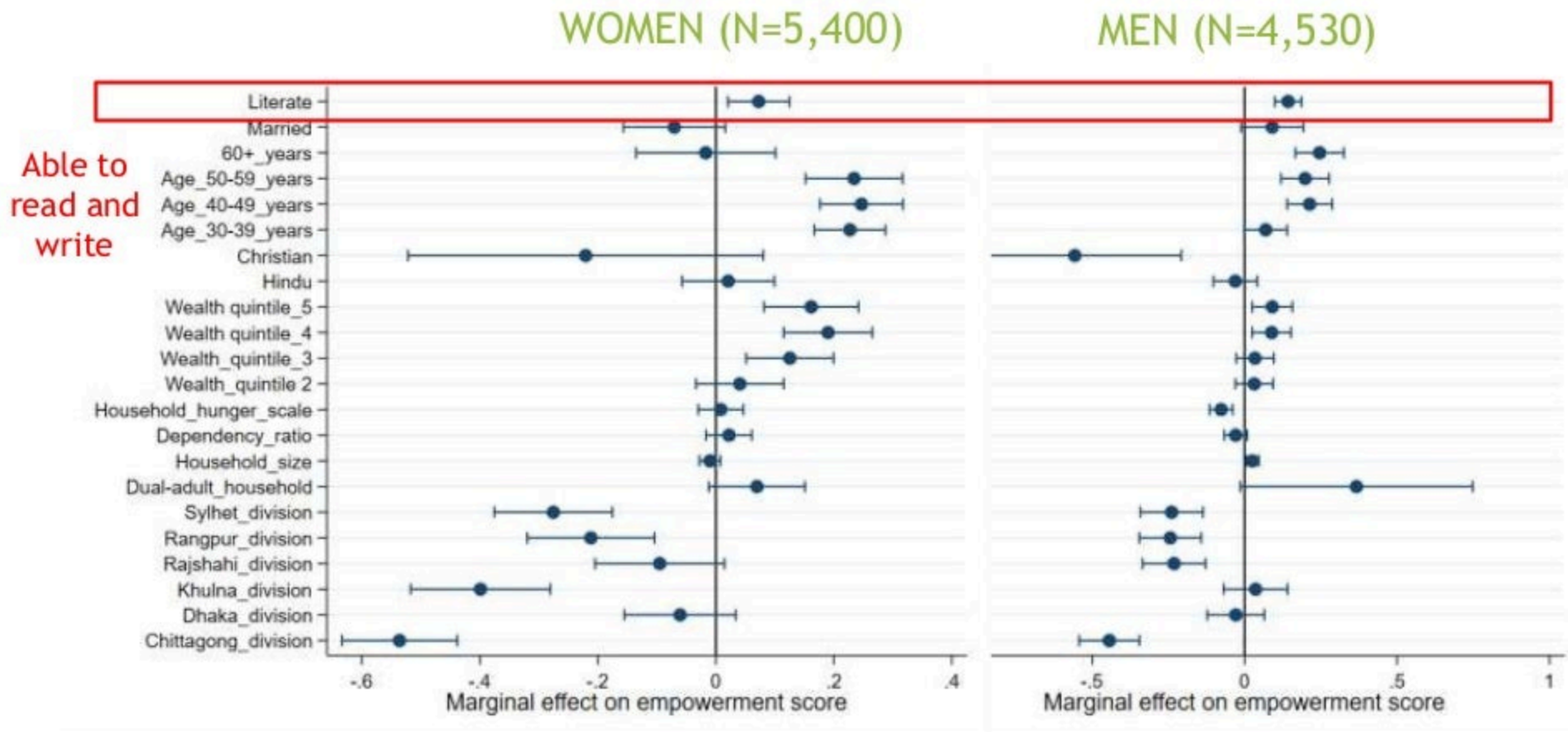

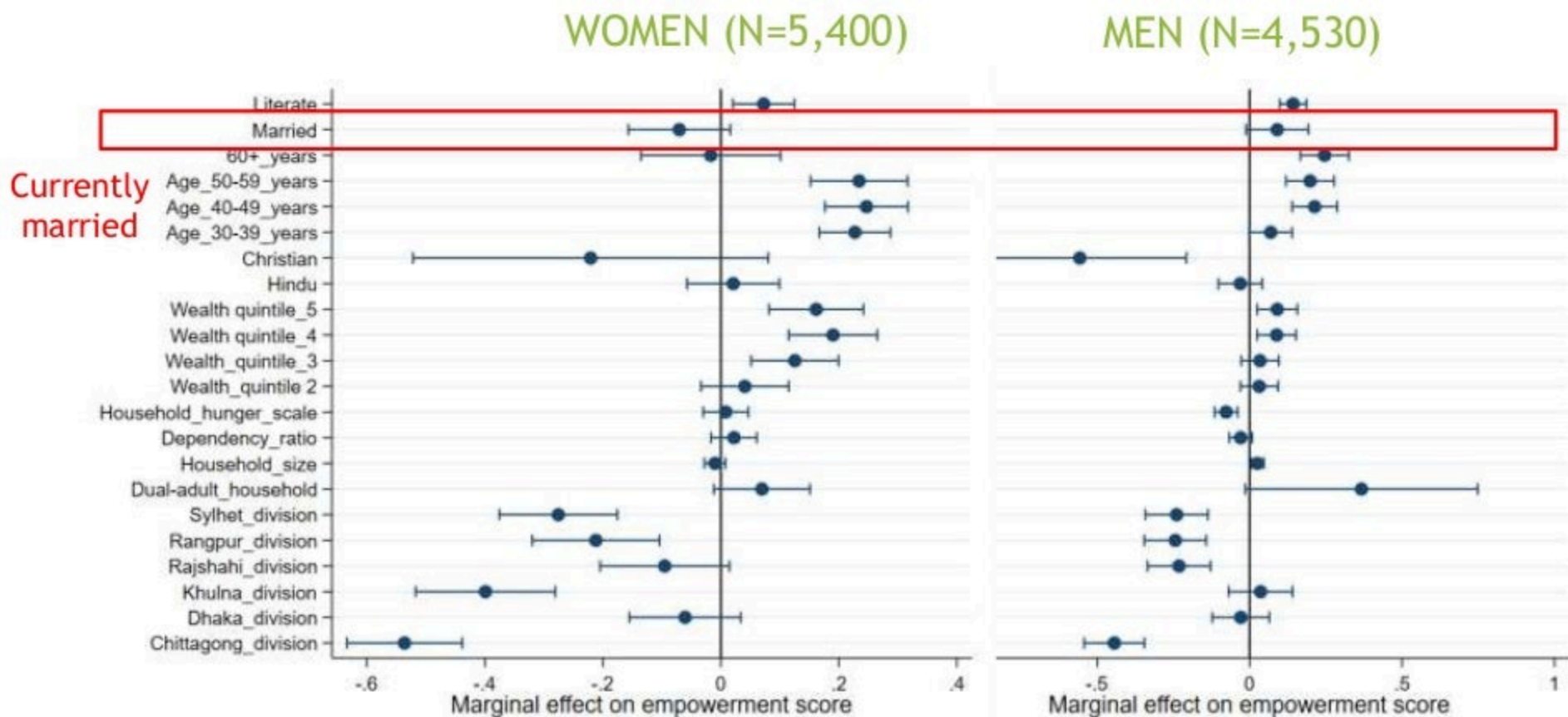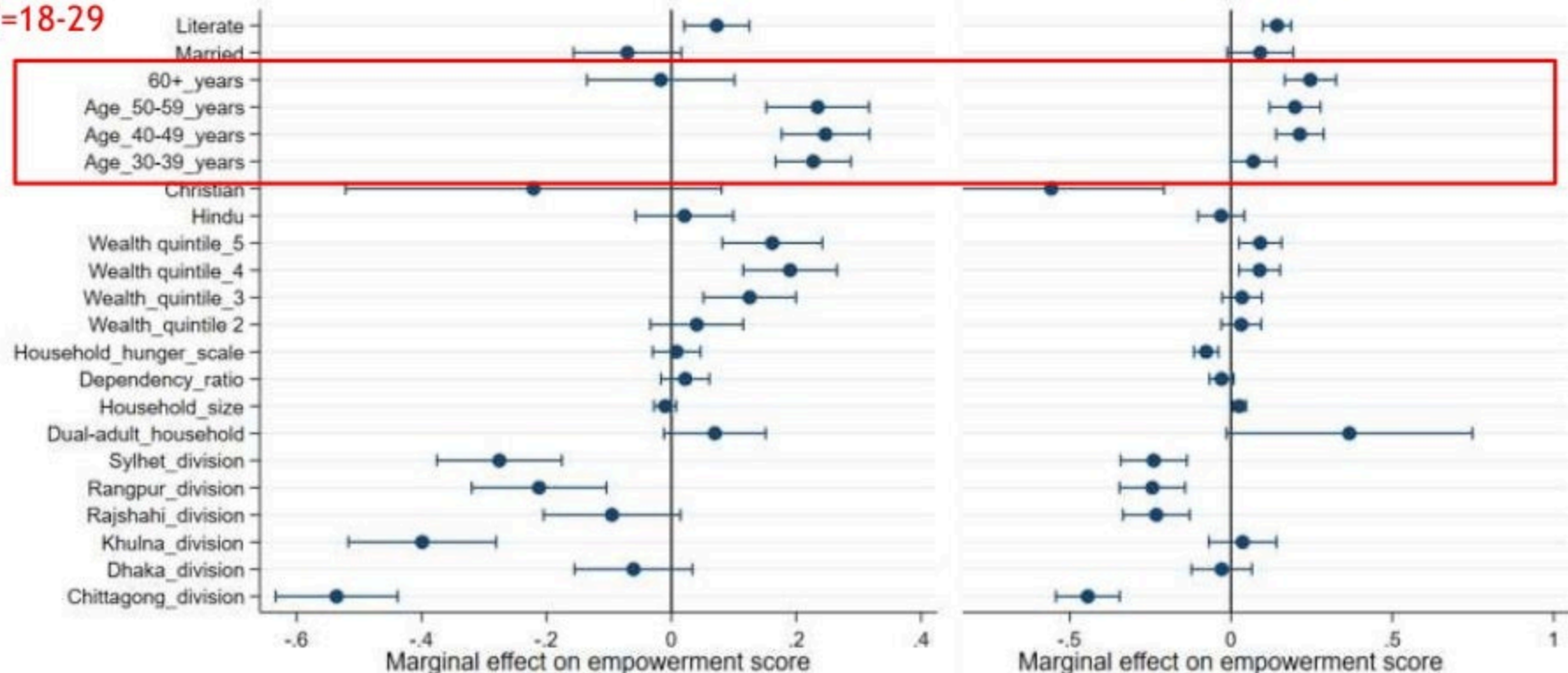WOMEN (N=5,400)   MEN (N=4,530)

Ref=18-29

Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

GAAP2

Being wealthy is associated with higher empowerment score for both men and women

WOMEN (N=5,400)   MEN (N=4,530)

Ref= Poorest

Literate
Married
60+_years
Age_50-59_years
Age_40-49_years
Age_30-39_years
Christian
Hindu
Wealth quintile_5
Wealth quintile_4
Wealth_quintile_3
Wealth_quintile 2
Household_hunger_scale
Dependency_ratio
Household_size
Dual-adult_household
Sylhet_division
Rangpur_division
Rajshahi_division
Khulna_division
Dhaka_division
Chittagong_division

Marginal effect on empowerment score
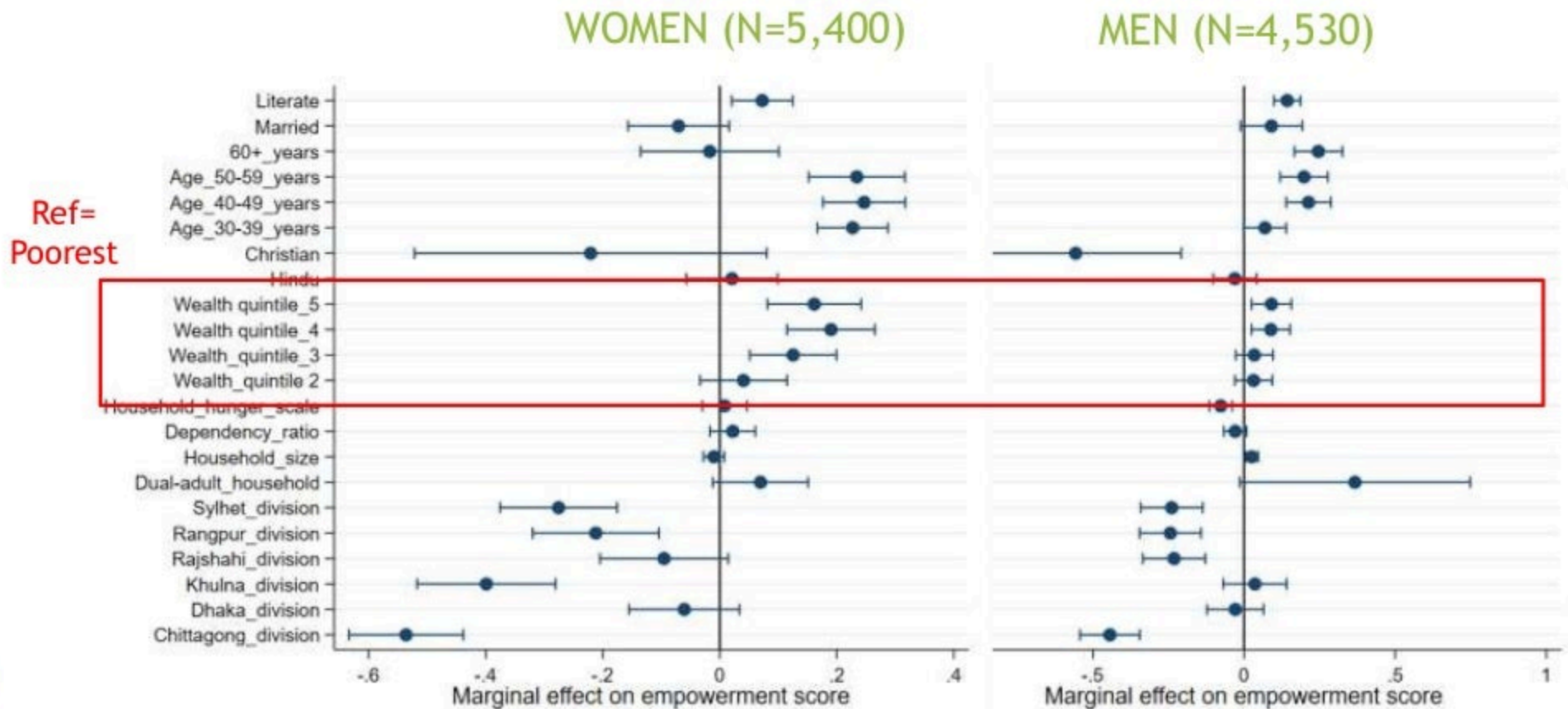
Empowerment score = (# indicators individual is adequate in)/10
Fractional logistic regression models, 95% CIs

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What did we learn?

▶ Wealth, literacy, marital status, and age are associated with empowerment score, though these associations vary by country.

▶ Some of these resources matter more for women's agency than for men's agency.

▶ Examples:

  ❖ Being married was associated with lower empowerment for women in Ghana but not in Bangladesh.

  ❖ In Ghana, age mattered for women's empowerment score; in Bangladesh, age mattered for both men and women.

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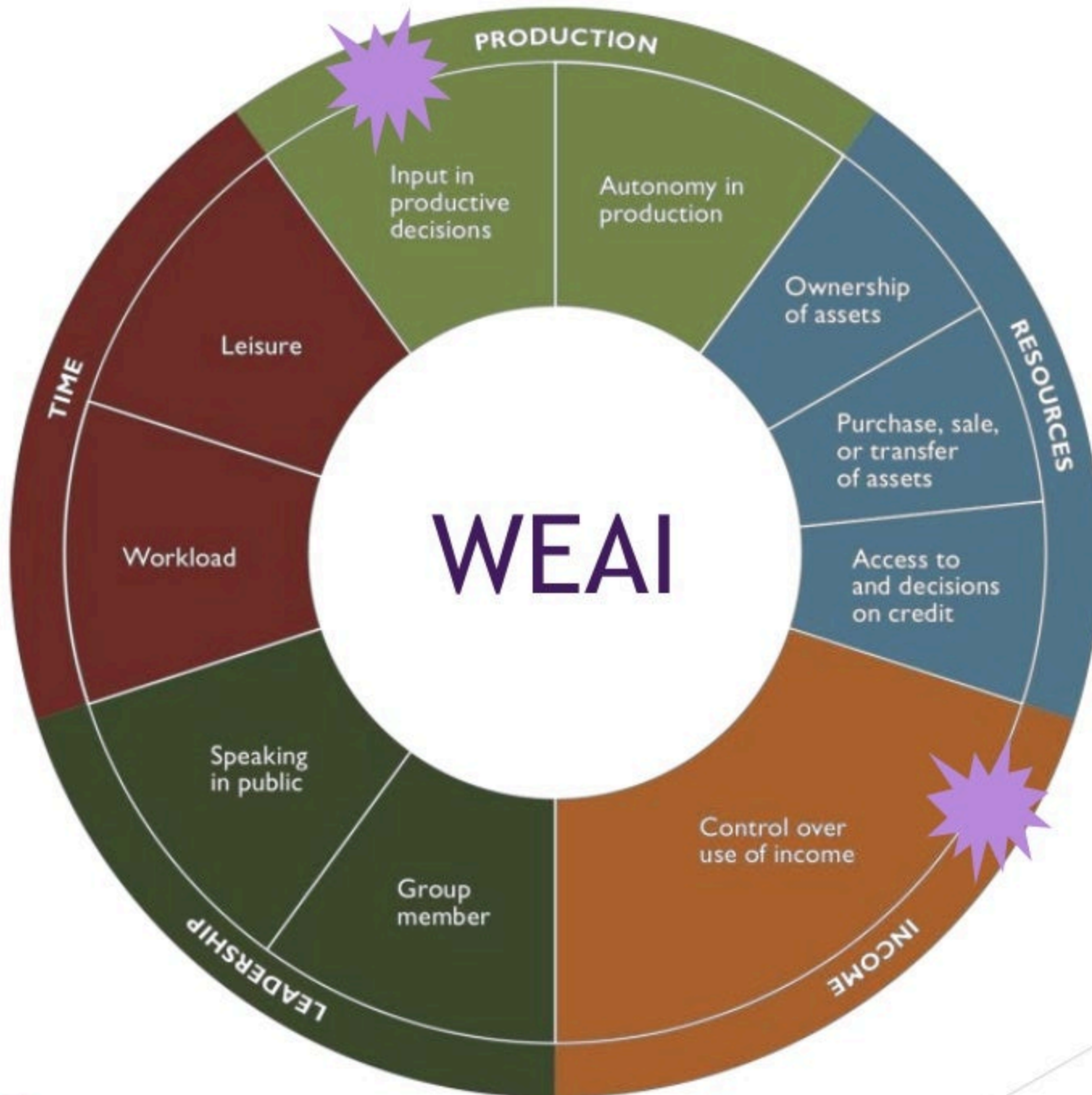
Input in productive decisions

- WEAI indicator:
  - Adequate if individual participates in decisions about at least one agricultural activity
- Regression outcome:
  - Number of agricultural activities the individual makes decisions about
  - Count variable, range=[0,9]
- Model:
  - Poisson regression

Resources → Input in productive decisions
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy	++	++		
Marriage	--		--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--	++	
Household size	++	++		++
Dual-adult household				

++	Positive association	0.05 level of confidence
--	**Negative association**	
Blank	No association	

GAAP2

Resources → Input in productive decisions
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy	++	++		
Marriage	--		--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--	++	
Household size	++	++		++
Dual-adult household				

++	Positive association	0.05 level of confidence
--	Negative association	
Blank	No association	

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Resources → Input in productive decisions
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy	++	++		
Marriage	--		--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--	++	
Household size	++	++		++
Dual-adult household				

++	Positive association	0.05 level of confidence
--	Negative association	
Blank	No association	

Resources → Input in productive decisions
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy	++	++		
Marriage	--		--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--	++	
Household size	++	++		++
Dual-adult household				

++	Positive association	0.05 level of confidence
--	Negative association	
Blank	No association	

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Control over use of income

- WEAI indicator:
  - Adequate if individual participates in decisions about how to use income from at least one activity

- Regression outcome:
  - Number of activities for which the individual makes income decisions
  - Count variable, range=[0,9]

- Model:
  - Poisson regression

Resources → Control over use of income
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy			++	++
Marriage	--	++	--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--		
Household size		++		
Dual-adult household		++		

++	Positive association	0.05 level of confidence
--	Negative association	
Blank	No association	

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Resources → Control over use of income
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy			++	++
Marriage	--	++	--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--		
Household size		++		
Dual-adult household		++		

++	Positive association	0.05 level of confidence
--	**Negative association**	
Blank	No association	

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Resources → Control over use of income
Direction of associations based on IRRs

Predictor	Bangladesh		Ghana	
	Women	Men	Women	Men
Literacy			++	++
Marriage	--	++	--	++
Age	++	++	++	
Wealth	--	--		++
Dependency ratio		--		
Household hunger	--	--		
Household size		++		
Dual-adult household		++		

++	Positive association	0.05 level of confidence
--	Negative association	
Blank	No association	

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What did we learn?

▶ The associations between resources and agency vary for different dimensions of empowerment.

▶ The predictors of achievements in each dimension of empowerment vary by country.

▶ Use these results to think about how to target interventions.

  ▶ E.g., marital status and control over income

Next steps

▶ Data from other FTF countries
  ▶ Mozambique, Nepal, Tanzania

▶ Other WEAI indicators
  ▶ Autonomy in production, leisure, speaking in public, ownership of assets, rights over assets, access to and decisions on credit

▶ Intrahousehold parity
  ▶ WEAI also allows us to compare women's and men's agency in the same household.
  ▶ Do men and women benefit equally from a household's resources? What is the association between household resources and the difference between men's and women's agency?

▶ Qualitative
  ▶ How do these results compare with qualitative findings? Compare to qualitative results from the WEAI pilots.

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Thank you!

We would like to acknowledge **all** CGIAR Research Programs **and Centers** for supporting the participation of their gender scientists to the *Seeds of Change* conference.

RESEARCH PROGRAM ON **Policies, Institutions, and Markets** CGIAR

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Irish Aid
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Rialtas na hÉireann

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Government of the Netherlands

UKaid
from the British people

USAID
FROM THE AMERICAN PEOPLE

References

► Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G., & Vaz, A. (2013). The Women's Empowerment in Agriculture Index. World Development, 52, 71-91.

► Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of women's empowerment. Development and Change, 30(3), 435-464.

► FTF Bangladesh Baseline Report

► FTF Ghana Baseline Report

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