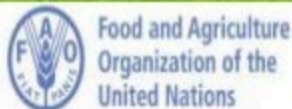


Male outmigration, intra-household decision-making and agricultural production: the case of Nepal

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Rationale

- ▶ Migration originating from rural areas is predominantly male (Mueller *et al.* 2015) raising concerns about the consequences of migration on sending rural communities in terms of
 - ▶ Women's work and empowerment; traditional gender norms
 - ▶ Agricultural productivity and production, etc.
 - ▶ Household food security
- ▶ In Nepal - >90% of international migrants are men; women constitute around 60% of all agricultural workers

Research objectives

To examine the impacts of male-dominated rural outmigration on sending communities:

In particular, the analysis aims to shed light on:

1. how outmigration influences women's and men's work in agriculture;
2. whether it also influences changes in decision-making about agriculture; and
3. what the impacts on agricultural production and food security are.

Conceptual Framework

- ▶ The New Economics of Labor Migration (NELM)
 - ▶ Migration as a household rather than individual decision
- ▶ Migration affects sending communities mainly through 2 channels:
 - ▶ the loss of migrant's labor, and
 - ▶ the remittance income.

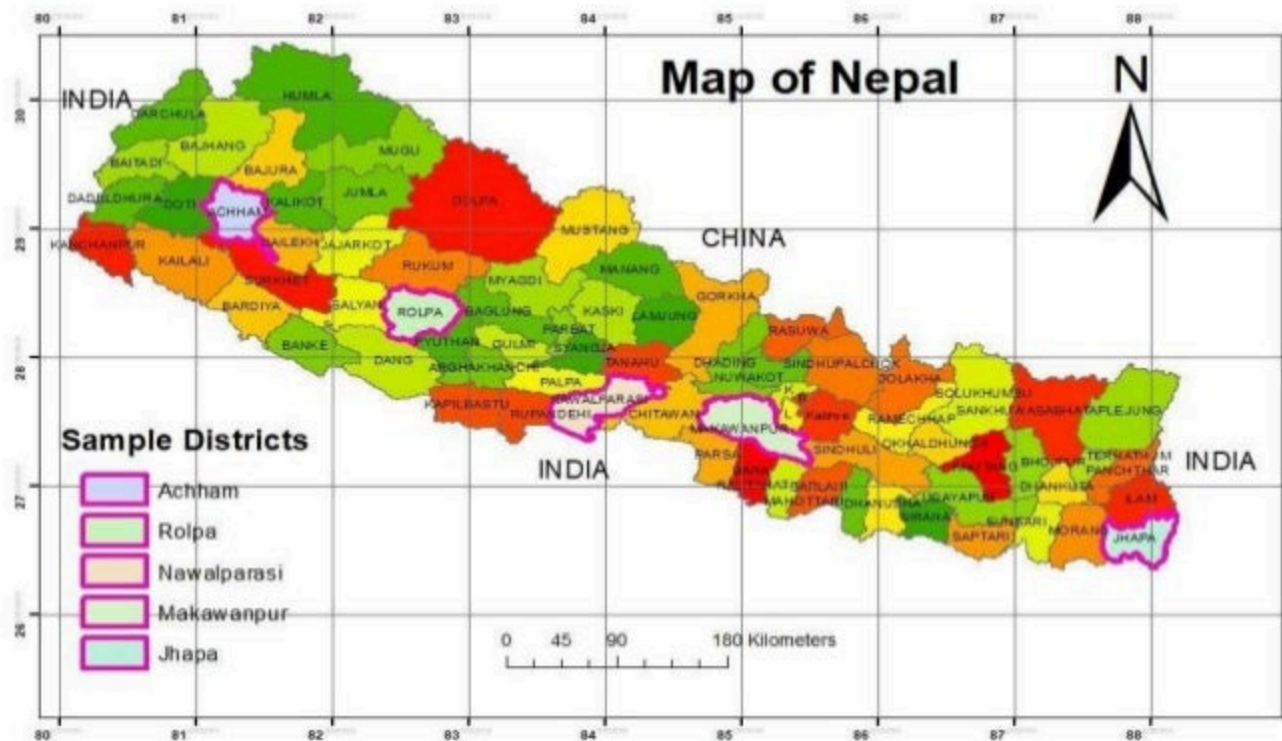
Methodology - Individual-level analysis

- ▶ $Y_{ih} = \alpha + \beta_1 M1_h + \beta_2 M2_h + \beta_3 R_h + \gamma X_{ih} + \varepsilon_i$ (1)
- ▶ Y_{ih} is a set of different indicators for women's and men's work in agriculture and outside of agriculture.
- ▶ We model women's and men's labor allocation as a function of:
 - ▶ whether the individual lives in a household with an international migrant ($M1_h$);
 - ▶ internal migrant ($M2_h$);
 - ▶ the (log) remittance income (R_h) received by the household; and
 - ▶ the individual, household and community characteristics, X_{ih} , and ε_i is the error term

Methodology - Household (farm)-level analysis

- ▶ $Y_h = \alpha + \beta_1 M1_h + \beta_2 M2_h + \beta_3 R_h + \gamma X_h + \varepsilon_i$ (2)
- ▶ Y_{ih} is a set of different indicators for **decision-making on the farm, farm production, productivity and food security**
- ▶ We model women's and men's labor allocation as a function of:
 - ▶ whether the individual lives in a household with an international migrant ($M1_h$);
 - ▶ internal migrant ($M2_h$);
 - ▶ the (log) remittance income (R_h) received by the household; and
 - ▶ the household and community characteristics, X_h :

Data



Source: "Technical Report on Survey of Migration and Women's Empowerment in Agriculture" prepared by Nepa School of Social Sciences and Humanities, September 2, 2017.

- ▶ Primary survey data collected August-September 2017
 - ▶ a sample of 1002 households
 - ▶ from 5 districts -- Achham, Rolpa, Nawalparasi, Makwanpur and Jhapa
 - ▶ representative at district-level
- ▶ Multi-topic survey
- ▶ i) A-WEAI administered to **ONE** individual from each household.
- ▶ ii) The Food Insecurity Experience Scale (FIES).

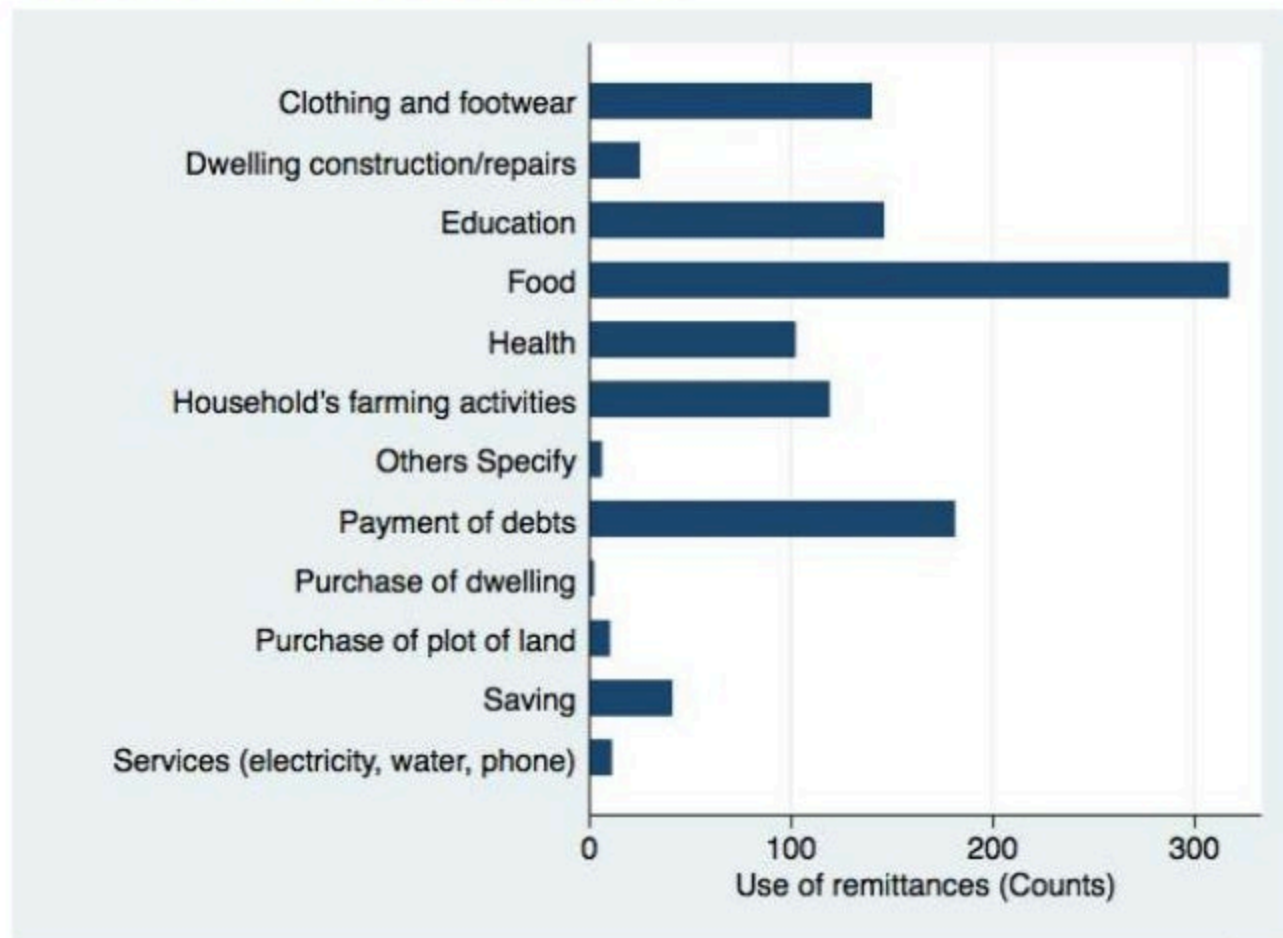
Nepali Migration

- ▶ International migration is an important HH livelihoods diversification strategy
 - ▶ Remittance share in GDP is 29.2% (WDI)
- ▶ International migration has become more important than internal migration -
 - ▶ around 15% of working-age population in our sample are current international migrants
 - ▶ less than 3% of working-age individuals in our sample are classified as current internal migrants
- ▶ Men dominate migration -- more than 93% of current migrants are men
- ▶ Migrants tend to be:
 - ▶ younger than the average working-age population; and
 - ▶ better educated - only 9% of migrants, compared to 29% of the working-age population, have no education.
- ▶ Destinations:
 - ▶ 35% of international migration to India
 - ▶ >60% to Malaysia and the Gulf countries
 - ▶ Internal migration - primarily to Kathmandu
- ▶ Main reasons for migration: economic (looking for better jobs)

Remittances

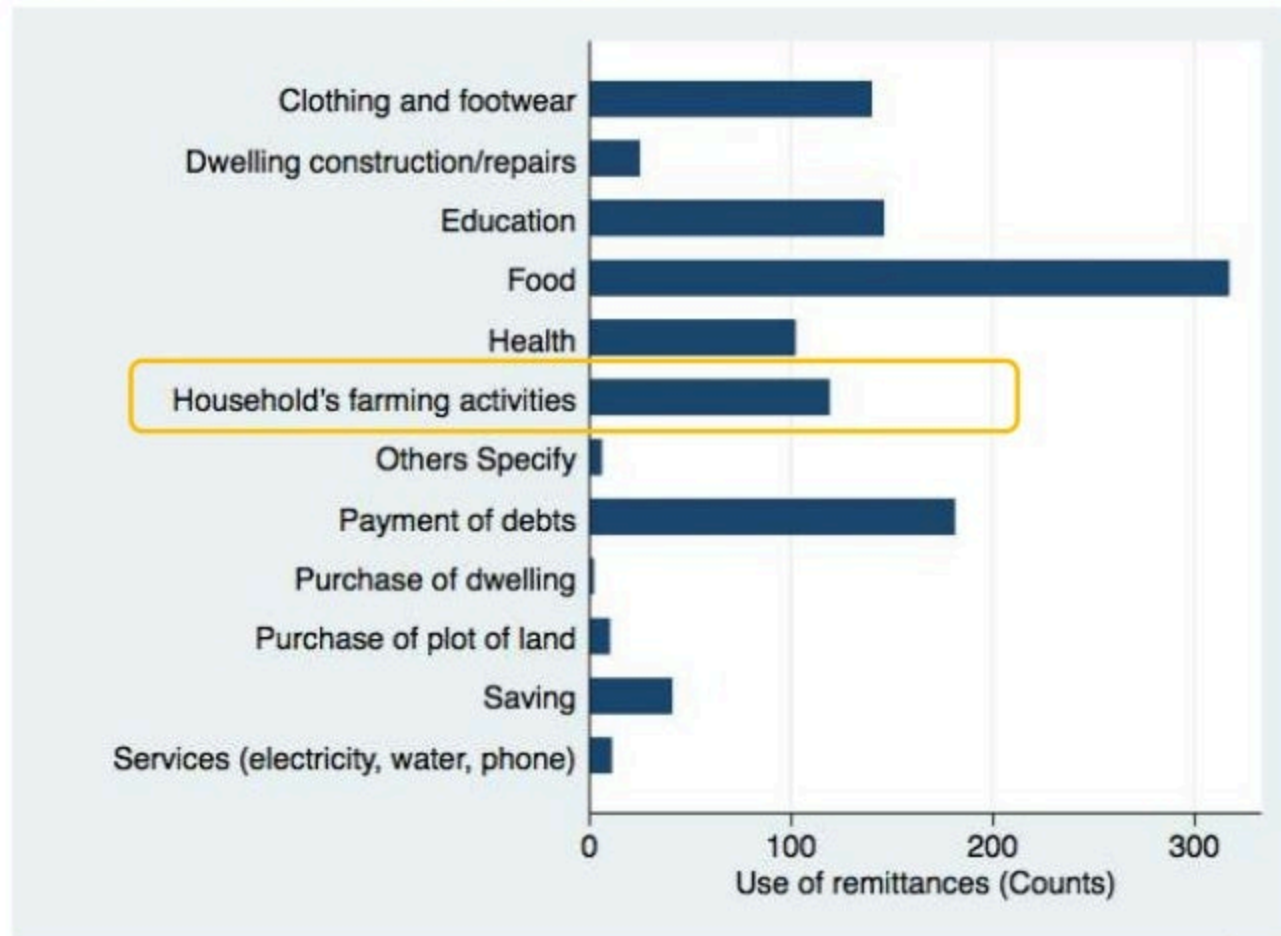
- ▶ 45% of all households in our sample receive remittances
- ▶ 87% of all households with a current international migrant receive remittances
- ▶ The median amount of the remittances sent by all migrants over the past year was 160,000 Nepali rupees (or around 1,555 USD)
- ▶ Almost 2/3 of remittance senders indicate how the remittances should be used

Use of remittances



Note: Respondents were allowed to choose as many categories as needed.

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Migration and women's work in Nepal, OLS

	Employed (any) (=1 if yes)	Farm self- employed (=1 if yes)	Farm contributing family workers (=1 if yes)	Agricultural (wage) laborers (=1 if yes)	Processing (agricultural products) (=1 if yes)	Trading (agricultural products) (=1 if yes)	Nonagricultu ral workers (=1 if yes)	Professional (=1 if yes)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>A. Working-age Women - no controls for remittances (N=1667), OLS</i>								
International migrant in HH	-0.00508 (0.0174)	0.167*** (0.0241)	-0.177*** (0.0274)	0.00199 (0.0118)	-0.0332** (0.0168)	0.00309 (0.00382)	-0.00604 (0.0124)	0.00298 (0.00952)
<i>A. Working-age Men - no controls for remittances (N=1243), OLS</i>								
International migrant in HH	0.0161 (0.0225)	0.120*** (0.0290)	-0.0428 (0.0402)	0.00579 (0.0182)	-0.00163 (0.0238)	0.00703 (0.00926)	-0.0935*** (0.0307)	-0.0531** (0.0236)

Note: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Migration and Men's Labor Supply

	Working-age Men							
	Employed (any) (=1 if yes) (1)	Farm self- employed (=1 if yes) (2)	Farm contributing family workers (=1 if yes) (3)	Agricultural (wage) labourers (=1 if yes) (4)	Processing (agricultural products) (=1 if yes) (5)	Trading (agricultural products) (=1 if yes) (6)	Nonagricultu ral workers (=1 if yes) (7)	Professional (=1 if yes) (8)
International migrant in HH	0.116** (0.0517)	0.165*** (0.0505)	-0.0463 (0.0638)	0.0291 (0.0296)	-0.0486 (0.0382)	-0.0152 (0.0136)	-0.0216 (0.0450)	-0.0530** (0.0221)
Log total remittances in \$	-0.0169** (0.00692)	-0.00746 (0.00693)	0.000591 (0.00842)	-0.00392 (0.00353)	0.00791 (0.00510)	0.00375 (0.00246)	-0.0121* (0.00626)	-2.40e-05 (0.00343)
Observations	1,243	1,243	1,243	1,243	1,243	1,243	1,243	1,243
Robust standard errors in parentheses								
*** p<0.01, ** p<0.05, * p<0.1								

Migration, remittances and labour hours (per year) for non-migrant women - Tobit estimates

	Working-age women					
	Employed (any)	Farming	Agricultural (wage) laborers	Processing (agricultural products)	Non-agricultural workers	Professional
	hours/year (1)	hours/year (2)	hours/year (3)	hours/year (4)	hours/year (5)	hours/year (6)
International migrant in HH	34.82 (80.10)	-66.99 (75.16)	233.4* (140.6)	-204.6 (278.2)	-496.2 (551.1)	1,748*** (340.0)
Log total remittances in \$, raw	8.944 (10.55)	25.18*** (9.760)	-31.23 (19.18)	-33.86 (38.88)	53.65 (74.64)	-111.2** (47.27)
Observations	1,474	1,666	1,667	1,667	1,667	1,667

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Migration, remittances and labour hours per year for non-migrant men - Tobit estimates

	Working-age men					
	Employed (any)	Farming	Agricultural (wage laborers)	Processing (agricultural products)	Nonagricultural workers	Professional
	(1)	(2)	(3)	(4)	(5)	(6)
International migrant in HH	-4.667 (147.4)	417.0*** (122.8)	227.2 (292.4)	-658.1*** (73.57)	-136.2 (371.4)	-2,708*** (260.0)
Log total remittances in \$, raw	-21.93 (20.17)	-31.88* (16.32)	-36.86 (38.87)	124.4*** (10.20)	-95.11* (52.95)	9.311 (33.82)
Observations	1,081	1,241	1,243	1,243	1,243	1,243

Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Decision-making about agriculture and land ownership in Nepal

	Male land manager(s) only	Female land manager(s) only	Joint land manager	Male land owner(s) only	Female land owner(s) only	Joint land owner
	(1)	(2)	(3)	(4)	(5)	(6)
International migrant in HH	-0.0577*** (0.0206)	0.184*** (0.0354)	-0.127*** (0.0368)	-0.00981 (0.0436)	0.0445 (0.0424)	-0.0347 (0.0315)
Observations	876	876	876	691	691	691

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Migration and agricultural incomes

	(Log) total harvest value	Log harvest value GRAINS	Log harvest value VEGGIE	Total net crop income (npr)	Total net income from livestock (npr)
	(1)	(2)	(3)	(4)	(5)
International migrant in HH	-0.365*** (0.0960)	-0.333*** (0.0948)	-0.311 (0.226)	-17,632 (10,675)	-433,608 (446,549)
Log total remittances in \$, raw	0.0299** (0.0126)	0.0295** (0.0144)	0.0250 (0.0262)	87.61 (1,058)	-118,950 (116,878)
Observations	963	927	765	946	946

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Conclusions

- ▶ The study finds that male outmigration in Nepal is associated with significant changes in women's work and roles on the farm
 - ▶ Women in migrant HH are more likely to be the primary farmer, rather than contributing family member on the farm
 - ▶ They see improvements in decision-making about agricultural production
- ▶ The effects of migration on women's and men's work are mediated by the receipt of remittances
 - ▶ Men's increased employment on the farm is in response to the migration of a family member, rather than remittance income
 - ▶ Women's increased employment on the farm seems to be linked to the receipt of remittances
- ▶ Yet, there is little evidence that male outmigration significantly strengthens women's economic empowerment
 - ▶ The majority of employment is on the farm; no increased participation in higher value nodes of agricultural value chains

Preliminary Policy Implications

- ▶ Gender-sensitive agricultural extension services and services tailored to contexts with the changing agricultural production modes
- ▶ Enabling environment and incentives for women and men to mobilize remittances for productive purposes, including more investments in agriculture or small businesses
- ▶ Strengthen women's access to higher-earning activities in agricultural value chains and food systems

Next steps:

- ▶ Isolate the causal effects of migration on the labor and empowerment outcomes of non-migrant women and men in sending communities and on agricultural production and food security
 - ▶ Instrumental variable approaches
 - ▶ Building a panel
- ▶ Explore the heterogeneity of impacts depending on the characteristics of migrants (e.g. destination, length of migration, etc.) and the characteristics of the individuals and households who stay behind (e.g. age, etc.)