

The impact of large-scale migration on poverty, expenditures, and labor market outcomes in Nepal

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Introduction

- 3.5 percent of the world population - more than 280 million people - lives outside their countries of birth.
- Many of them are temporary workers in richer parts of Asia
 - e.g. Saudi Arabia, UAE, Qatar, Malaysia, Singapore
 - Bangladesh and Nepal alone send over 1 million workers every year to Malaysia and the GCC countries
- Remittance by migrants is an important source of revenue in many sending countries
 - Kyrgyz Republic (33 %), Tajikistan (29%), Nepal (28%)
 - Pakistan (6.7%), Bangladesh (5.7%), and India (2.9%)
- Migration is seen, by economists, as one of the most effective development interventions (e.g., Clemens, 2011)
- But policymakers in many countries (e.g., Nepal) are cautious about the scale of migration.

Why does scale matter?

- If a small proportion of a community migrates, impacts confined to the immediate family
- But large-scale of people leaving will have impacts in the origin communities beyond the immediate family

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 - Labor supply in the origin communities shrink
 - Farmlands remain fallow (Adhikari and Hobley, 2013), factories shut down
 - Employment falls - worsening welfare outcomes for those remaining behind

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 - Farmlands remain fallow (Adhikari and Hobley, 2013), factories shut down
 - Employment falls - worsening welfare outcomes for those remaining behind
- But:
 - Scarcity induces participation from people outside the LF
 - Remaining labor becomes more productive, e.g., through technology adoption
 - 'Bad' and unproductive farms and businesses exit (healthy churn)
 - Remittance leads to increased demand and increased ability to finance business ventures

This paper

- How has large-scale migration affected poverty and labor force outcomes?
 - In the context of the rapid increase in migration from Nepal between 2001 and 2011

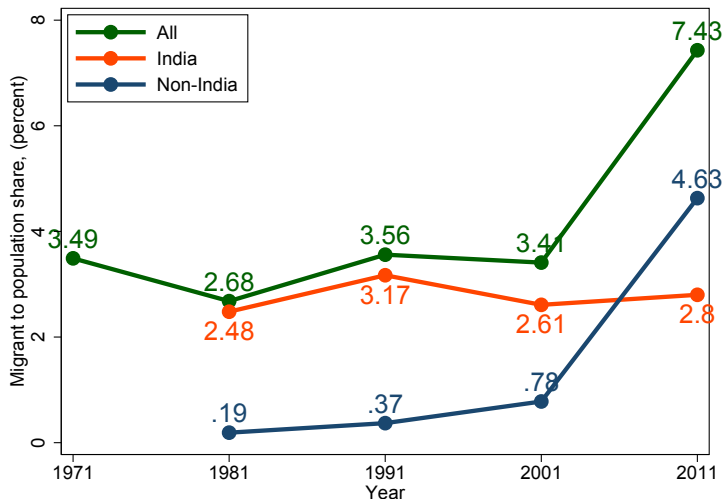
Outline of the talk

- 1 Introduction
- 2 Context
- 3 Data
- 4 Results and discussions
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Drastic increase in migration from Nepal since 2000



Migration driven by Malaysia and GCC destinations

- From about 3.5 percent (around global average) in 2001 to about 7.4 percent in 2011 and 2021.
- Largely male (more than 80%) for low-skill work in the GCC countries and Malaysia
 - Largely intermediated by informal recruitment agents throughout the country
 - Malaysia: cost \$1,600; monthly wage \$440; employment contract of 2.5 years on average
 - GCC: cost \$1,000; monthly wage \$420; typically 2 year contracts
- From 8 percent of male WAP to 16 percent!!
- By 2011, foreign employment was bigger than domestic wage employment for males aged 15-44 in rural areas
 - ... and only slightly smaller than domestic agriculture

non-India migration has become pervasive by 2011

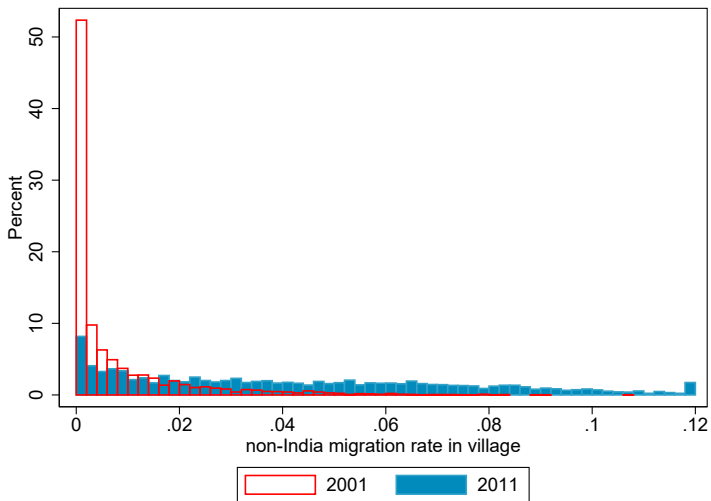


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Data and empirical strategy

- Data:
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- Data:
 - Population and housing census 2001, 2011
 - Nepal Living Standards Survey 2010
- Empirical Strategy: To identify the impact of *village-level migration*.
 - Instrumental Variable: Village level migration rates in 2001 as instrument of village level migration rate in 2011

$$\begin{aligned}
 M_{hv} &= \alpha_1 + \gamma M_{v,2001} + \delta X_{hv} + \nu_{hv} \\
 y_{hv} &= \alpha_2 + \beta M_{hv} + \delta' X_{hv} + \varepsilon_{hv}
 \end{aligned}
 \tag{1}$$

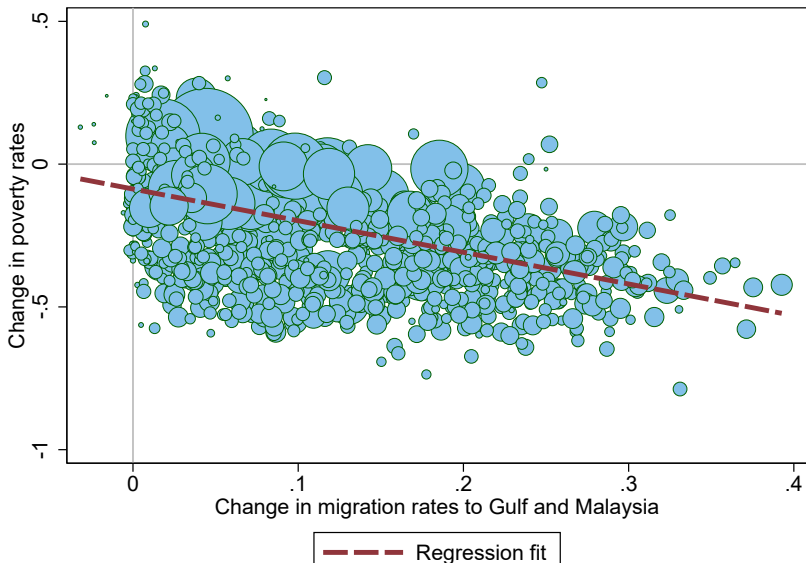
- Difference-in-difference: At the village level

$$y_{ivt} = \beta M_{vt} + \mu_t + \gamma_v + \varepsilon_{ivt} \tag{2}$$

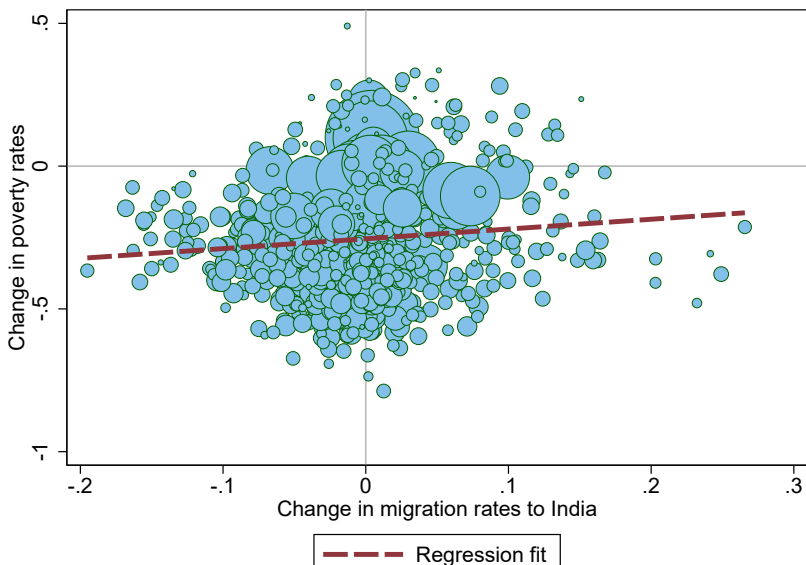
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Poverty falls with migration to non-India destinations



... but not so much with India migration



Same results at the household level too

| | All | | Rural | | Urban | |
|---|-----------|----------|-----------|----------|----------|---------|
| | Log (PC- | | Log (PC- | | Log (PC- | |
| | p0 | cons) | p0 | cons) | p0 | cons) |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Household has a migrant in Gulf-Malaysia | | | | | | |
| in Gulf-Malaysia | -0.777*** | 1.534*** | -0.649*** | 0.809*** | -1.527* | 5.286 |
| | (0.188) | (0.433) | (0.182) | (0.276) | (0.803) | (3.237) |
| First stage F-stat | 32.0 | 32.0 | 34.7 | 34.7 | 4.4 | 4.4 |
| Observations | 5988 | 5988 | 3900 | 3900 | 2088 | 2088 |
| Household has a migrant in India | | | | | | |
| in India | 0.049 | -0.260 | 0.049 | -0.208 | 0.031 | -0.975 |
| | (0.179) | (0.213) | (0.187) | (0.222) | (0.324) | (0.760) |
| First-Stage F-stat | 34.2 | 34.2 | 30.2 | 30.2 | 5.9 | 5.9 |
| Observations | 3004 | 3004 | 2186 | 2186 | 818 | 818 |

- IV estimates
- Rural results more precise than urban ones

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 - if permanent income: consume most of it
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 - if permanent income: consume most of it
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- Remittance income in this context is somewhere in between
- Literature on the marginal propensity to consume out of income shocks:
 - Paxson (1993) finds MPC of 0.7 for permanent income shocks and 0.3 for transitory income shocks in Thailand.
 - Haushofer and Shapiro (2016) finds MPC of 0.2 for purely transitory cash transfers in Rural Kenya

MPC of remittance incomes between 0.4 - 0.7

| | Log(cons) (1) | Breakdown of Log(consumption) | | | |
|-------------------------|----------------------|-------------------------------|---------------------|---------------------|--------------------|
| | | food (2) | durable (3) | non-durables (4) | education (5) |
| All Households | | | | | |
| Log(remittances) | 0.164*** (0.046) | 0.103*** (0.031) | 0.618*** (0.187) | 0.179*** (0.052) | 0.171 (0.130) |
| implied MPC | 0.494 | 0.178 | 0.088 | 0.104 | 0.036 |
| First-stage F-stat | 17.83 | | | | |
| Observations | 5988 | 5988 | 5988 | 5988 | 5988 |
| Rural Households | | | | | |
| Log(remittances) | 0.146** (0.064) | 0.120** (0.052) | 0.634** (0.319) | 0.120* (0.072) | -0.078 (0.223) |
| implied MPC | 0.399 | 0.205 | 0.064 | 0.060 | -0.013 |
| First-stage F-stat | 5.58 | | | | |
| Observations | 3900 | 3900 | 3900 | 3900 | 3900 |
| Urban Households | | | | | |
| Log(remittances) | 0.168*** (0.056) | 0.082** (0.034) | 0.538*** (0.182) | 0.210*** (0.064) | 0.367** (0.148) |
| implied MPC | 0.718 | 0.149 | 0.184 | 0.201 | 0.167 |
| First-stage F-stat | 20.89 | | | | |
| Observations | 2088 | 2088 | 2088 | 2088 | 2088 |

Summary: consumption and poverty impacts

- Large poverty and consumption impacts both at the village level as well as the household level.
 - Particularly for non-India (Gulf & Malaysia) migration
 - No impact for India migration

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- Households spend half (40% rural, 70% urban) of their remittance incomes in consumption.
 - In rural areas, most of the consumption is towards food, followed by durables and non-durables
 - In urban areas, high expenditures in durable, non-durables, and education.

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- Households spend half (40% rural, 70% urban) of their remittance incomes in consumption.
 - In rural areas, most of the consumption is towards food, followed by durables and non-durables
 - In urban areas, high expenditures in durable, non-durables, and education.
- Large-scale migration has led to rapid reductions in poverty
 - Gulf-Malaysia migration can account for 40% of actual decline in poverty between 2001 and 2011.

Wages go up in the labor markets

| | Log(wage) (1) | Log(agric wage) (2) | Log(non-agric wage) (3) | Log(casual wage) (4) |
|------------------------------|---------------------|---------------------------|-------------------------------|----------------------------|
| Working age (15-64) | | | | |
| Gulf-Malaysia migration rate | 2.338** (0.961) | 4.073*** (1.375) | 2.025* (1.085) | 2.297** (1.005) |
| First-stage F-stat | 308.61 | 119.94 | 363.79 | 175.11 |
| Observations | 5316 | 1729 | 3992 | 3077 |
| Male sub-sample | | | | |
| Gulf-Malaysia migration rate | 1.671* (1.011) | 3.492** (1.713) | 1.258 (1.091) | 1.547 (1.109) |
| First-stage F-stat | 307.97 | 88.87 | 327.50 | 164.83 |
| Observations | 3297 | 723 | 2880 | 1738 |
| Female sub-sample | | | | |
| Gulf-Malaysia migration rate | 3.879*** (1.496) | 4.426*** (1.469) | 3.978 (2.600) | 3.537*** (1.170) |
| First-stage F-stat | 251.92 | 123.41 | 274.20 | 159.28 |
| Observations | 2019 | 1006 | 1112 | 1339 |

- Gulf-Malaysia migration between 2001 and 2011 increased wages by 8% (14% for females), and agricultural wages by 14%

Significant increases in labor market participation

| | LFP (1) | Agric- culture (2) | Participation in non-agriculture | | | emplo- yer (6) |
|----------------------------|---------------------|--------------------------|----------------------------------|----------------------|----------------------|----------------------|
| | | | All (3) | Wage (4) | self (5) | |
| Working age (15-64) | | | | | | |
| Village migration rate | | | | | | |
| x migrant in HH | 0.192** (0.095) | 0.400*** (0.087) | -0.207*** (0.075) | -0.126** (0.058) | -0.081** (0.032) | 0.076** (0.039) |
| x no migrant in HH | 0.353*** (0.085) | 0.112 (0.100) | 0.241*** (0.065) | 0.144*** (0.053) | 0.097*** (0.028) | 0.134*** (0.043) |
| Observations | 3881384 | 3881384 | 3881384 | 3881384 | 3881384 | 2270376 |
| Adj R-squared | 0.053 | 0.199 | 0.087 | 0.054 | 0.036 | 0.024 |
| Male sub-sample | | | | | | |
| Village migration rate | | | | | | |
| x migrant in HH | -0.060 (0.095) | 0.641*** (0.101) | -0.701*** (0.115) | -0.532*** (0.097) | -0.168*** (0.047) | 0.117*** (0.043) |
| x no migrant in HH | 0.443*** (0.068) | 0.369*** (0.113) | 0.074 (0.104) | 0.010 (0.086) | 0.065 (0.043) | 0.162*** (0.046) |
| Observations | 1847306 | 1847306 | 1847306 | 1847306 | 1847306 | 1344491 |
| Adj R-squared | 0.028 | 0.194 | 0.134 | 0.075 | 0.054 | 0.022 |
| Female sub-sample | | | | | | |
| Village migration rate | | | | | | |
| x migrant in HH | 0.138 (0.117) | 0.079 (0.109) | 0.059 (0.049) | 0.113*** (0.038) | -0.055** (0.026) | 0.089** (0.044) |
| x no migrant in HH | 0.214* (0.129) | -0.110 (0.120) | 0.323*** (0.052) | 0.221*** (0.041) | 0.102*** (0.024) | 0.134*** (0.050) |
| Observations | 2034078 | 2034078 | 2034078 | 2034078 | 2034078 | 925885 |
| Adj R-squared | 0.160 | 0.249 | 0.057 | 0.042 | 0.025 | 0.035 |

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 - in HHs without a migrant: increase in overall employment; especially in agriculture and entrepreneurship

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 - in HHs without a migrant: increase in overall employment, especially in non-farm sectors
- Consistent with migration promoting entrepreneurship; increasing productivity in agriculture; and increased overall demand

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- Large role for policy to facilitate gainful migration (e.g., to the Gulf & Malaysia)
 - especially in areas with high levels of poverty and poor labor market prospects
 - and among the poor & vulnerable households

THANK YOU!

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