
International Migration, Remittances, and Poverty Reduction: Evidence from the Philippines

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Motivation

- Between 1965 and 2000, the fraction of people living outside their countries of birth increased from 2.2% to 2.9% of world population
 - 175 million people in 2000
- Remittance receipts of developing countries are large in magnitude
 - 2002 figures:
 - \$79 billion, remittance receipts
 - \$51 billion, official development aid
 - \$189 billion, foreign direct investment
- Risk is pervasive in developing countries
 - Illness, weather shocks, disasters, civil conflict

Key questions

- What impact do migrants' earnings have on origin households in developing countries? In particular:
 - Household income
 - Poverty rates
 - Investments in children, enterprises
- How does migration help households cope with risk?
 - Do remittances from overseas migrants serve as insurance for relatives back home?
 - Do households without migrants send members overseas in response to bad shocks?

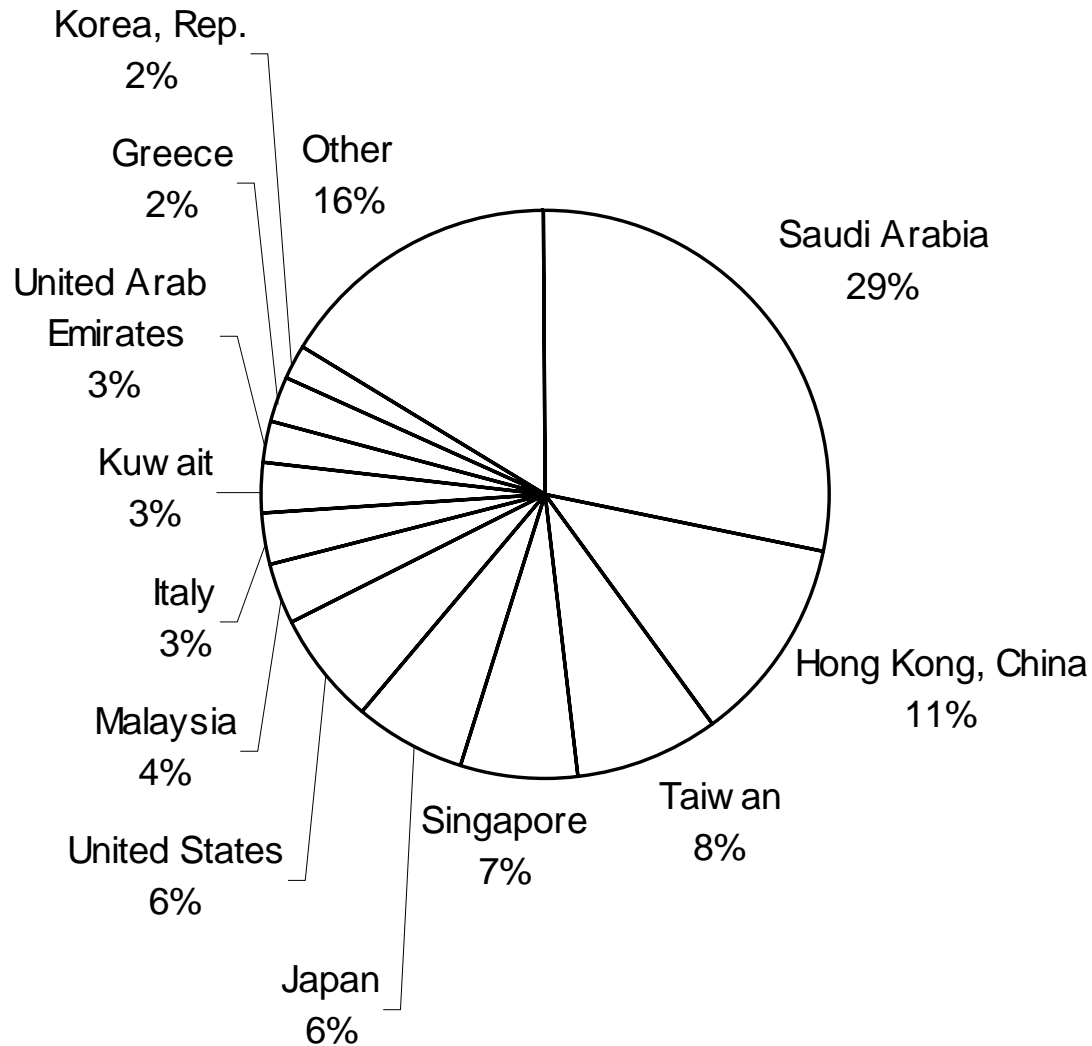
Agenda

- Brief overview of Philippine labor migration
- Impact of migrant resources on source households
 - Papers:
 - “Remittances and Poverty in Migrants’ Home Areas” (with Claudia Martinez)
 - “International Migration, Human Capital, and Entrepreneurship”
- Migration and coping with risk
 - Paper: “Are Remittances Insurance?” (with HwaJung Choi)

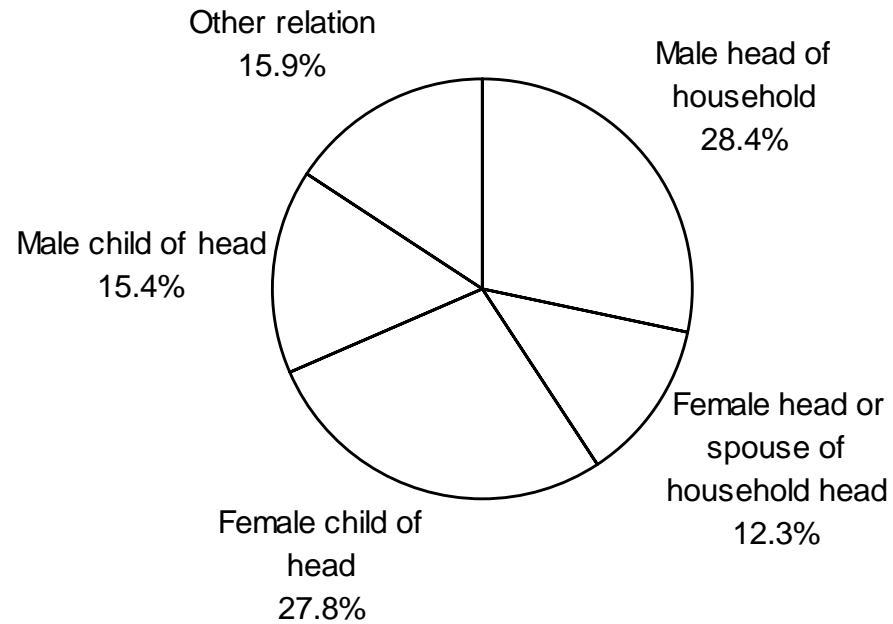
Overview of Philippine labor migration

- In 1970s, government initiates “Overseas Employment Program” to place workers in overseas jobs
 - Placement service is initially government-run
 - Later devolved to private recruitment agencies, with government supervision
- Primarily temporary, legal contract work
 - Largest occupations are domestic servant (31%) and production worker (31%)
 - 84% away less than 4 years at time of survey
- In mid-1997, ~1% of population (about 800,000 people) were overseas
 - 5.9% of households have a member overseas
- Located in dozens of countries

Distribution of Overseas Workers from Philippines (June 1997)



Migrants by position in household



Data

- National household survey data from National Statistics Office of Philippine government
 - Four linked surveys:
 - Labor Force Survey (LFS)
 - Survey on Overseas Filipinos (SOF)
 - Family Income and Expenditure Survey (FIES)
 - Annual Poverty Indicators Survey (APIS)
 - Can track *dwelling*s over time, most of which contain same household continuously
 - Survey rounds: July 1997, Oct 1998
 - 1,646 households with at least one member overseas in June 1997

Basic household statistics

	<u>Mean</u>	<u>Std. Dev.</u>
Exchange rate shock	0.41	0.16
<u>Household financial statistics (Jan-Jun 1997)</u>		
Total income (pesos)	94,272	92,826
Remittance receipts (pesos)	36,194	46,836
Remittance receipts (as share of hh income)	0.40	0.31
Number of HH members working overseas in Jun 1997	1.11	0.36
HH size (including overseas members, Jul 1997)	6.16	2.42
Located in urban area	0.68	
<u>Other HH income sources (Jan-Jun 1997)</u>		
Wage and salary, as share of total	0.23	0.29
Entrepreneurial income, as share of total	0.17	0.25
Agricultural income, as share of total	0.10	0.21

Basic migrant statistics (means)

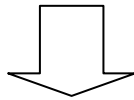
Age	34.49
Marital status is single (indicator)	0.38
Gender is male (indicator)	0.53
<u>Occupation (indicators)</u>	
Production and related workers	0.31
Domestic servants	0.31
Ship's officers and crew	0.12
Professional and technical workers	0.11
Clerical and related workers	0.04
Other services	0.10
Other	0.01
<u>Highest education level (indicators)</u>	
Less than high school	0.15
High school	0.25
Some college	0.31
College or more	0.30
<u>Position in household (indicators)</u>	
Male head of household	0.28
Female head or spouse of head	0.12
Daughter of head	0.28
Son of head	0.15
Other relation to head	0.16
<u>Months overseas as of Jun 1997 (indicators)</u>	
0-11 months	0.30
12-23 months	0.24
24-35 months	0.16
36-47 months	0.15
48 months or more	0.16

Positive migrant shocks and HH investment

- Possible positive impacts
 - Alleviate credit constraints
 - Encourage risk-taking
- Possible negative impacts
 - Reduced labor supply (income effect)
 - Most entrepreneurial people stay overseas (brain drain)

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- Economic theory makes no clear predictions
 - Migrant economic conditions can raise or lower investment in migrants' source households
- Empirical work is necessary
 - Existing research simply establishes *correlation* between migration/remittances and HH investment activities

A hypothetical experimental approach

- Identify households with one or more members working overseas at a point in time
- Assign each migrant a randomly-sized economic shock
- Examine impact of the migrant shocks on changes in outcomes in the migrants' origin households

Empirical strategy

- Take advantage of a real-world situation akin to the experiment just described
- June 1997: 6% of households in the Philippines had one or more members working overseas, in dozens of countries
- July 1997: Asian financial crisis occurs
 - Large, sudden, heterogeneous changes in exchange rates in many locations of Filipino workers (see figure)
 - Philippine peso also depreciates
- Examine impact of migrant exchange rate shocks on Philippine households

Exchange rates over time

Exchange Rates in Selected Locations of Overseas Filipinos (Jul 1996 - Oct 1998)

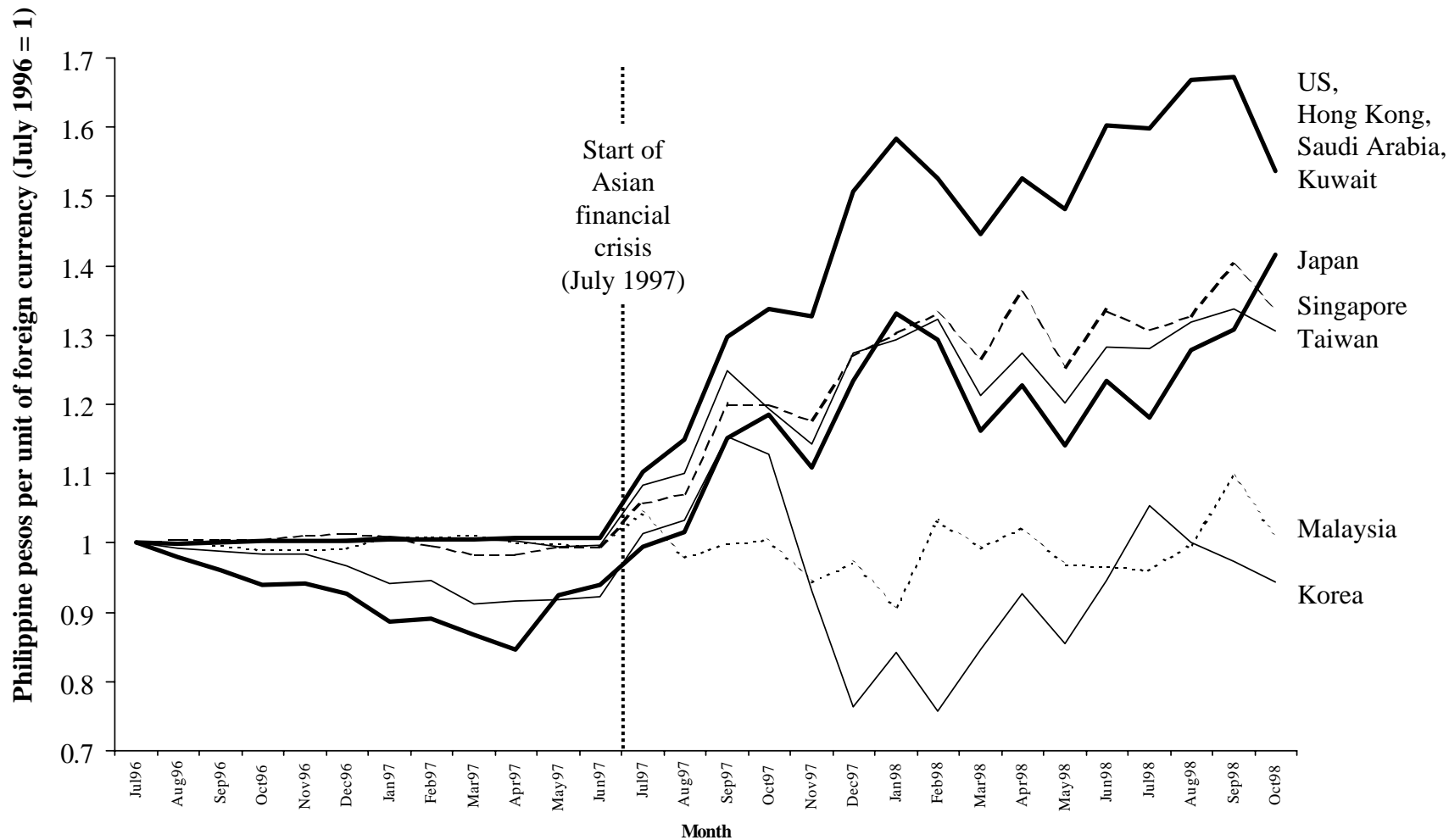
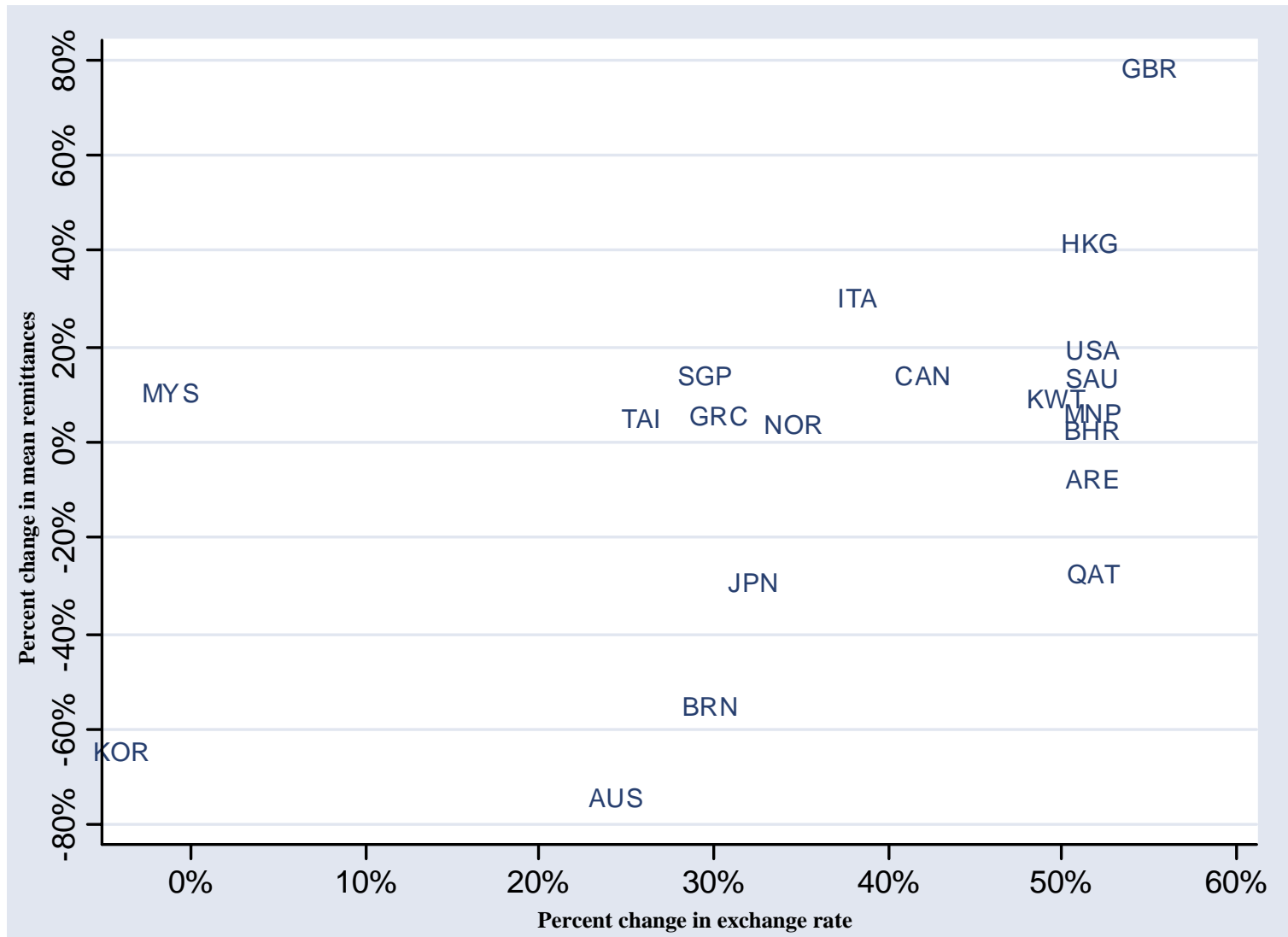


Figure 1: Impact of migrant exchange rate shocks on Philippine household remittance receipts (1997-1998)



NOTES—Exchange rates are in Philippine pesos per unit of foreign currency. Percent change in exchange rate is mean exchange rate from Oct 1997 to Sep 1998 minus mean exchange rate from July 1996 to June 1997, divided by the latter. Mean remittances are calculated among all households with a single migrant in given overseas location. Percent change in mean remittances is between Jan - Jun 1997 and Apr-Sep 1998 reporting periods. Data points are the top 20 locations of Philippine overseas workers (as listed in Table 1).

Impact of migrant shocks on households

<u>Outcome</u>	<u>Value prior to crisis</u>	<u>Impact of 25% improvement in migrant's exchange rate vs. Philippine Peso</u>
Remittances	40% of household income	Increases by 6.0 percentage points
Probability of being below poverty line	9% of households	Declines by 1.5 percentage points
Educational expenditures	5.4% of household income	Increases by 0.7 percentage points
Probability of attending school (ages 10-17)		
Girls	95%	Increases by 3.3 percentage points
Boys	93%	Increases by 1.7 percentage points
Average hours worked per week (ages 10-17)		
Girls	0.64	Declines by 0.54 hours/week
Boys	1.53	Declines by 0.81 hours/week
Total hours worked in self-employment by household members (per week)	21.5	Increases by 2.5 hours
Probability of owning a:		
Television	83%	Increases by 2.4 percentage points
Living room set	68%	Increases by 1.5 percentage points
Vehicle (jeep, motorcycle, or car)	13%	Increases by 3.6 percentage points

Remittances as insurance

- Motivation: a large body of research in development economics has established that households use a variety of creative strategies to cope with risk
 - Interhousehold transfers (insurance)
 - Informal credit
 - Savings, asset accumulation
- But these mechanisms tend to break down when shocks are *aggregate* or *systemic* (shared by all households in a locality)
- Remittances from overseas can potentially help households cope with aggregate shocks
- Are remittances insurance?

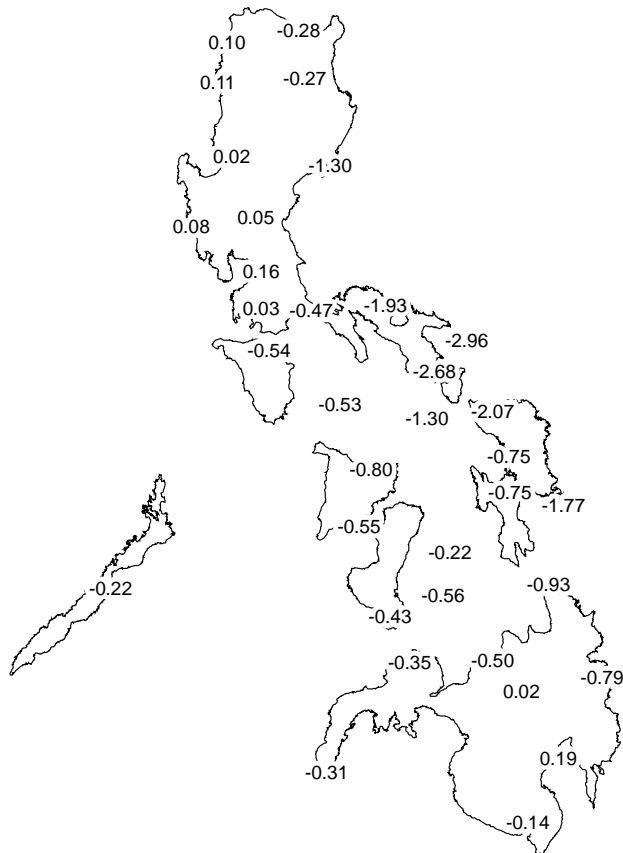
Empirical approach

- Examine impact of income shocks experienced by households in the Philippines on remittances received from overseas migrants
- Focus on unexpected rainfall shocks due to El Nino weather phenomenon (so shocks vary in size across households in sample)
- Use panel data on households in Philippines

Figure 1: Seasonal rainfall shocks, Philippines

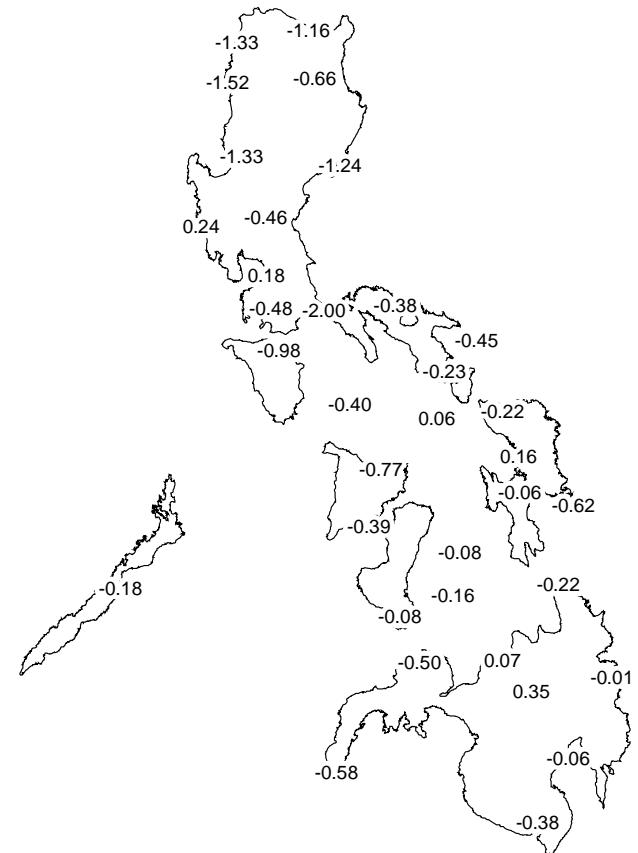
A. Dry season

0.47



B. Wet season

-0.63



Notes: Rainfall shocks are change in rainfall (in 000 mm) between last season and current season. Dry season shock is change from Dec 1996-May 1996 season to Dec 1996-May 1997 season. Wet season shock is change from Jun 1996-Nov 1996 season to Jun 1997-Nov 1997 season. Each number in figure is centered at coordinates of a rainfall station.

Summary of results

- For households with migrant members, negative income shocks are largely replaced by remittance inflows
 - About 60% replacement rate
- In households *without* migrant members, there is no remittance response to income shocks
 - But they become more likely to *send* a member overseas
 - 10% decline in income leads to 0.75% increase in likelihood of a member departing overseas in next year
 - Large effect relative to mean fraction of these households newly sending someone overseas (2%)

In sum

- The Philippines provides a natural laboratory for learning about the role of international migration in development
- Resources sent by migrants have a number of positive effects on recipient households
 - Lower poverty
 - More investment in child human capital (lower child labor, more schooling)
 - More entrepreneurship
 - Insurance against negative income shocks
 - In contrast to common (paternalistic) view that remittances are wasted
- Lessons learned from the Philippine case are getting wide attention
 - Widely cited in the World Bank's *Global Economic Prospects 2006: International Migration and Remittances*

Goal for today

- Introduce central questions in the study of international migration
- Discuss what we can learn from the Philippine case
 - One of the world's largest sources of migrants
 - A natural laboratory to study the role of international migration in economic development
- Show examples of empirical work in development economics