Panacea for International Labor Market Failures?
Bilateral Labor Agreements and Labor Mobility

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Low-Skill Labor Mobility is Controversial

- **Receiving Country**
  - Labor market, social, and fiscal concerns
  - “There is nothing more permanent than temporary foreign workers”

- **Sending Country**
  - Concerns about abuse by employers abroad
  - Government promoting low-skill labor mobility at the costs of worker rights and conditions
Low-Skill Labor Mobility is Beneficial

- Receiving Country
  - Alleviates excess demand of labor as population age
  - Retain firms that would instead move their production processes abroad
    - Tax revenues
    - Winning elections

- Sending Country
  - Relieves excess supply of low-skill labor
    - Supports political and social stability
  - Generates remittances
    - Highly resilient in recessions
    - Exceeding Foreign aid, portfolio investment, and FDI in many developing countries
Triple-Win?

- Bilateral Labor Agreements (BLAs) recently touted as an example of formal international cooperation that can lead to “triple-win”
  - Memorandum of Understanding (MOUs) or Memorandum of Agreement (MOAs)
  - Flexible bilateral arrangements that specify cost assignments, the terms and conditions of employment, recruitment and grievance procedures and social security benefits
- Under BLA-governed migrant worker programs, receiving countries, sending countries, and migrants can all reap the economic benefits of higher cross-border labor mobility while mitigating the political costs
  - For receiving countries, ensured return of migrant workers
  - For sending countries, better protected working conditions for migrant workers sent
  - For migrant workers, the opportunity to accrue location wage premiums and accumulate human capital
Do BLAs Facilitate Cross-Border Labor Mobility?

- Large literature links international institutions and higher cross-border mobility of *goods* and *capital*
- Few studies offer systematic evidence linking international institutions and higher cross-border mobility of *people*
- Mixed evidence among recent empirical work
  - Positive, negative, null
Main Problems

- Country-level data confounds country effects with migrant worker effects
  - Different workers work in different destination countries
    - Filipino nurses in UK vs. construction workers in UAE
  - Heterogeneous BLA effects on labor mobility conditional on individual-level characteristics
    - Skill level
Goals of the Paper

- Contrasts theoretically the effect of international agreements on people flows against goods or capital flows
  - Bilateral agreements actually introduce additional costs on the mover in labor migration (migrants) in contrast to lowering barriers and costs for the mover in trade (goods) and investment (capital)
- Proposes a theory that reconciles extant mixed findings
  - Skill level mediates the effect of BLAs
  - BLAs reduce mobility for low-skilled workers but increase mobility for high-skilled workers
- Test empirically the theoretical implications with new dyadic skill-level Overseas Filipino Worker (OFW) data
  - More fine-grained and relevant population for BLAs
Theories of International Institutions

- Literature finds positive effects of international organizations and agreements on cross-border goods and capital flows.
- Help reduce state-level market failures due to problems with 3 “C”s:
  - **Communication**: transparency and signaling device that reduces language miscommunications and asymmetric information.
  - **Commitment**: commitment device that induces audience and reputation costs for reneging.
  - **Coordination**: coordination device that reduces vacancy and screening costs by delegating.
- Therefore, if BLAs parallel PTAs or BITs in their effects, BLAs should promote labor mobility.
Theories of Migration Costs

- Instead of simply reducing costs related to market failures, BLAs are unique in which they shift costs to sending state governments, receiving country firms and employers, ultimately passed on to migrant workers.
- E.g. transportation, insurance, health, legal, administrative fees or costs.
Implications for Labor Mobility

BLA → **Skill Level** → Labor Mobility

- Low-skill migrant workers are more vulnerable to BLA-induced costs
  - High debt, little market and bargaining power
- BLAs can further reduce receiving country firm demand for foreign low-skill labor
  - Minimum wage requirements
- High-skill labor are less vulnerable to BLA-induced costs
  - Fees waived, more savings, access to financing, regulated under GATS mode 4
- High-skill labor benefit from BLA-induced positive externalities
  - Public goods such as human rights, working conditions, and minimum wage
Hypotheses

**Hypothesis 1**
Holding all else equal, the existence of BLAs mitigate international labor market failures and increases the mobility of BLA-regulated labor migrants, mainly the low-skilled.

**Hypothesis 2a**
Holding all else equal, BLAs increase migration costs for low-skill labor migrants and decreases their mobility.

**Hypothesis 2b**
Holding all else equal, high-skill labor migrants are less vulnerable to BLA-induced migration costs and may even benefit from positive BLA externalities, which increases their mobility.
Data and Operationalization

- **Unit of analysis:** skill-destination country-year
- **Universe of analysis:** Overseas Filipino Workers (OFW) to 173 destination countries from 1992-2009
- **Outcome of interest:** OFW Mobility
  - OFW new hires for a given skill level, destination, and year as % of total OFW new hires in the same skill level and year
  - McKenzie, Theoharides and Yang (MTY 2014)
- **Key Covariates:** BLA, Skill Level, BLA*Skill
  - Dichotomous variables
  - Philippine Overseas Employment Administration (POEA) and MTY (2014)
- **Control Covariates:**
  - Various individual-level, destination country-level, dyad-level time-varying characteristics
OFW Mobility in 2009

2009 Low-Skilled OFW Mobility

2009 High-Skilled OFW Mobility
## Philippine Bilateral Labor Agreements

<table>
<thead>
<tr>
<th>Country</th>
<th>Year of First BLA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>2007</td>
</tr>
<tr>
<td>Canada</td>
<td>2006</td>
</tr>
<tr>
<td>Indonesia</td>
<td>2003</td>
</tr>
<tr>
<td>Iraq</td>
<td>1982</td>
</tr>
<tr>
<td>Japan</td>
<td>2009</td>
</tr>
<tr>
<td>Jordan</td>
<td>1981</td>
</tr>
<tr>
<td>South Korea</td>
<td>2004</td>
</tr>
<tr>
<td>Kuwait</td>
<td>1997</td>
</tr>
<tr>
<td>Lao People’s Democratic Republic</td>
<td>2005</td>
</tr>
<tr>
<td>Libya</td>
<td>1979</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2008</td>
</tr>
<tr>
<td>Norway</td>
<td>2001</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>1979</td>
</tr>
<tr>
<td>Qatar</td>
<td>1997</td>
</tr>
<tr>
<td>Spain</td>
<td>2006</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2002</td>
</tr>
<tr>
<td>Taiwan</td>
<td>1999</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>2007</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2002</td>
</tr>
<tr>
<td>United States</td>
<td>1968</td>
</tr>
</tbody>
</table>
Bayesian generalized linear mixed model with varying intercepts for destination countries and years.

\[ Mobility_{ijt} \overset{\text{indep.}}{\sim} \mathcal{N}(\delta_j + \lambda_t + \beta_i BLA_{jt} + \zeta_{\text{skill}i} + \gamma X_{jt}, \sigma^2_y) \]

\[ \delta_j \overset{\text{i.i.d.}}{\sim} \mathcal{N}(\delta, \sigma^2_\delta), \quad \lambda_t \overset{\text{i.i.d.}}{\sim} \mathcal{N}(\lambda, \sigma^2_\lambda), \quad \beta_i \overset{\text{i.i.d.}}{\sim} \mathcal{N}(\alpha_0 + \alpha_1 \text{skill}_i, \sigma^2_\beta), \]

\[ \zeta = (\zeta_1)^T, \quad \gamma = (\gamma_1 \gamma_2 \ldots \gamma_{19})^T, \]

\[ X_{jt} = \left( \text{region.BL} \ A_{jt} \ \text{unemploy}_t \ \text{labor.par}_t \ \text{labor.tot}_t \ \text{EU}_t \ \text{WTO}_t \ \text{regime}_t \ \text{gdp}_t \ \text{gdp.pc}_t \ \text{gdp.growth}_t \ \text{p.trade}_t \ \text{phl.trade}_t \ \text{cumulate.OFW}_t \ \text{PTA}_t \ \text{BIT}_t \ \text{mig.stock}_t \ \text{language}_j \ \text{colony}_j \ \text{distance}_j \right) \]
Coefficient Posterior Means and 95% Central Credible Intervals

- BLA
- Skill Level
- BLA*Skill Level
- Median Wage
- Regional BLAs
- Unemployment Rate
- Labor Participation Rate
- Labor Force
- EU
- WTO
- Regime Type
- Real GDP (log)
- Real GDP per capita (log)
- GDP growth
- Partner Trade Dependence
- PHL Trade Dependence
- Cumulative OFW Count (IHS)
- PTA
- BIT
- Migrant Stock (IHS)
- Common Language
- Colonial Relationship
- Distance
BLA Effect Heterogeneity across Skill Level

![Graph showing density of first difference estimates for skill levels]

- **Skill Level**: Low and High
- **Y-axis**: Density
- **X-axis**: First Difference Estimates
- **Graph Description**: The graph illustrates the distribution of first difference estimates for two different skill levels, with distinct peaks indicating the density of estimates for each level.
The premise that international institutions promote cross-border economic integration by mitigating problems with market failures is central to the political economy literature.

My findings using OFW data suggest a more complicated picture:

- The effect of BLAs are **mediated** by the skill level of migrant workers.
- Unique nature of BLAs: help solve state-level market failure problems by **shifting** costs to migrant workers instead.
- **Reconciles** some of the emerging negligible or mixed BLA effect findings.
Broader Implications

- The study of formal international cooperation in migration introduces an additional layer of actor preferences absent in the literature.
  - Migrants have preferences while goods and capital don’t. Complicates interaction between state and firms.
- The importance of examining whether migration policy and agreement effects match their intentions
  - Political economy explanations about migration policy outcomes rely on fundamental assumptions about how policy effects shape actor preferences
  - Yet, little empirical work has been done to verify whether such assumptions hold outside of experimental settings
- The heterogeneous treatment effect of BLAs shows the benefits of incorporating as fine-grained data available
  - Especially important in political economy research on migration where individual characteristics can often confound state or dyad-level characteristics studies are interested in
<table>
<thead>
<tr>
<th>Variable</th>
<th>Operationalization</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFW Mobility</td>
<td>Count of OFW new hires for a given skill level, destination, and year as percentage of total OFW new hires in the same skill level and year.</td>
<td>Constructed based on MTY (2013)</td>
</tr>
<tr>
<td>BLA</td>
<td>Destination country and PHL have a signed BLA (MOU or MOA) in a given year. 1 = yes, 0 = no.</td>
<td>POEA</td>
</tr>
<tr>
<td>Skill Level</td>
<td>Skill level of OFW? 1 = high (MTY 2013’s level 3 and 4), 0 = low (MTY 2013’s level 1 and 2). Average years of schooling for low and high-skill are 12.2 and 14.45, respectively.</td>
<td>Constructed based on MTY (2013)</td>
</tr>
<tr>
<td>Median Wage</td>
<td>Median wage of OFW for a given skill level, destination, and year.</td>
<td>Constructed based on MTY (2013)</td>
</tr>
<tr>
<td>Regional BLA</td>
<td>Number of Philippine-involving BLAs existing in same region of the destination country at t - 5 years.</td>
<td>Constructed based on POEA and UN data</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>Destination country total unemployment as percentage of total labor force.</td>
<td>WDI augmented with TWN National Statistics Data</td>
</tr>
<tr>
<td>Labor Participation Rate</td>
<td>Destination country percentage of total population ages 15+ and economically active.</td>
<td>WDI augmented with TWN National Statistics Data</td>
</tr>
<tr>
<td>Labor Force</td>
<td>Destination country people ages 15+ and economically active, total in millions.</td>
<td>WDI augmented with TWN National Statistics Data</td>
</tr>
<tr>
<td>EU</td>
<td>Destination country EU membership. 1 = yes, 0 = no.</td>
<td>EU official website</td>
</tr>
<tr>
<td>WTO</td>
<td>Destination country WTO/GATS membership. 1 = yes, 0 = no.</td>
<td>WTO official website</td>
</tr>
<tr>
<td>Regime Type</td>
<td>Destination country Polity Score 2.</td>
<td>POLITY IV</td>
</tr>
<tr>
<td>Real GDP</td>
<td>Destination country log GDP (constant 2000 USD).</td>
<td>MTY (2013); WDI</td>
</tr>
<tr>
<td>Real GDP per capita</td>
<td>Destination country expenditure side real GDP at constant 2005 PPPs (in million 2005 USD)/total population in millions</td>
<td>Constructed based on PWT 8.0</td>
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<tr>
<td>GDP growth</td>
<td>Destination country GDP growth (annual %).</td>
<td>WDI</td>
</tr>
<tr>
<td>Partner Trade Dependence</td>
<td>Bilateral trade of goods (exports + imports)/ destination country expenditure side real GDP.</td>
<td>Constructed based on UN Comtrade and PWT 8.0</td>
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<tr>
<td>PHL Trade Dependence</td>
<td>Bilateral trade of goods (exports + imports)/ Philippines expenditure side real GDP.</td>
<td>Constructed based on UN Comtrade and PWT 8.0</td>
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<tr>
<td>Cumulative OFW Count</td>
<td>Destination country cumulative count of OFW in the same skill level since 1992 (IHS).</td>
<td>Constructed based on POEA data</td>
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<tr>
<td>PTA</td>
<td>Destination country PTA in force with PHL. 1 = yes, 0 = no.</td>
<td>Department of Trade and Industry (DTI), PHL</td>
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<tr>
<td>BIT</td>
<td>Destination country BIT in force with PHL. 1 = yes, 0 = no.</td>
<td>UNCTAD</td>
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<td>Migrant Stock</td>
<td>Stock of PHL-born population in the destination country (IHS).</td>
<td>WB Global Migration Database; POEA; TWN National Statistics</td>
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<tr>
<td>Common Language</td>
<td>A language is spoken by at least 9% of the population in both PHL and destination country? 1 = yes, 0 = no.</td>
<td>CEPII</td>
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<tr>
<td>Colonial Relationship</td>
<td>Dyad ever in colonial relationship? 1 = yes, 0 = no.</td>
<td>CEPII</td>
</tr>
<tr>
<td>Distance</td>
<td>Thousand kilometers between most populated cities of dyad (log).</td>
<td>CEPII</td>
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### Descriptive Statistics

<table>
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<tr>
<th>Variable</th>
<th>( \bar{x} )</th>
<th>Min</th>
<th>Max</th>
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<tbody>
<tr>
<td>OFW Mobility</td>
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<td>0.00</td>
<td>79.26</td>
<td>6228</td>
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<td>BLA</td>
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<td>Skill Level</td>
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<td>Median Wage</td>
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<td>Labor Force (millions)</td>
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<td>Real GDP (ten millions)</td>
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<td>Real GDP per capita (thousands)</td>
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<td>PHL Trade Dependence</td>
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<td>Cumulative OFW Count (thousands)</td>
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<td>PTA</td>
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<td>BIT</td>
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<td>Migrant Stock (thousands)</td>
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Robustness Checks

Data Appendix

Extensions

−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5

OLS
OLS (Cty & Year FE)
GLMM (Cty & Year)
Pois
Pois (Cty & Year FE)
NegBin (Cty & Year)
Hurdle (Cty & Year)

Model

BLA Coefficient

BLA*Skill Level Coefficient
BLA Effect Heterogeneity across the Treated
The Synthetic Control Method: Supportive Cases
BLA Effect Heterogeneity across the Treated
The Synthetic Control Method: Ambiguous Cases

Data Appendix

Extensions
BLA Effect Heterogeneity across the Treated
The Synthetic Control Method: Contradicting Cases

- For Low Skill OFW Mobility in the United Kingdom and Synthetic United Kingdom:
  - Year: 1995, 2000, 2005
  - Values: 0.05, 0.15, 0.25

- For High Skill OFW Mobility in the United Kingdom and Synthetic United Kingdom:
  - Year: 1995, 2000, 2005
  - Values: 0.00, 0.04, 0.08

- For Low Skill OFW Mobility in Switzerland and Synthetic Switzerland:
  - Year: 1995, 2000, 2005
  - Values: 0.05, 0.10, 0.15, 0.20

- For High Skill OFW Mobility in Switzerland and Synthetic Switzerland:
  - Year: 1995, 2000, 2005
  - Values: 0.00, 0.04, 0.08

- For Low Skill OFW Mobility in Canada and Synthetic Canada:
  - Year: 1995, 2000, 2005
  - Values: 1, 2, 3, 4

- For High Skill OFW Mobility in Canada and Synthetic Canada:
  - Year: 1995, 2000, 2005
  - Values: 1, 2, 3, 4, 5