Services Liberalization and MNC Activities

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Motivation

- Services employ 82% of the U.S. workforce, account for $10.3 trillion (78%) of U.S. GDP
- U.S. is world’s leading services exporter; services account for 30% of U.S. exports
- Global services liberalization lags behind liberalization of trade in goods, and capital controls
Theoretical Framework
Keller and Yeaple AER 2013

- MNCs trade-off two forms of knowledge transfer from HQ to affiliates:
  - ship intermediates with knowledge *embodied* in the product
  - directly communicate knowledge (*disembodied* transfer) [aka, *services trade*].
- Finding: Affiliate competitiveness (sales) declines with embodied trade costs—effect is strongest among firms in knowledge-intensive industries
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- ship intermediates with knowledge *embodied* in the product
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**Finding:** Affiliate competitiveness (sales) declines with embodied trade costs—effect is strongest among firms in knowledge-intensive industries.

“The intangibility of disembodied knowledge, however, makes its movements hard to observe, and the costs...difficult to assess.”
Our Contribution

• Services trade costs influenced by communication costs, but also by the openness or restrictiveness of the regulatory regime.
• When service payments (e.g., royalties, license and other fees for intangible property; headquarters fees for consulting, insurance, financial services; interest payments) are restricted, complex MNC activities are more difficult.
• When service payment restrictions are high, we expect decreases in MNC affiliate activities and competitiveness, particularly in service-import-intensive industries.
• How do we measure changes in the restrictiveness of services transactions across countries over time?
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FIRST ANNUAL REPORT ON
EXCHANGE RESTRICTIONS

INTERNATIONAL MONETARY FUND

MARCH 1, 1950
Quinn’s Invisibles Payments Liberalization Index

PAYINV

Payments for Invisible Transactions and Current Transfers

Controls on these transfers
Trade-related payments
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
Investment-related payments
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
Payments for travel
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
Personal payments
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test

Foreign workers’ wages
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
Credit card use abroad
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
Other payments
  Prior approval
  Quantitative limits
  Indicative limits/bona fide test
**PAYINV index**

Example: India

<table>
<thead>
<tr>
<th>Payments for Invisible Transactions and Current Transfers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Controls on these transfers</strong></td>
</tr>
<tr>
<td>Trade-related payments</td>
</tr>
<tr>
<td>Prior approval</td>
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<tr>
<td>Quantitative limits</td>
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<td>ADs may effect remittances of up to US$1 million a project toward consulting services procured abroad, subject to documentary requirements.</td>
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<tr>
<td>ADs may also effect remittances on behalf of Indian companies executing infrastructure projects for procurement of consulting services for such projects, up to US$10 million a project.</td>
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**INDIA**

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foreign companies operating in India may remit profits to their head offices without RBI approval, subject to payment of applicable taxes and other liabilities.
Quinn’s Financial Current Account Index
Firm-level data on MNC Activities (BEA)

- All U.S. MNCs report detailed operations at the level of each foreign affiliate in Benchmark Surveys conducted quinquennially (1989-2009)
  - Affiliate activities and performance: sales, employment, income
  - Affiliate trade with HQ and 3rd parties
- BEA data in previous studies
  - economics and finance literatures (Antras et al. QJE 2009; Branstetter et al. JIE 2011; Bilar AER forthcoming; Helpman et al. AER 2004; Yeaple JIE 2009)
  - political science (N. Jensen 2013, Jensen et al. 2014)
We model affiliate-level activities $A_{ijt}$ (Sales, Employment, and Income):

$$A_{ijt} = \sigma + \alpha X_{jt-1} + \beta C_{jt-1} + \varphi + \varsigma_j + \tau_t + \epsilon_{ijt}$$

including host country economic and institutional reforms $X_{jt}$, economic control variables $C_{jt}$ (GDP/capita, growth, population), headquarter firm $\varphi$, country $\varsigma_j$, and year $\tau_t$ fixed effects.
Firm-Level Results

Note: N=87,569. The dependent variables are logged. The coefficients are exponentiated.
Using data from all affiliates in OECD countries, we construct an index of imported services intensity

\[ SVCINT_j = \sum_i \frac{INV_i SLS_{ij}}{SLS_i SLS_j} \]
Firm-Level Results

Note: The dependent variables are logged. The coefficients are exponentiated.
Conclusion

- Services payments reform increases the activities and improves the performance of foreign MNCs
- Heterogeneous effects of reform across industries with different services-intensities
- Political economy impediments to services liberalization unlikely sector-based (i.e., not services sector only)
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Macro Country-level Results
DV: FDI/GDP

Note: The dependent variables is FDI/GDP. The variables are standardized to mean of 0 and SD of 1.
Services Liberalization and Services Imports

Note: We estimate: 
\[ \text{Services Imports}_{ijt} = \sigma + \alpha X_{jt} + \beta C_{jt} + \varphi + \varsigma_j + \tau_t + \epsilon_{ijt} \]
Services Intensity by Sector
Determinants of Services Intensity

- Iceland
- Luxembourk
- New Zealand
- Portugal
- Greece
- Turkey
- Finland
- Ireland
- Denmark
- Austria
- Sweden
- Belgium
- Norway
- Switzerland
- Australia
- Netherlands
- Spain
- Italy
- United Kingdom
- France
- Germany
- Japan

- \( e(Avg\ \text{Services\ Intensity} \mid X) \)
- \( e(\text{Population (log)} \mid X) \)
- \( e(\text{GDP/capita (log)} \mid X) \)
  
  coef = .08685078, (robust) se = .02088246, t = 4.16
  
  coef = .17812194, (robust) se = .03816803, t = 4.67