The Goods and Services Tax

Research and Discussion

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Motivation

- Reducing **international** trade barriers has been a major policy focus for developing countries
  - Reducing tariffs e.g. India's trade liberalization in 1991 (Krishna and Mitra, 1998)
- Recent research has focused more on reducing **internal** trade barriers
  - Microevidence finds large internal trade barriers
  - Van Leemput 2017, Donaldson 2016, Allen 2014, Atkin and Donaldson 2016, Asturias et al. 2016
  - India: Goods and Service Tax will reduce cross–state taxes

Questions

- How large are domestic trade barriers in India?
- How will the GST reduce them and what will be the impact on domestic trade and growth?
- What might be the logistical bottlenecks of the GST?

Road Map of the Talk

1. Estimating Indian Domestic Trade Barriers
2. Estimating the Impact of the GST
3. Discussion on Future Research and Potential Bottlenecks

1. Estimating Indian Domestic Trade Barriers

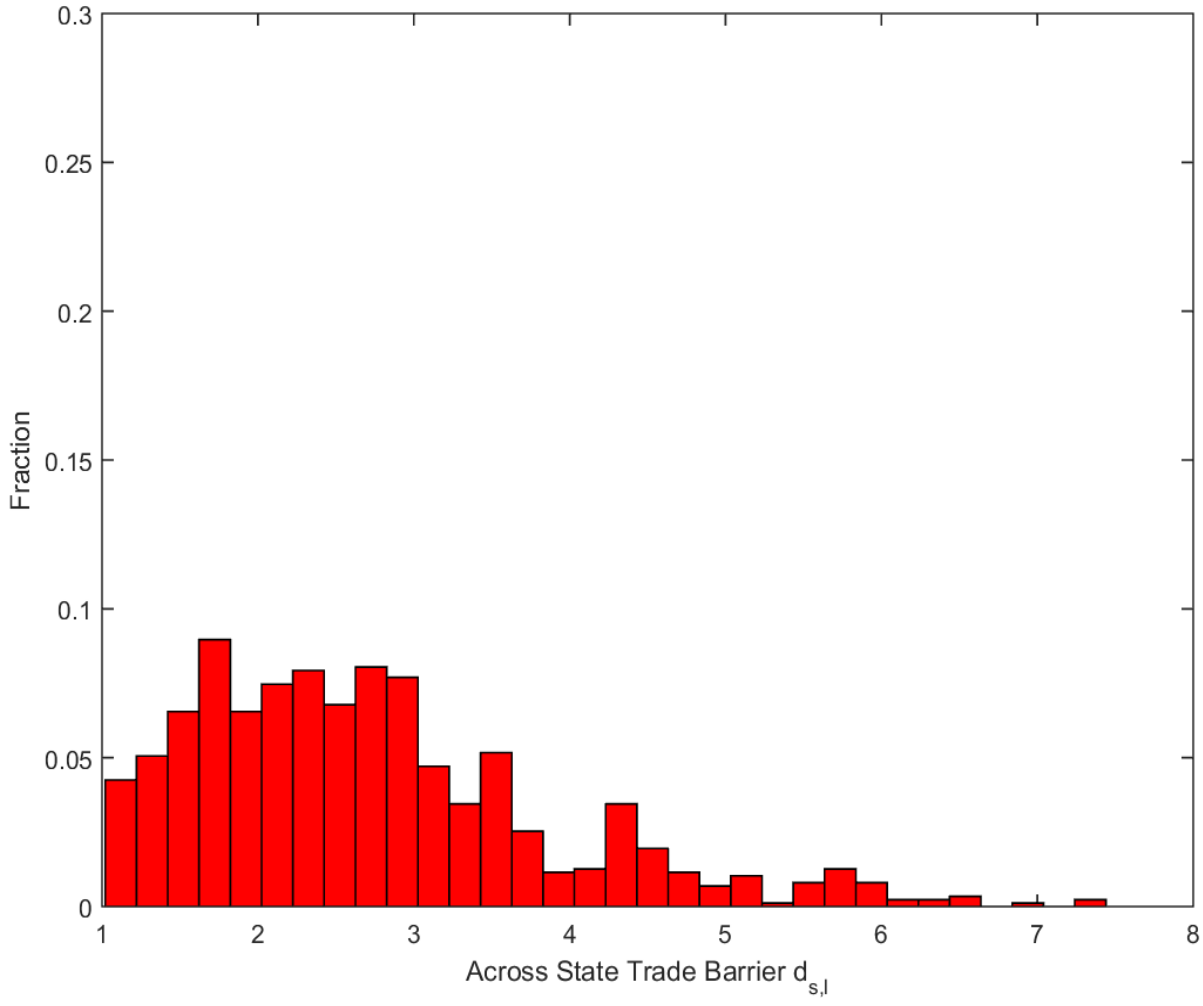
Model of the Indian Economy

- Develop an international trade model (Eaton, Kortum 2002) to quantify internal and external trade barriers
  - 27 Indian states + 3 union territories
  - each state modeled as having an urban and a rural area
  - goods flow modeled as flows between rural and urban areas and across states
  - trade both with each other and the rest of the world
  - states have differential port access

Measuring Trade Costs

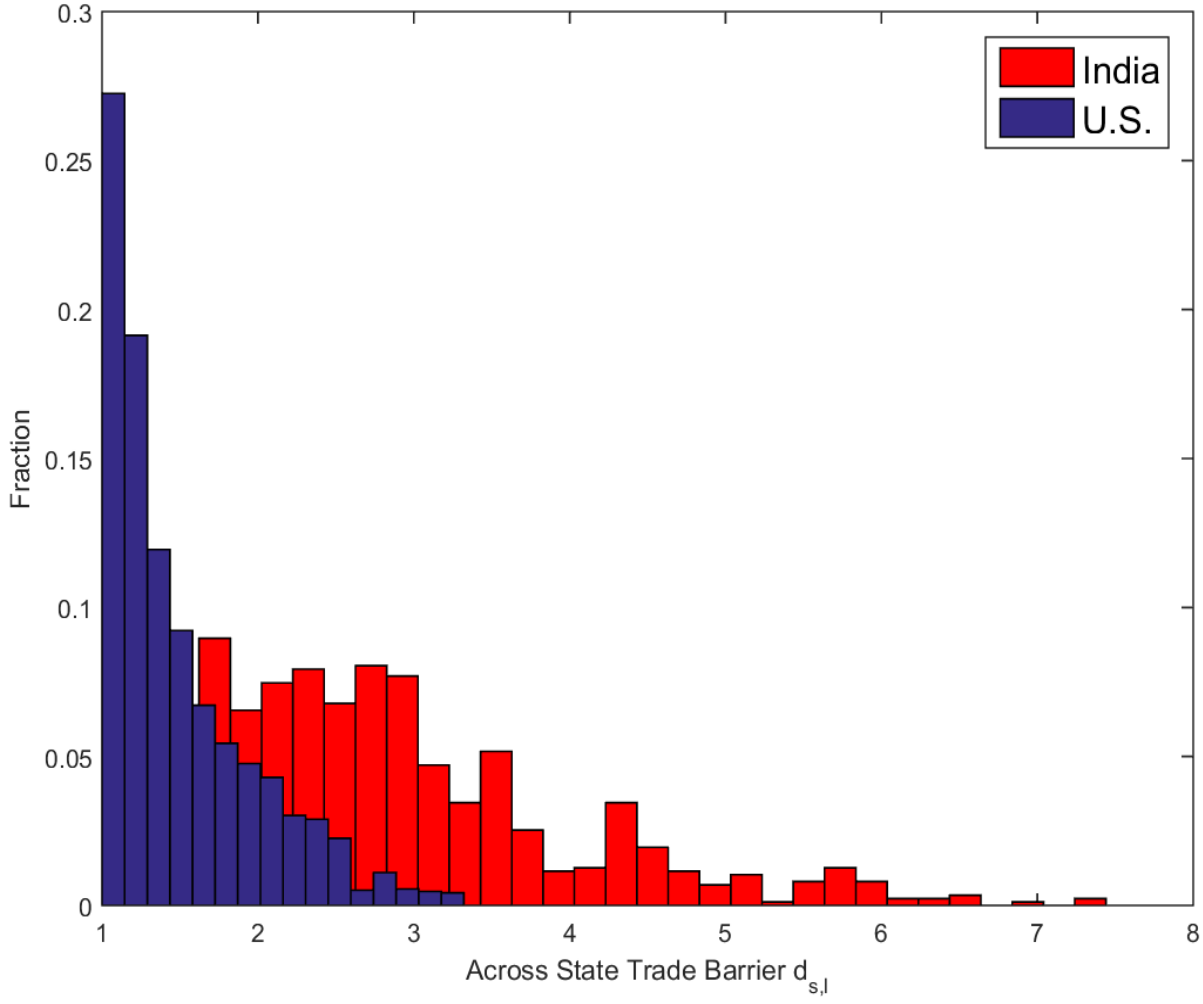
1. Detailed price data for $\pm$1,800 wholesale markets
   - Compute internal trade costs within and across states
2. Cross–state trade data at Indian state level
   - Evaluate the fit of model predictions regarding cross–state trade flows based on price data
3. International trade data at Indian state level with port information
   - Compute international trade costs using the model structure

Cross–state Trade Barriers



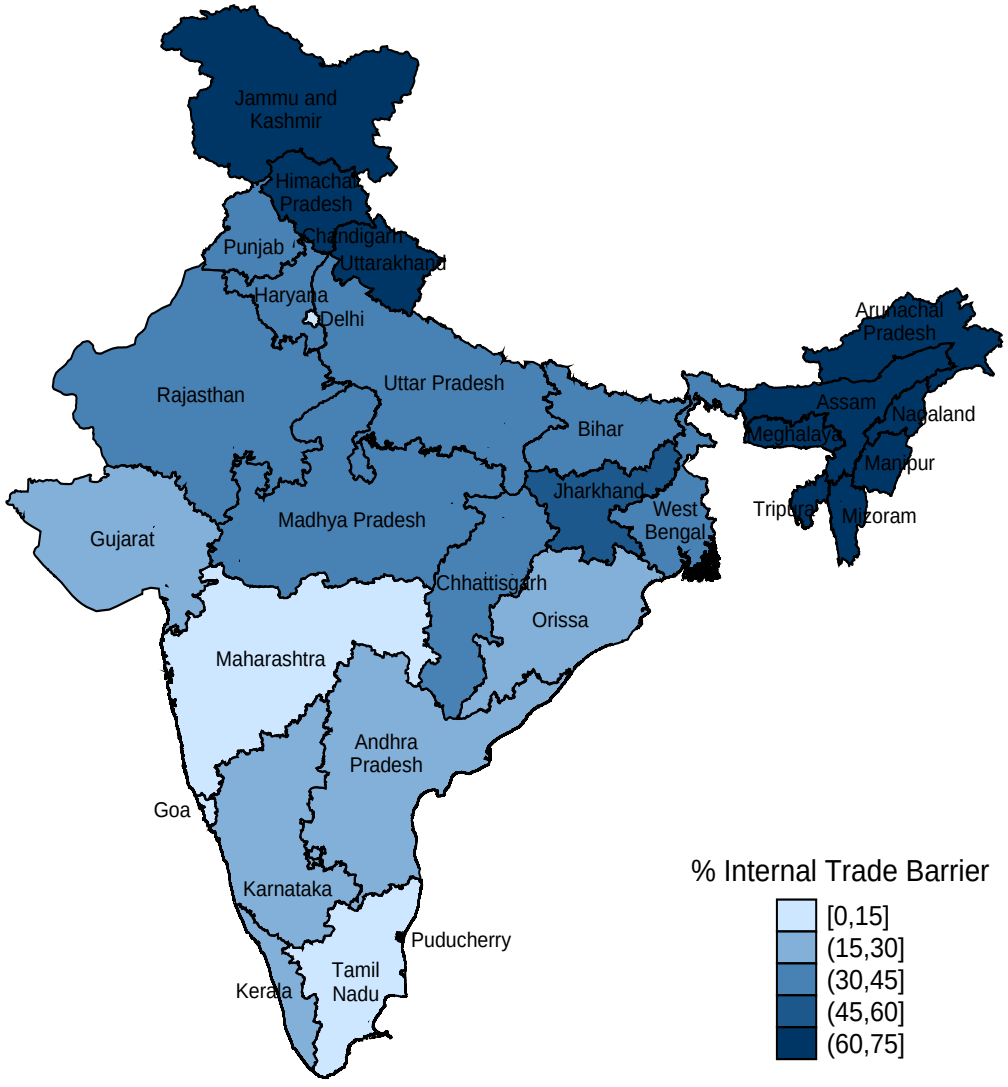
Median $d_{sl} = 2.52$

Cross–state Trade Barriers



- Cross–state Indian trade barriers are 5 times higher than in the U.S.

External versus Internal Trade Barriers



- On average, internal barriers make up 40% of total, but large variation
- Driven by Non-port states: 51% versus Port states: 16%

Findings

1. Internal barriers make up 40% of total trade barriers, on average.
   - Large heterogeneity across states based on remoteness
   - 90-10 percentile is 70%-13%
   - Port states average: 16%, Non-port states average: 51%

   Takeaway: Internal trade barriers are substantial for non-port states

Findings

1. Internal barriers make up 40% of total trade barriers, on average.
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   - 90-10 percentile is 70%-13%
   - Port states average: 16%, Non-port states average: 51%

   Takeaway: Internal trade barriers are substantial for non-port states

2. The gains in welfare from:
   - Reducing cross–state trade barriers to those in the U.S.: 13%
   - Fully eliminating international import barriers: 7%

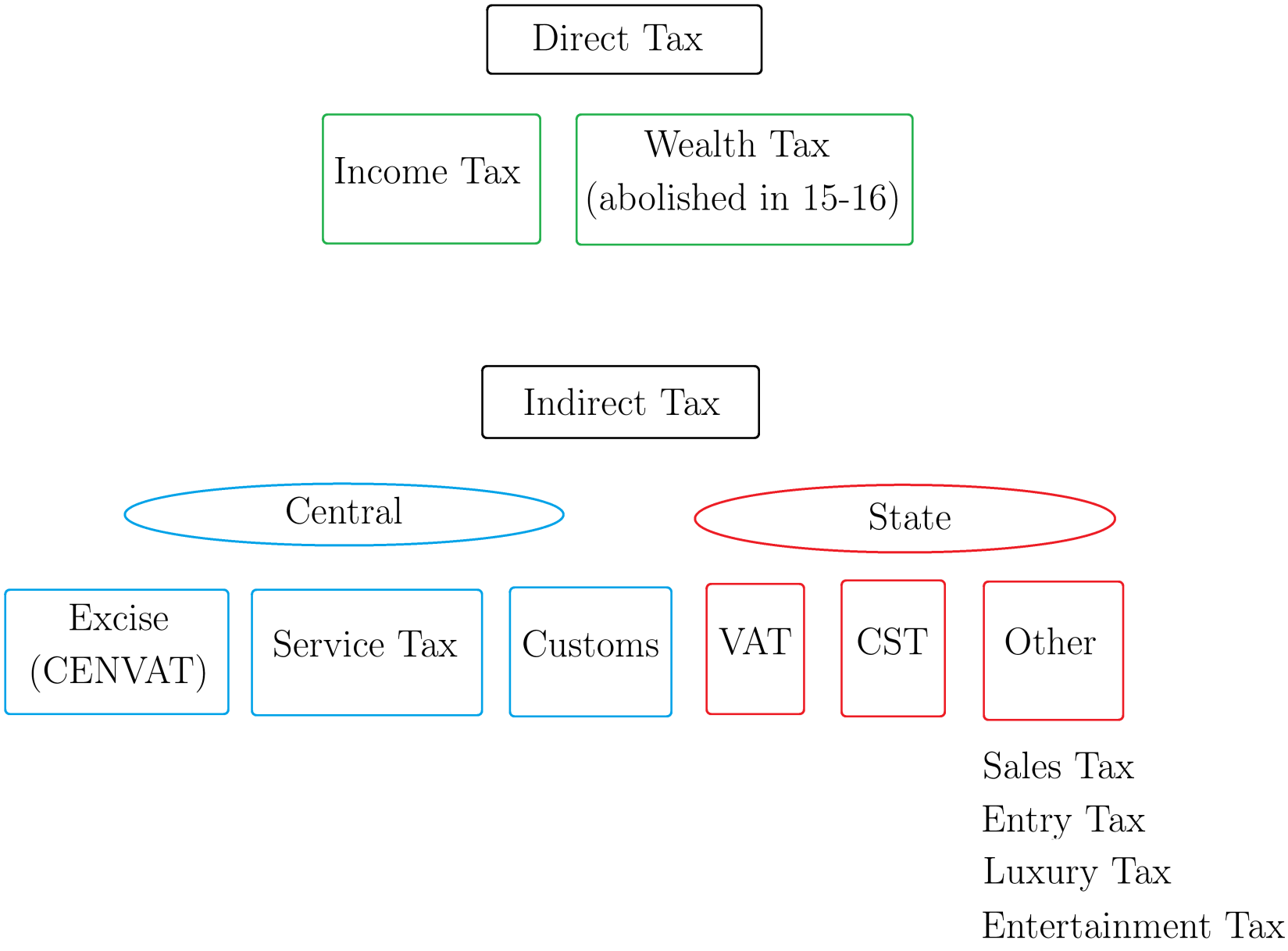
   Takeaway: India has more to gain from becoming more integrated internally

2. Estimating the Impact of the GST

Goods and Services Tax (GST)

- In August 2016, Indian Parliament approved the GST
  - Rolled out on July 1st, 2017
- Create a unified tax regime across states
  - Range of different taxes in states with heterogeneity in the tax levels
  - Merge central and state taxes into one common tax
- The final tax rates for all goods and services have been decided recently
  - Four tax brackets of 5%, 12%, 18%, and 28%

Current Tax Structure



Indirect Taxes subsumed by the GST

	CENTRAL TAXES	Rate
1.	Excise duty (CENVAT)	12.36%
2.	Service Tax	15%
3.	Countervailing Duties (CVD)	12.36%
4.	Special Additional Duty of Customs (SAD)	4%
	STATE TAXES	**Range Rates**
1.	Value Added Tax (VAT)	10%-14.5%
2.	Central Sales Tax (CST)	2%
3.	Others	
	3.1 Sales Tax	0%-15%
	3.2 Entry Tax	0%-12.5%
	3.3 Luxury Tax	3%-20%
	3.4 Entertainment Tax	15%-50%

GST

- GST will merge the indirect central and state taxes into a four-tier schedule of 5%, 12%, 18% and 28%

	Exempt	**Low Rate**	**Standard Rates**		**High Rate**
	0%	5%	12%	18%	28%
Goods	Agricultural goods	Necessity goods, Coal, Coke	Processed food, Pharmaceuticals	Chemicals, Paper and paper board	Luxury goods and consumer durables
Services	-	Transport	Hotels and restaurants	Upscale hotels and restaurants	Luxury hotels and restaurants, gambling, and entertainment

Example of Current Tax System

1. Consider two Indian States: Andhra Pradesh and Maharashtra
2. Produce goods and trade domestically and internationally with the Rest of the World (ROW)

Table 1: Cross–state Taxes under Current Tax System

		Exporter		
		(1)	(2)	(3)
		Andhra Pradesh	Maharashtra	ROW
Importer	Andhra Pradesh	29%	31%	17%
	Maharashtra	29%	26%	17%
	ROW	0%	0%	0%

Example of Tax under GST

1. Consider two Indian States: Andhra Pradesh and Maharashtra
2. Produce goods and trade domestically and internationally with the Rest of the World (ROW)

Table 2: Cross–state Taxes under GST

		Exporter		
		(1)	(2)	(3)
		Andhra Pradesh	Maharashtra	ROW
Importer	Andhra Pradesh	16%	16%	16%
	Maharashtra	16%	16%	16%
	ROW	0%	0%	0%

Table 3: Impact GST (Percent)

	Real GDP	Agric. Production	Manuf. Production	Internal Trade	External Trade
	(1)	(2)	(3)	(4)	(5)
India	4.2	-0.5	14	29	32
Port states	4.4	-1.6	14	29	30
Non-Port states	3.9	0.7	13	29	43

Note: The real GDP expansion is weighted by the share of agricultural and manufacturing GDP of total GDP (48 percent).

3. Discussion on Future Research and Potential Bottlenecks

World Bank Data (2014-15)

- The World Bank has put together multiple sources of data
  1. Railway data on 9,000 stations
     - Information on goods loaded and loaded off
  2. Goods production and consumption
     - For 627 districts
  3. Road traffic count data
     - 1600 traffic tracking station
     - Information on truck and car traffic
  4. Trucker surveys
     - Origin destination and goods transport questions
     - 30,000 trucks
     - Information on both policy barriers and infrastructure barriers

1. Estimate domestic trade barriers at more granular level

- World Bank data is more recent 2014/15
  - How large are domestic barriers in India today?
- Estimate domestic trade barriers at a more granular level
  - Bilateral district-level data for 627 districts
- Improve the accuracy of estimates of internal and external barriers

2. GST analysis

- Analyze the GST impacts with more recent data and at a more granular level
- Detailed logistical mapping of goods flows
  - Estimate how much trade would flow through individual districts
- Study the potential bottlenecks after the GST implementation
- Estimate the benefit of new infrastructure investment such as roads or ports
- Use optimization methods to study the location of new infrastructure investments

Multi-State Country

Environment

- Multiple states $s = 1, ..., 30$
- Two goods produced in each state:
  - Agriculture and Manufacturing denoted by $g \in \{a, m\}$
- Two regions in each state:
  - Rural and Urban denoted by $r \in \{R, U\}$
- Total state population L_s:
  - Rural population: $\beta_s L_s$
  - Urban population:$(1 - \beta_s) L_s$
  - Labor is immobile across regions and states (can be relaxed)

Demand - CRIE preferences

- Following Fieler (2011)
- Representative agent in region r in state s

$$U_s^r = \max \left\{ \left(\frac{\sigma_a}{\sigma_a - 1} \right) \int_0^1 \left[q_s^r (j_a)^{\frac{\sigma_a - 1}{\sigma_a}} \right] dj_a + \left(\frac{\sigma_m}{\sigma_m - 1} \right) \int_0^1 \left[q_s^r (j_m)^{\frac{\sigma_m - 1}{\sigma_m}} \right] dj_m \right\}$$

subject to

$$\int_0^1 q_s^r (j_a) \, p_s^r (j_a) \, dj_a + \int_0^1 q_s^r (j_m) \, p_s^r (j_m) \, dj_m = w_s^r$$

- w_s^r: state-specific regional wage
- Preferences are non-homothetic: $\sigma_m > \sigma_a$
  - as **income** $\uparrow$, share manufacturing expenditures $\uparrow$

Production

- Both goods are produced with Ricardian technology (CRS, only labor)
  - Agriculture produced only in the **rural area**
  - Manufacturing produced only in the **urban area**
  - Each with a continuum of varieties $j_g \in [0,1]$
- Each region draws a productivity $z_s(j_g)$ for each variety only for the good produced in that region
  - **Rural**: $z_s(j_a) \qquad \forall j_a \in [0,1]$
  - **Urban**: $z_s(j_m) \qquad \forall j_m \in [0,1]$

Production ctd.

- Productivity draw $z_s(j_g)$, $g \in \{a, m\}$ follows a Fréchet

$$z_s(j_g) \sim F_s(z) = exp\left(-T_{g,s} z^{-\theta_g}\right)$$

  - If $T_{g,s}$ is high, state s is on average more productive (absolute advantage)
  - If θ_g is low, wider range of productivities and higher gains from trade (comparative advantage)
- Unit cost of production (CRS):

$$p_s^r(j_g) = \frac{w_s^r}{z_s(j_g)}$$

  - w_s^r: state-specific regional wage

Internal Trade

Two types of trade:

1. Within state: urban-rural
2. Across states via urban areas

Trade within State

- All good varieties are tradable across rural and urban area
- Within state iceberg transportation cost $\delta_s > 1$
- Cost of delivering j_g to other region within state

$$p_s^r(j_g) = \frac{w_s^r}{z_s(j_g)}\delta_s$$

Trade across States

- All good varieties are tradable across states
  - Cross–state iceberg transportation costs $d_{sl} > 1$
  - Assumption: goods can only be traded via the urban areas
- Total cost of delivering one unit of either good across states is:

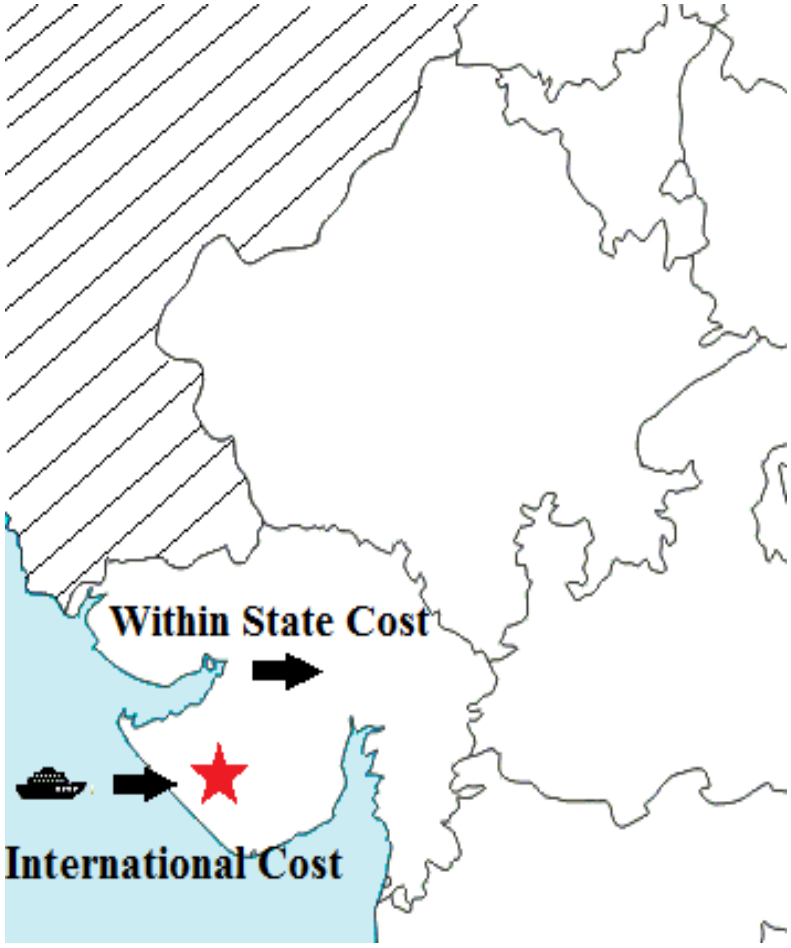
		From State 1	
		Rural	*Urban*
To State 2	*Rural*	$\delta_1 * d_{21} * \delta_2$	$\delta_1 * d_{21}$
	Urban	$d_{21} * \delta_2$	d_{21}

Multi-State Country and RoW

Environment

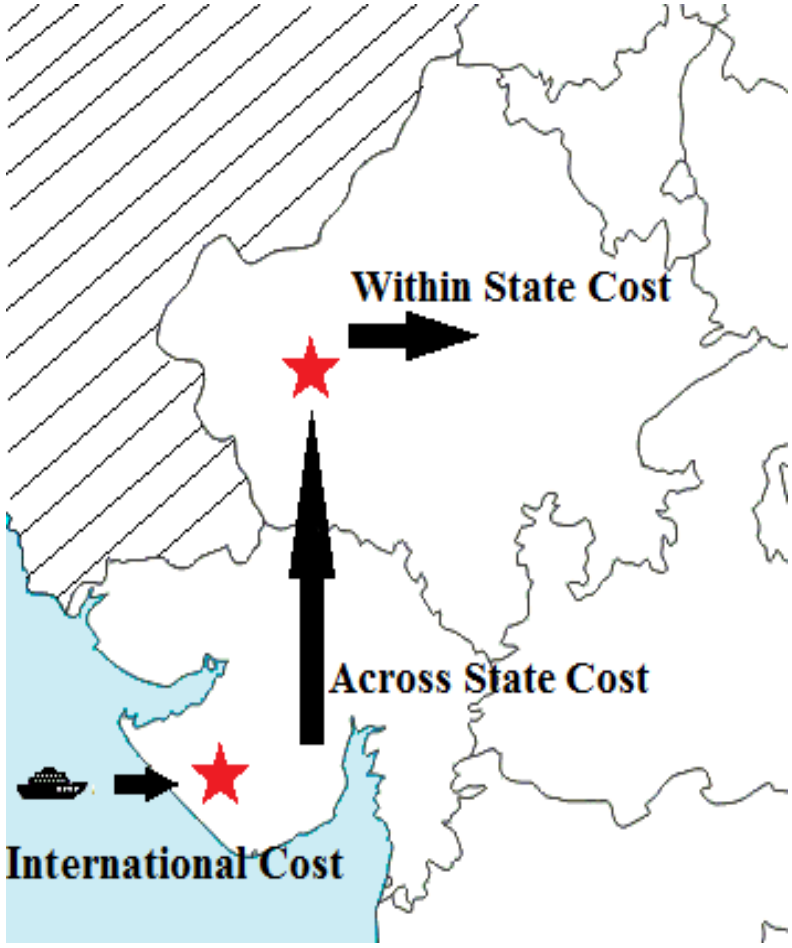
- Indian states trade with one rest of the world (RoW)
  - Same preferences and technology process
- Both agriculture and manufacturing are tradable
- To ship goods across countries:
  - **International** iceberg transportation costs $\tau > 1$
  - $\tau_{imp,g}$: good-specific import cost
  - $\tau_{exp,g}$: good-specific export cost
- Key assumptions:
  1. All exports and imports need to go through a **port**
  2. τ's are the same for all ports

1. Port States



$\tau_{imp,g} * \delta_G$

2. Non port States



$\tau_{imp,g} * d_{RG} * \delta_R$

Urban Area

International Trade

- Assume Perfect Competition:

$$p_s^r(j_g) = \min\{p_{sl}(j_g); l = 1...S, ROW\}$$

$$p_s^r(j_g) = \min\left\{\frac{w_l^r}{z_s(j_g)} D_{g,sl}^r; l = 1...S, ROW\right\}$$

- where $D_{g,sl}^r$ depends on
  - the region of consumption: urban and rural
  - the type of good: manufacturing and agriculture
  - and whether state s is a port state

Equilibrium

Quantitative Analysis

Methodology

- 30 Indian states trading with each other and the rest of the world
- Indian state data $\{L_s, \beta_s, w_s^r\}$ and Parameters $(\sigma_A, \sigma_M, \theta_A, \theta_M)$
- Measured from the **data**: using price variation to compute
  - (30*30)-30 cross–state trade barriers (cross–state variation)
  - 30 rural-urban trade barriers (within state variation)
- Measured in context of the **model**: match international trade flows to compute
  - 4 international trade barriers: one import and export barrier for each good type

Rural-Urban Trade Barriers

- Use the same no-arbitrage condition as before
- However, now use price variation across urban and rural markets within states
- Compute 30 rural-urban trade frictions **within** Indian states
- The median trade cost is 1.58: 90-10 percentile is 2.28 and 1.24.
- Highly correlated with distance from the market to nearest railway ($\rho = 0.58$)

International Trade Barriers

- **International trade**: Foreign Trade Statistics of India (2012)
  - International agricultural and manufacturing trade data and through major ports
- Use to compute international trade barriers:
  - Calibrate $\tau_{g,imp}, \tau_{g,exp}$ to match agreggate sectoral trade as a fraction of sectoral production:

	Import	Export
Agriculture	2.6%	6.6%
Manufacturing	35%	31%

Size International Trade Barriers

International vs. Regional Integration

Two main counterfactuals:

1. Remove import border costs
2. Reduce Indian cross–state barriers to U.S. level

International vs. Regional Integration

%△ Welfare	Import Barrier	Cross–state to U.S.
India	**7%**	13%
Port states	**12%**	12%
Non-port states	**2%**	14%

- Welfare increase is substantial: 7% and driven by the port states: 12%
- Heterogeneity of foreign market access matters in terms of policy impacts

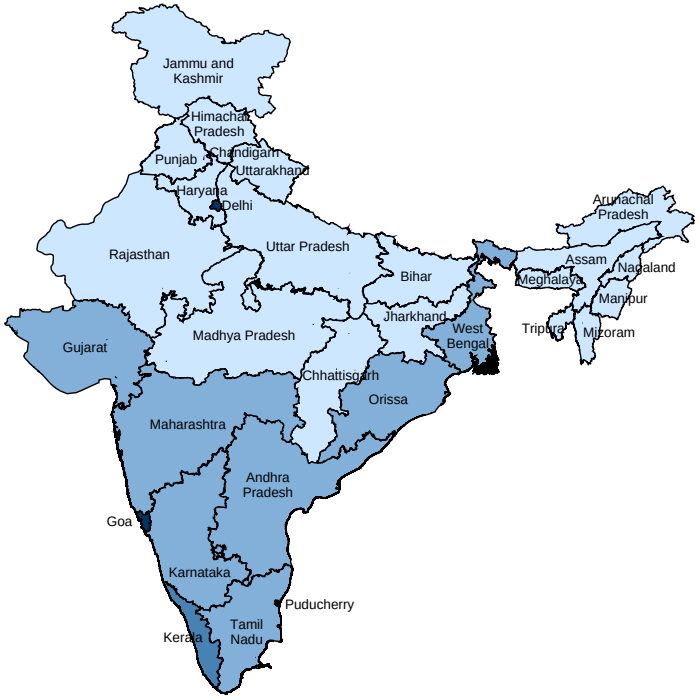
Regional Integration to U.S. Level

%△ Welfare	Import Barrier	Cross–state to U.S.
India	7%	**13%**
Port states	12%	**12%**
Non-port states	2%	**14%**

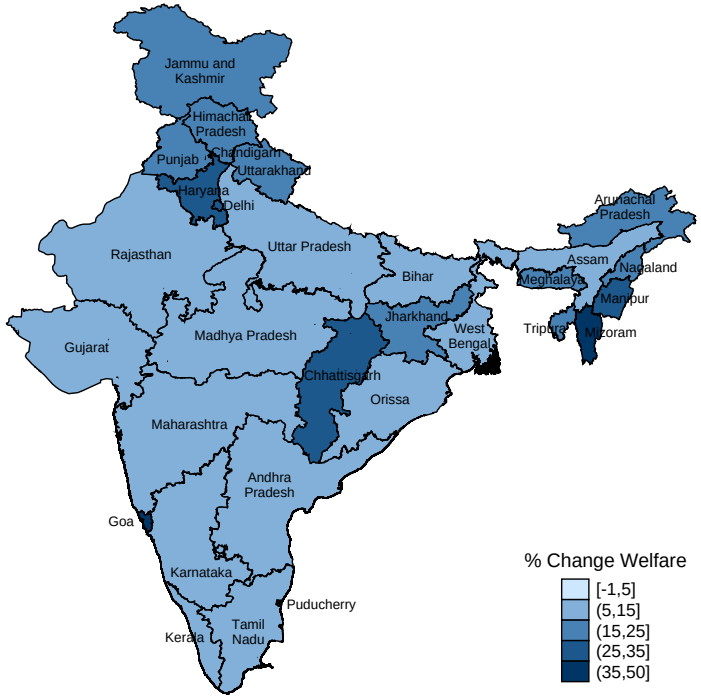
- Aggregate welfare increases by more than fully reducing import barriers: 13%
- Welfare gains are distributed more equally across states

International vs. Regional Integration

1. Remove Import Barriers



2. Cross–state barriers to U.S.



1. India gains more from internal integration
2. And the welfare gains are distributed more equally

International vs. Regional Integration - Intuition

1. Non-port states trade little with the rest of the world and other Indian states
   - Reducing cross–state barriers increases welfare due to
     - increased access to foreign markets
     - increased access to other Indian markets

2. Port states are already relatively open to the rest of the world
   - Therefore, the largest gains come from opening up trade with other Indian states

Additional Counterfactuals | International Imports | Mobile Labor | Gravity Estimation | Nature Cross–state barriers

Example Quota

Business Standard

Restriction on potato export from Bengal relaxed further

Press Trust of India | Kolkata August 25, 2014 Last Updated at 22:30 IST

Restrictions imposed on export of potato from West Bengal have been relaxed further as the state government today allowed 700 tonnes of tuber to Odisha, Jharkhand and Assam per day.

Of the 700 tonnes of potato allowed for export, 400 tonnes would be sent to Odisha, 100 tonnes to Jharkhand and 200 tonnes to Assam following a request from those state governments, Agriculture Marketing Minister Arup Roy said.

Source: http://www.business-standard.com/article/pti-stories/restriction-on-potato-export-from-bengal-relaxed-further-114082501338_1.html

Motivation

Literature

- Donaldson AER, forthcoming (2016): assesses the impact of improved transportation on internal trade and international trade from 1870-1930
- This paper:
  1. Uses more recent 2012 data for current policies
  2. More detailed data on:
     - Inter-state trade with ports
     - International trade via major ports
     - Price data both across and within state
  3. Quantitative analysis based on international trade model
  4. Focus on quantifying the size and welfare implications of external and internal barriers

Literature

International Trade

- Define state s as a non-port state in India with its closest port state being state t
- $D^r_{g,sl}$ is the total trade cost to ship goods from state l to region r in state s

	From ROW			
To Port State t	Urban	$\tau_{g,imp}$	To Non-Port State s	Urban $d_{st} * \tau_{g,imp}$
	Rural	$\delta_t * \tau_{g,imp}$		Rural $\delta_s * d_{st} * \tau_{g,imp}$

International Trade Costs

Cross–state Trade Barriers

1.	Apple	19.	Garlic	35.	Peach
2.	Arhar	20.	Ginger	36.	Pears
3.	Bajra	21./22.	Green chilly	37.	Pomegranate
4.	Banana	23.	Green grams	38.	Potato
5.	Beetroot	24.	Green ginger	39./40.	Pumpkin
6.	Bengal grams	25.	Gur	41./42.	Raddish
7.	Bhindi	26.	Lemon	43.	Red grams
8./9.	Bitter gourd	27.	Maize	44.	Rice
10.	Black grams	28.	Mango	45.	Spinach
11.	Bottle gourd	29.	Masur dal	46./47.	Tomato
12./13.	Cabbage	30.	Mousambi	48.	Turmeric
14./15.	Carrot	31.	Onion	49.	Water melon
16.	Cauliflower	32.	Orange	50.	Wheat
17.	Cucumber	33.	Paddy		
18.	French beans	34.	Papaya		

Across-State Trade Barriers

- For each commodity compute a state-based urban and rural price:
  1. Average out daily prices to a monthly price within market
  2. Drop the top 99th and bottom 1st percentile across markets
  3. Average out monthly prices to yearly price within market
  4. Average out yearly prices across markets to a state-based urban and rural price
     - Urban markets are in cities with population > 1 million
- To discipline $d_{s,l}$, apply a no-arbitrage condition on state-based urban prices

Cross–state Trade Barriers

Equilibrium

For a given set of values for $\{\beta_s\}_{s=1..S,ROW}$, $\{T_{g,s}\}_{s=1...S,ROW}$, $D^r_{g,sl}$, and $\{L_s\}_{s=1..S,ROW}$, an equilibrium is a set of region-good-state specific price indexes , $\left\{P^r_{g,s}\right\}_{s=1..S,ROW}$, region-state specific wages $\{w^r_s\}_{s=1...S,ROW}$, and good-specific bilateral trade flows $X_{g,sl}$ such that:

1. Consumers maximize utility and purchase from the (trade cost inclusive) minimum cost producer.
2. Producers of each variety charge prices equal to the unit costs of production including transportation costs.
3. Labor markets clear, i.e., total shipments from state s equal total production in state s.

Indian State Data

- **State-specific Indian data**: The Ministry of Statistics and Programme Implementation in India
- $\{L_s\}$: State population
  - 50% of total population in port and non-port states
- $\{\beta_s\}$: Percentage of rural population
  - 72% on average, 68% in port states and 75% in non-port states
- $\{w_s^r\}$: State-based value added per capita in each sector
  - On average, urban wages are three times higher than rural

Methodology

Parameters

Parameter	Value	
$\{\sigma_A, \sigma_M\}$	$\{3.3, 5\}$	Elasticity of substitution
$\{\theta_a, \theta_m\}$	$\{5.6, 5\}$	Cost-Elasticity of Trade Flows

- Elasticities of substitution are taken from Fieler (2011)
  - Match consumption patterns: 39% of expenditures goes to agriculture
- θ_m is taken from Simonovska and Waugh (2014)
  - I estimate θ_a following their method

Methodology

Average Size Internal Trade Barriers

- Average import and export barriers

	Import Barrier	% Internal	Export Barrier	% Internal
All States	3.65	44%	4.15	29%
Port States	2.42	16%	2.90	9%
Non-Port States	5.48	62%	5.81	45%

- On average, the total trade barrier in non-port states is three times higher
- Internal trade barriers are substantial, especially for non-port states

Internal Map India

Size Internal Trade Barriers - Agriculture

- Total import and export barriers for agricultural trade:

	Import Barrier	% Internal	Export Barrier	% Internal
All States	4.62	34%	4.32	47%
Port States	3.07	11%	2.88	23%
Non-Port States	6.95	52%	6.62	65%

- On average, the total trade barrier in non-port states is three times higher
- Internal trade barriers are substantial, especially for non-port states

Size Internal Barriers

Size Internal Trade Barriers - Manufacturing

- Total import and export barriers for manufacturing trade:

	Import Barrier	% Internal	Export Barrier	% Internal
All States	2.67	62%	4.00	16%
Port States	1.77	29%	2.92	0%
Non-Port States	4.02	78%	5.00	27%

- The fraction of internal import barriers is higher due to the lower international import barrier
- Internal trade barriers are substantial, again especially for non-port states

Size Internal Barriers

International Trade Barriers

	Import	Export
Agriculture	2.57	2.14
Manufacturing	1.49	2.92

- Manufacturing export barriers are higher than import barriers (Waugh,2010)
- Agricultural import barriers are around 3 times higher than manufacturing (Tombe, 2012)

Fit International Trade

- Compare sectoral imports and exports as a fraction of total sectoral production:

		Agriculture			Manufacturing		
		Data	Model	Old Model	Data	Model	Old Model
Port States	Imports	4%	4%	3%	39%	36%	24%
	Exports	9%	10%	6%	34%	33%	21%
Non-Port States	Imports	0.7%	0.6%	2%	6%	11%	32%
	Exports	3%	2%	6%	6%	10%	29%

- Taking into account differential port access is quantitatively important

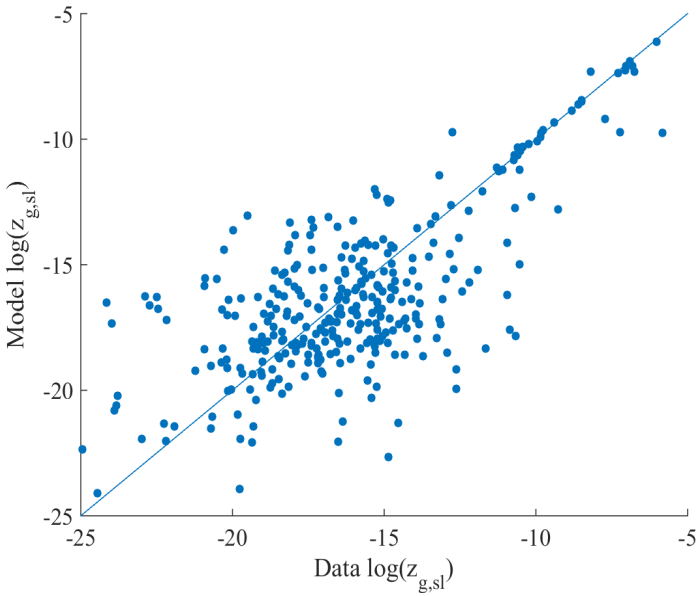
Results

Fit Internal Trade Flows

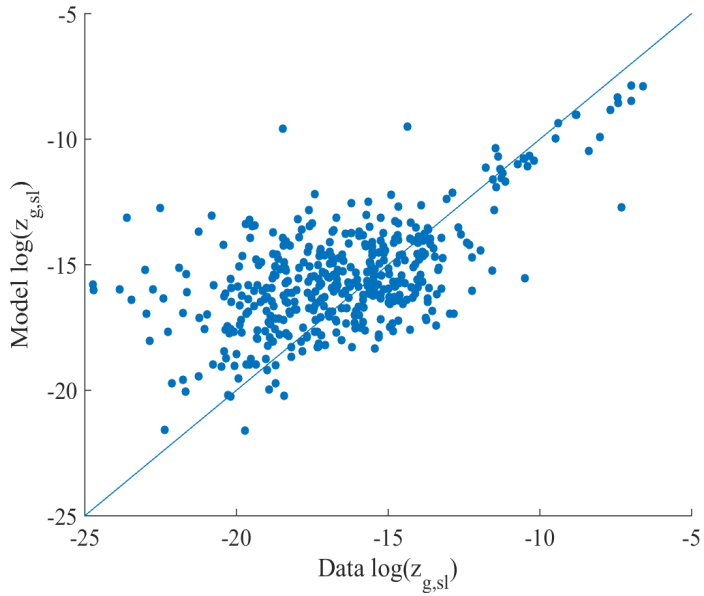
- **Intra-Indian trade**: Directorate General of Commercial Intelligence and Statistics in India (2012)
  - Inter-State Movement/Flows of Goods by Rail, River and Air
  - Agricultural and manufacturing trade data between 27 Indian states + 3 Union Territories (30)
- Use to evaluate the fit of the predicted cross–state trade flows based on price data

Fit Internal Trade Flows ctd.

1. Agriculture (corr = 0.67)



2. Manufacturing (corr = 0.55)



- Weighted import shares $z_{g,sl} = \frac{X_{g,sl}}{X_{g,s}X_{g,l}}$
- The correlations are positive, significant, and reasonably high

Results

International vs. Regional Integration

%△ Welfare	Import Barrier	Export Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	7%	**19%**	30%	2%	18%	13%
Port states	12%	**32%**	29%	-0%	19%	12%
Non-port states	2%	**7%**	31%	4%	17%	14%

- Welfare increase from removing export barriers is larger than from import barriers: 19% relative to 7%
- However, most welfare gains are again concentrated in the port states
  - Heterogeneity also matters for export policies

International vs. Regional Integration

%△ Welfare	Import Barrier	Export Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	7%	19%	**30%**	2%	18%	13%
Port states	12%	32%	**29%**	-0%	19%	12%
Non-port states	2%	7%	**31%**	4%	17%	14%

- Aggregate welfare increases the most when cross–state costs are removed: 30%
- The distributional gains are more equal, with non-ports benefitting slightly more

International vs. Regional Integration

%△ Welfare	Import Barrier	Export Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	7%	19%	30%	**2%**	18%	13%
Port states	12%	32%	29%	**-0%**	19%	12%
Non-port states	2%	7%	31%	**4%**	17%	14%

- Aggregate welfare increases but by less than reducing import barriers: 2%
  - Driven by the port states: -0%
- Nevertheless, non-port states benefit more: 4%

International vs. Regional Integration

%△ Welfare	Import Barrier	Export Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	7%	19%	30%	2%	**18%**	13%
Port states	12%	32%	29%	-0%	**19%**	12%
Non-port states	2%	7%	31%	4%	**17%**	14%

- Aggregate welfare increases by more than fully reducing import barriers: 18%
- However, removing cross–state barriers still has a larger impact on welfare

Results

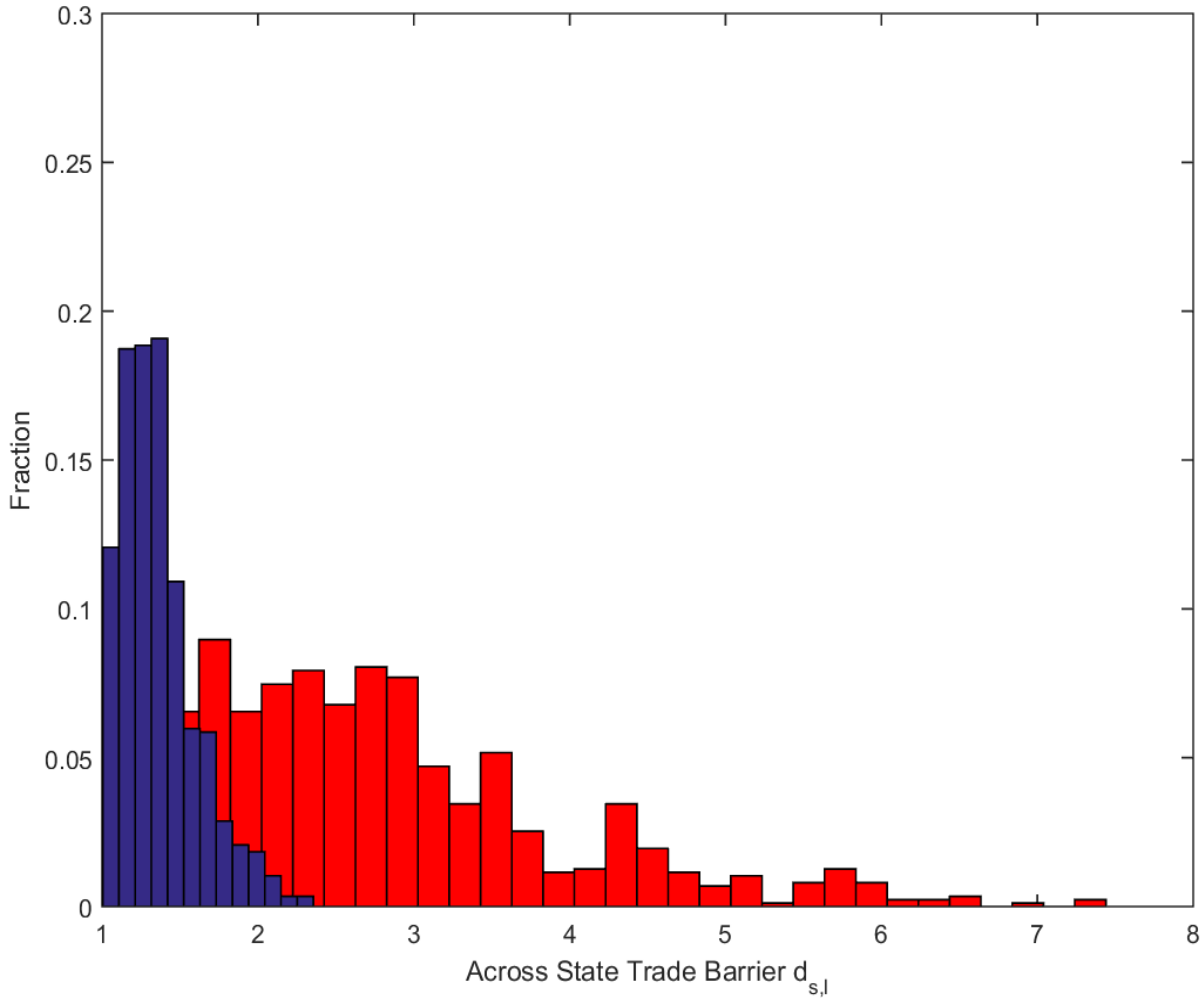
International vs. Regional Integration - International Imports

%△ Welfare	Base	Import Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	17%	37%	11%	26%	21%	14%
Port states	24%	50%	11%	24%	29%	16%
Non-port states	6%	18%	10%	28%	9%	11%

- Imports as a fraction of output increase when import barriers are removed or ports are built
- However, they decrease due to internal integration due to trade diversion from port states to non-port states

Results

Regional Integration to U.S. Level



- Reduce Indian cross–state barriers such that the median $d_{s,l}$ is equal to the U.S. level

Cross–state to U.S.

International vs. Regional Integration - Mobile Labor

%△ Welfare	Import Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	8%	46%	2%	17%	18%
Port states	14%	41%	-0%	19%	16%
Non-port states	3%	51%	4%	16%	20%

Results

International vs. Regional Integration - Gravity

%△ Welfare	Import Barrier	Cross-State	Ports	Rural-Urban	Cross–state to U.S.
India	7%	66%	4%	-	19%
Port states	15%	53%	-0%	-	16%
Non-port states	-0%	78%	7%	-	23%

Results

Nature Cross–state Trade Barriers

- Run regression

$$\log(d_{sl}) = \alpha + \beta X_{sl} + \varepsilon_{sl}$$

  - d_{sl}: cross–state trade barrier
  - X_{sl}: set of infrastructure and policy barriers

- Infrastructure - proxied by distance

- Policy barriers - proxied by corruption, tax administration and tax rates

Nature Cross–state Trade Barriers

	(1)	(2)	(3)	(4)	(5)
log(Distance)	0.19***	0.22***	0.22***	0.22***	0.18***
s.e.	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
High Corruption		0.17***	0.18***	0.19***	0.22***
s.e.		(0.03)	(0.03)	(0.03)	(0.03)
High Tax Admin.			0.23***	0.24***	0.25***
s.e.				(0.03)	(0.03)
High Tax Rate				0.12***	0.12***
s.e.					(0.03)
Common Language					-0.17***
s.e.					(0.03)
Adj. R^2	0.12	0.18	0.24	0.25	0.28

Takeaway: Policy barriers represent a non-negligible fraction of cross–state barriers Results