

# Trading with Asia's Giants

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# Introduction

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- Asia, with its two anchors of China and India, has emerged as a major center of global economy.
  - Large and sustained U.S. trade deficit with Asia raises concerns about U.S. competitiveness in the region.
    - Longstanding bilateral trade deficit with China
    - Emerging issue of services trade with India
  - Review pattern of U.S. trade relationship with China and India
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# Introduction

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- WE focus on China and India as markets for U.S. exports
    - Other studies have emphasized imports from region
  - Why have exports failed to grow?
  - Highlight two important aspects of trade relationship
    - It is a low level of goods exports to China and India, rather than high imports that seem unusual.
    - United States has a larger services trade with China than with India and a bilateral surplus with both.
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# Introduction

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## □ Three Perspectives

- Commodity composition of U.S. exports to region
    - Role of comparative advantage
    - Contrast with trade of these countries with EU-15 and Japan
  - Role of multinational corporations and FDI
    - Sales agents for exports?
  - Gravity equations
    - Role of distance and size of markets
    - Goods and services trade
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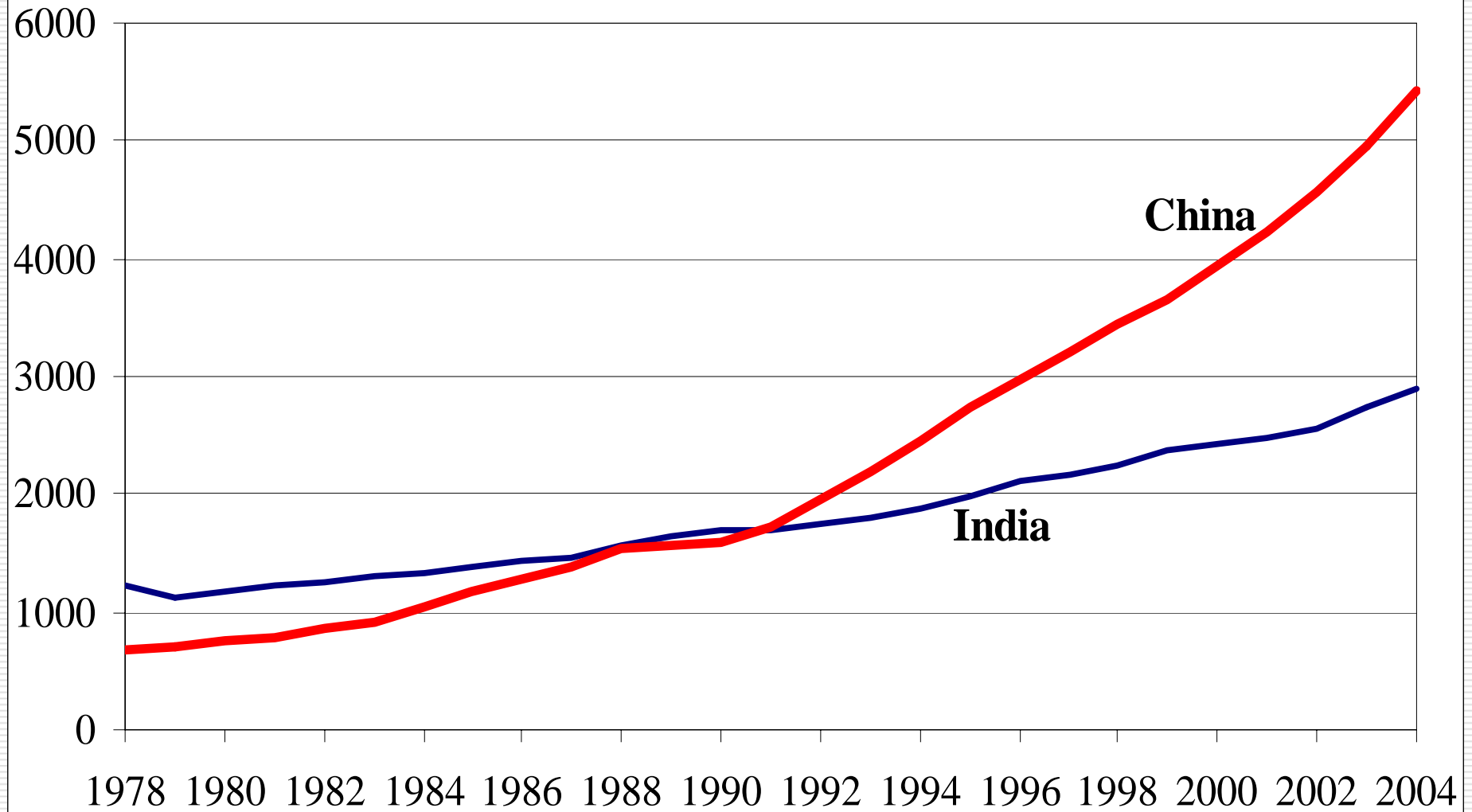
# Context

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- China is a much larger country than India with a deeper integration with the global economy
    - Growth acceleration began earlier
    - Income per capita is now twice that of India
  - China's growth has been more rapid in all three sectors
    - Agriculture, Industry and Services
    - Most similar in services
    - Similar gains from reallocation of labor among sectors.
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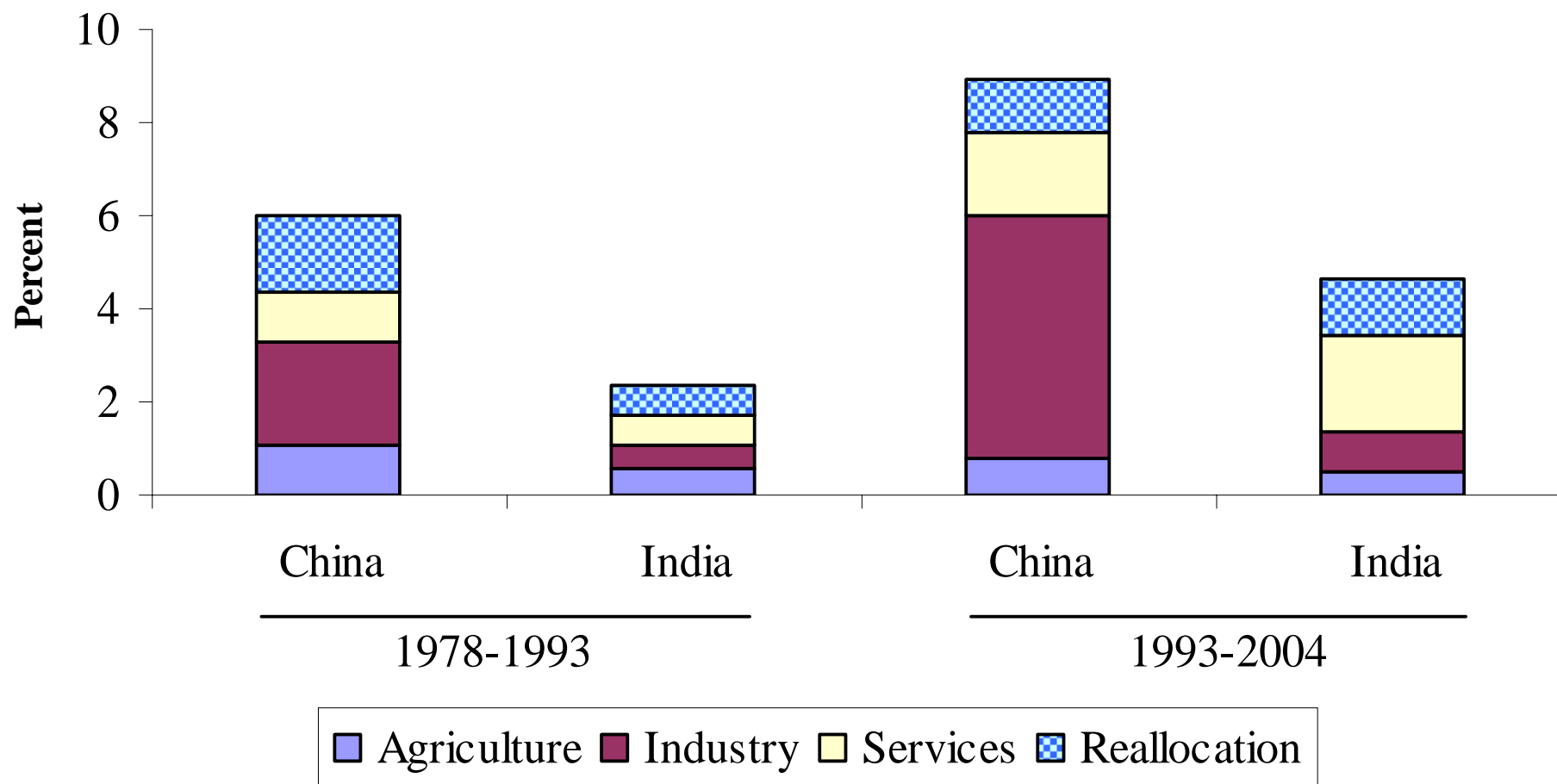
# GDP per Capita, China and India

Constant 2000 International (PPP) Dollars



Source: World Bank 2006, World Development Indicators

## Growth in Output per Worker: Sector and Reallocation Components, 1978-2004



Source: Bosworth and Collins (2006)

# Bilateral Trade Flows - Goods

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- Large U.S. trade deficits with both India and China
  - Contrast with EU-15 and Japan in trade with China is largely in the low level of U.S. exports
    - Imports from China are similar shares of GDP
    - Japan has a trade surplus with China because of large export flow
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# Bilateral Trade Flows - Goods

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- India contrasts with China because of its small goods trade.
    - GDP is one third of China's, but
    - Global trade is only 12%
  - Japan has a particularly small trade with India - less than 5% of that with China.
  - India has much more extensive trade with the EU-15 than with the United States.
    - United States has large bilateral deficit
    - Japan and the Eu-15 have trade surpluses
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# Bilateral Goods Trade with China & India, 2005

(billions USD)

	United States		Japan		EU-15	
	Trade	Percent of GDP	Trade	Percent of GDP	Trade	Percent of GDP
<b>China</b>						
Exports	58.2	0.47	116.0	2.56	87.8	0.69
Imports	269.1	2.17	110.0	2.43	205.0	1.61
Balance	-211	-1.70	6.0	0.13	-117	-0.92
<b>India</b>						
Exports	8.0	0.06	3.5	0.08	25.6	0.20
Imports	19.9	0.16	3.2	0.07	23.3	0.18
Balance	-11.9	-0.10	0.3	0.01	2.3	0.02

# Bilateral Trade Flows - Services

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- U.S. services trade is more balanced with both China and India, but
  - The magnitude is less than that of Japan and the EU-15 in China
  - Less than that of the EU-15 in India
    - Japan has trivial services trade with India
    - Little evidence of large services trade between United States and India
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# Bilateral Services Trade with China & India, 2005

(billions USD)

Partner	United States		Japan		EU-15	
Country	Trade	Percent of GDP	Trade	Percent of GDP	Trade	Percent of GDP
<b>China</b>						
Exports	13.4	0.11	10.5	0.23	23.7	0.19
Imports	12.1	0.10	14.2	0.31	17.7	0.14
Balance	1.4	0.01	-3.7	-0.08	6.0	0.05
<b>India</b>						
Exports	5.2	0.04	0.8	0.02	6.5	0.05
Imports	5.0	0.04	0.3	0.01	5.8	0.05
Balance	0.1	0.00	0.4	0.01	0.7	0.01

# Services Trade Statistics

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- India reports a level of business service exports to the United States twenty times that shown in US data
    - \$8.7 billion versus 0.4 billion
    - Why so different?
  - Services trade is defined in terms of residence of buyer and seller.
    - No record of cross-border transactions.
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# Services Trade Statistics

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- The United States understates the importance of the trade
    - Measurement problems normally thought to be greater for importing country
    - Excludes affiliate trade at disaggregate levels.
  - Largest differences are on Indian side.
    - India includes nationals working in the United States for more than a year
    - India includes sales to U.S. affiliates in India as exports.
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# Why have U.S. exports failed to grow? Three perspectives

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## Export composition?

- Is there are sharp difference between U.S exports to world and to China/India?
- Possible evidence of trade distortions.

## Role of Multinational Corporations

- Is there a link between FDI and exports?

## Is it distance?

- A form of trade barrier, but why not for imports?
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# I. Export Composition

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- Composition of Exports to China and India seem very similar to those exported to World
    - High rank order correlation for commodities at 3-digit level
    - Similar to correlations for Japan and EU-15
  - U.S., Japan and EU-15 are strong competitors in China, but less so in India.
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## Correlations of Bilateral Commodity Trade, 2005

	Rank Correlation of Commodity Trade		Correlation of Trade Shares	
	China	India	China	India
<u>World/Country</u>				
U.S.	0.84	0.77	0.78	0.69
Japan	0.92	0.88	0.67	0.51
EU-15	0.84	0.78	0.72	0.26
<u>Competitors</u>				
U.S./Japan	0.74	0.71	0.61	0.27
U.S./EU-15	0.78	0.82	0.72	0.52
Japan/EU-15	0.78	0.81	0.72	0.15

# Export Composition (2)

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- China appears to be as open to U.S. exports as is world more generally
  - United States appears to lose out to Japan in China
    - Japan's large exports to China are in the same product groups as US exports
    - Chinese discrimination in favor of Japan is not plausible
    - Issue may be US-Japan exchange rate, not US-China.
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# Export Composition (3)

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- Slightly lower correlations between exports to India and global market.
  - Special role of gem trade between India and EU distorts correlations
    - 30% of EU-15 exports to India
    - 5% for the United States, zero for Japan
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## II. Multinational Corporations

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- Multinational affiliates believed to be a beachhead for promoting a country's trade
  - US FDI in China (Mainland and Hong Kong) averages only \$5 billion annually – 3 percent of US global FDI.
    - US retailers deal with non-US foreign invested enterprises (FIEs).
  - FDI in India averages \$0.75 billion annually.
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# U.S. Affiliate Sales to China

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- US affiliates in China produce mainly for the local market
    - Growing rapidly
    - 60% of sales are local
    - 30% to third countries
    - Affiliates account for a small (10%) and shrinking proportion of US exports and imports.
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## U.S. Affiliates' Sales to China

billions of U.S. dollars

	1994	1999	2004
<b><i>U.S. Multinational Affiliate Sales</i></b>			
Total Sales	32,954	67,635	123,531
Sales to the U.S.	4,638	10,405	14,297
Local Sales	19,289	42,565	73,602
Sales to other foreign countries	9,027	14,665	35,632
<b><i>Exports to Affiliates (Percent of Total US Exports to China)</i></b>	27.6	29.3	10.7
<b><i>Imports from Affiliates (Percent of Total US Imports from China)</i></b>	7.8	8.7	4.4

# U.S. Affiliate Sales to India

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- Large contrast with scale of operations in China
    - Less than 10 percent of China sales
  - Even greater emphasis on local market
  - Small scale of sales to parent implies they are not important player in offshoring of U.S. service jobs
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## U.S. Affiliates' Sales to India

billions of U.S. dollars

	1994	1999	2004
<b><i>U.S. Multinational Affiliate Sales</i></b>			
Total Sales	983	4,554	13,100
Sales to the U.S.	28	138	1,582
Local Sales	934	4,327	9,914
Sales to other foreign countries	21	89	1,604
<b><i>Exports to Affiliates (Percent of Total US Exports to India)</i></b>	1.4	9.0	8.3
<b><i>Imports from Affiliates (Percent of Total US Imports from India)</i></b>	0.5	0.8	2.3



# Japanese Affiliates

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- Affiliate operations in China only half as large as United States
    - Extremely rapid growth
    - Less focused on local market (45%)
    - Export more back to parent
  - Sales to affiliates are less than 10 percent of total exports to China.
  - Do not have published data for India
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# Japanese Affiliate Sales by Destination

billions of U.S. dollars

	2002	2003	2004
<b><i>Japan Multinational Affiliate Sales</i></b>			
Total Sales	28	44	60
Sales to Japan	10	13	18
Local Sales	10	18	26
Sales to other foreign countries	8	12	16
<b><i>Exports to Affiliates (Percent of Total)</i></b>	5.6	5.8	
<b><i>Imports from Affiliates (Percent of Total)</i></b>	9.9	10.8	

# Affiliate Operations

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- Multinational companies only weakly linked to trade
    - Affiliates are independent businesses in China and India
    - Local-content production for sale within domestic economy.
    - Motivated by desire to be part of a rapidly growing market.
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# III. Role of Distance

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- Simplest explanation for low exports is that China and India are far from the United States
    - Many studies find a strong role for distance in explaining trade -- that has persisted despite revolutions in communication and transportation.
    - How can it explain asymmetric result for exports and imports?
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# Role of Distance

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- Estimate 'gravity' equations for bilateral trade of U.S., Japan, and EU-15 for 26 years (1980-2006) and 162 trading partners, fixed effects in time.
    - Strong role for distance, size of population and income per capita.
    - Elasticities near unity for exports.
    - Distance elasticities low for imports of U.S. and EU-15
    - All three trade more than expected with East Asia
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# Gravity Equations for Global Exports: United States, Japan, EU-15 (with fixed effects by year)

	United States	Japan	EU-15
	Log Exports/GDP	Log Exports/GDP	Log Exports/GDP
	(2)	(2)	(2)
Weighted Distance	-1.16 (-31.9)	-0.61 (-10.7)	-1.15 (-43.9)
Log Population	0.90 (108.2)	0.86 (90.8)	0.79 (125.1)
Log GDP per Capita	1.05 (98.7)	1.01 (85.9)	0.87 (97.2)
East Asia Region	0.56 (12.0)	0.89 (13.6)	0.25 (6.1)

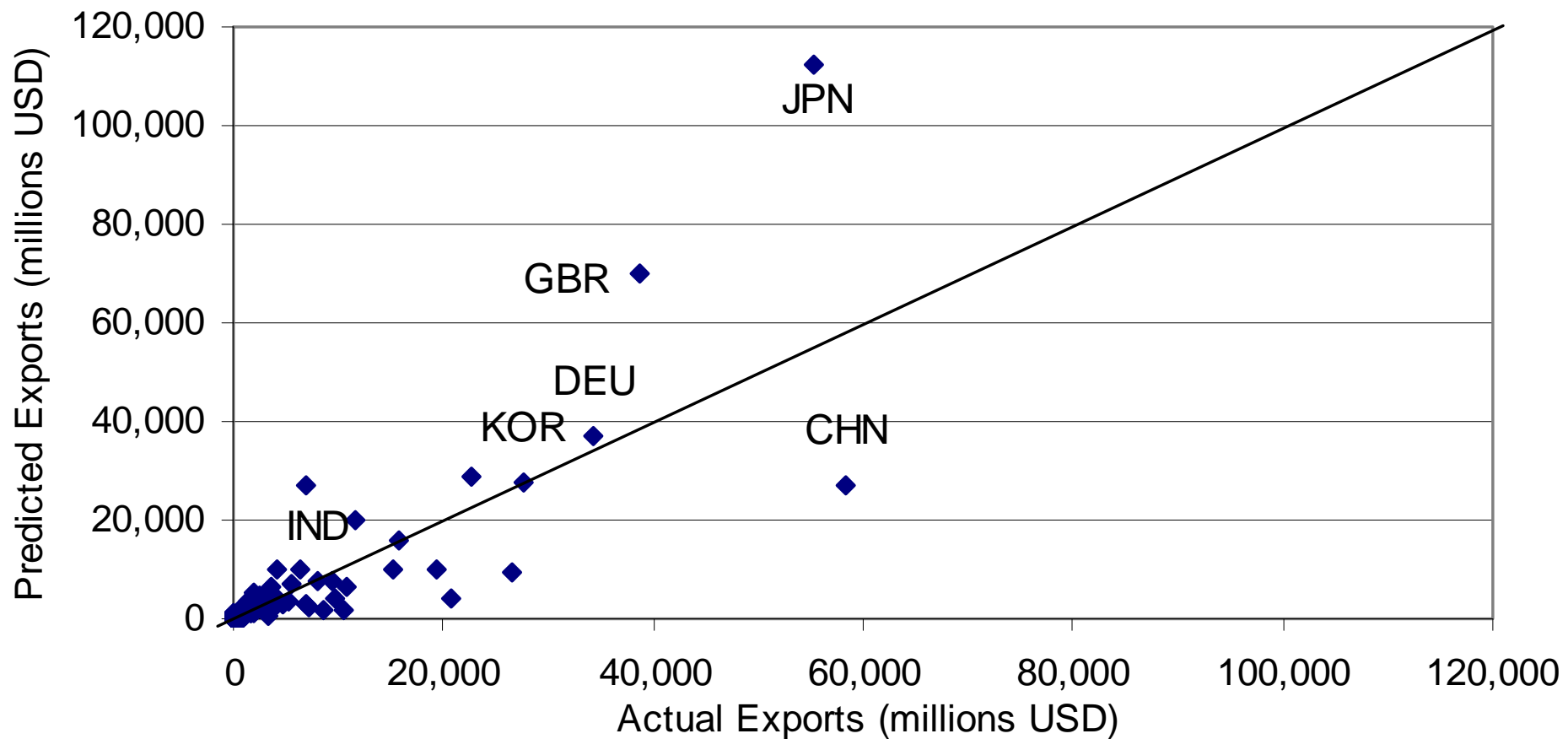
Other variables: Common Language and Colony Dummies.

# Gravity Equations for Global Imports: United States, Japan, EU-15 (with fixed effects by year)

	United States	Japan	EU-15
	Log Imports/GDP	Log Imports/GDP	Log Imports/GDP
	(2)	(2)	(2)
Weighted Distance	-0.71 (-13.0)	-0.65 (-7.7)	-0.79 (-23.3)
Log Population	1.05 (82.5)	1.00 (68.0)	0.90 (110.7)
Log GDP per Capita	1.14 (70.2)	1.18 (67.2)	0.90 (77.8)
East Asia Region	0.51 (7.0)	1.61 (16.0)	0.15 (2.8)

Other variables: Common Language and Colony Dummies.

## Actual and Predicted US Goods Exports, 2005



With East Asia Region Adjustment. Chart excludes Canada and Mexico.



# Distance Adjustment

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- Adjusted for distance, U.S. is a strong exporter to China
    - Much more than to Japan
    - Both exports and imports are larger than expected
  - Gravity equation works well to explain low level of U.S. goods trade with India.
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# Services Trade

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- Gravity equations also work very well for services trade
    - Partner country data from OECD for 1999-05,
    - U.S. data for 1992-2005
  - Distance effects are smaller than for goods
  - Large elasticities for market size
  - Strong East Asia influence on trade
  - U.S. trade with China and India are close to predicted values.
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# Gravity Equations for Service Exports: United States, Japan, EU-15 (with fixed effects by year)

	United States	Japan	EU-15
	Log Exports/GDP	Log Exports/GDP	Log Exports/GDP
	(1)	(1)	(1)
Weighted Distance	-0.56 (-14.7)	-0.25 (-1.9)	-1.08 (-20.9)
Log Population	0.71 (40.1)	0.84 (15.5)	0.74 (40.5)
Log GDP per Capita	0.90 (41.6)	1.11 (18.0)	0.77 (31.1)
East Asia Region	0.49 (11.2)	1.68 (9.5)	0.73 (8.4)

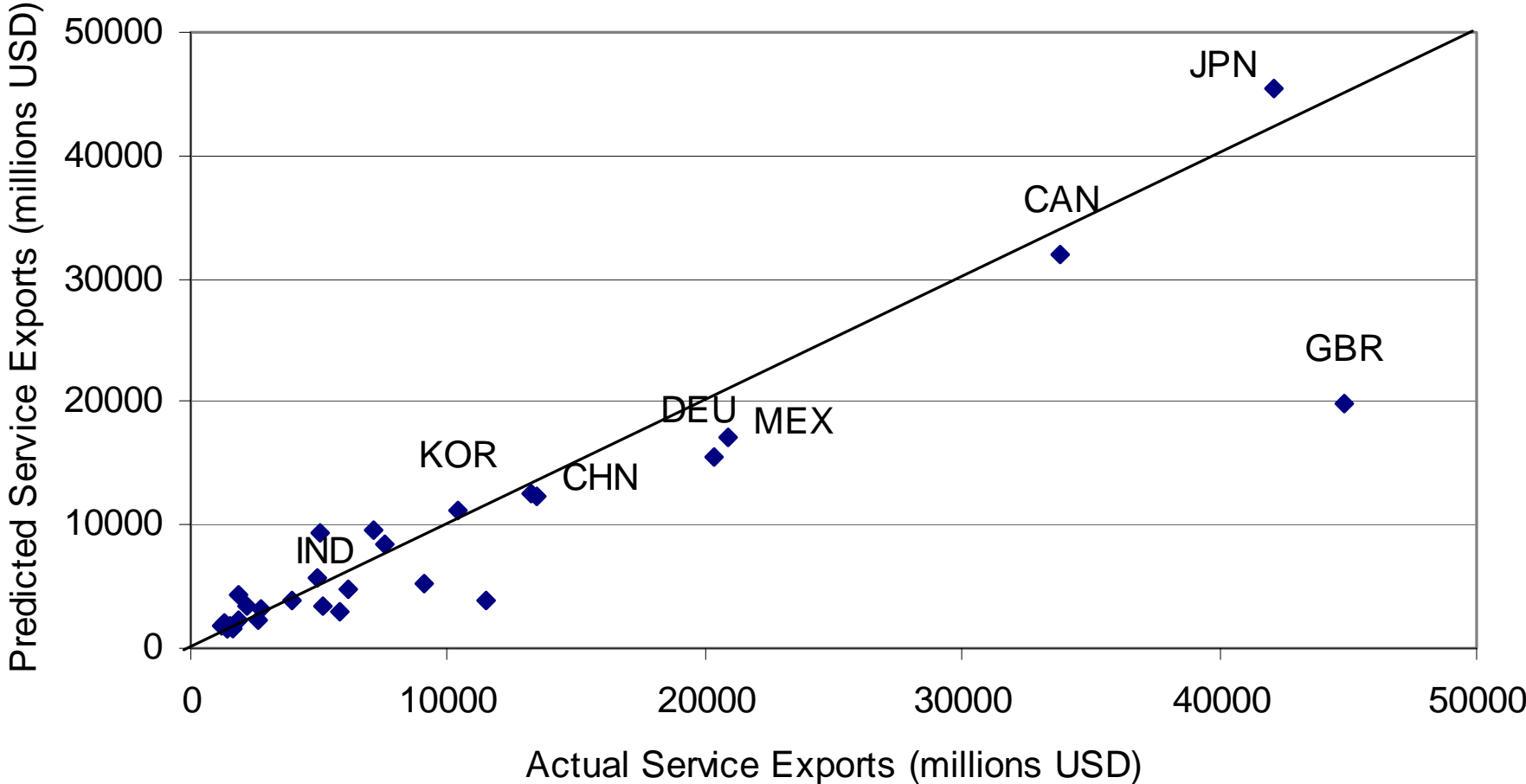
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# Gravity Equations for Service Imports: United States, Japan, EU-15 (with fixed effects by year)

	United States	Japan	EU-15
	Log Imports/GDP	Log Imports/GDP	Log Imports/GDP
	(1)	(1)	(1)
Weighted Distance	-0.57 (-10.0)	-0.32 (-3.3)	-0.87 (-13.5)
Log Population	0.78 (29.2)	0.79 (20.2)	0.81 (35.2)
Log GDP per Capita	1.01 (31.2)	1.19 (26.0)	0.78 (25.0)
East Asia Region	0.57 (8.7)	1.71 (13.2)	0.92 (8.4)

Other variables: East Asia Region, Common Language and Colony Dummies.

# Actual and Predicted US Service Exports, 2005



With East Asia Region Adjustment

# Role of U.S. Global Trade Deficit

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- U.S. exports to China and India are not low relative to own exports to other countries.
    - China is 3rd largest export market
    - India is 20<sup>th</sup>
  - U.S. exports to everyone are low compared to those of EU-15 and Japan
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# Trade Shares

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<u>Country</u>	<u>Exports</u>	Percent <u>of GDP</u>	<u>Imports</u>	Percent <u>of GDP</u>
US	904	7.3	1,733	14.0
Japan	595	13.1	515	11.4
EU15	1459	11.4	1,582	12.4

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# Global Trade Deficit (2)

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- U.S. imports are same share of GDP as EU-15 and Japan – 14 %
  - U.S. share of GDP devoted to exports (7%) is less than half that of EU-15 and Japan.
  - Price elasticities of exports and imports both near unity.
  - Devaluation implies:
    - Import share of GDP unchanged
    - Export share will rise toward 14%
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# Conclusion

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- Puzzle is low level of exports to Asia, not high level of imports
  - Focused on trade with China and India
    - U.S. imports from China similar share of GDP to EU-15 and Japan.
    - Exports are much smaller share of GDP
  - Little evidence that trade imbalances with Asia are the result of “unfair” trade practices.
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# Conclusion (2)

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- Poor performance of exports does not reflect an unusual product composition
    - Very similar composition to that of global exports
    - Similarity with Japan and EU-15 implies strong competition in China, but less so in India
  - Small role for U.S. multinationals in both markets.
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# Conclusion (3)

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- Gravity equations highlight importance of distance
    - East Asia is a larger than expected market for United States and for the EU-15 and Japan.
    - Exports and imports to China are both larger than expected.
    - Trade with India appears normal
  - Low level of U.S. exports is a global phenomenon, not limited to Asia.
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