

United States-China Trade: Where are the Exports?

Barry Bosworth

Susan Collins

Aaron Flaaen

Introduction

- Significant deterioration in US–China trade relationship.
 - Most of U.S. discussion focuses on perceived high levels of imports from China.
 - Competitive threat to U.S. manufacturers
 - Recent concerns of safety
 - Very little attention to: why are exports to China so small?
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Introduction

- Compared to the two other major markets, Japan and EU-15, imports from China do not look abnormally high.
 - Similar percent of GDP in all three economies
 - Highest in Japan
 - Whereas Japan exports 3 percent of its GDP to China, US exports are only 0.5 percent of GDP.
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Trade Balance with China as a Percent of GDP, 2006

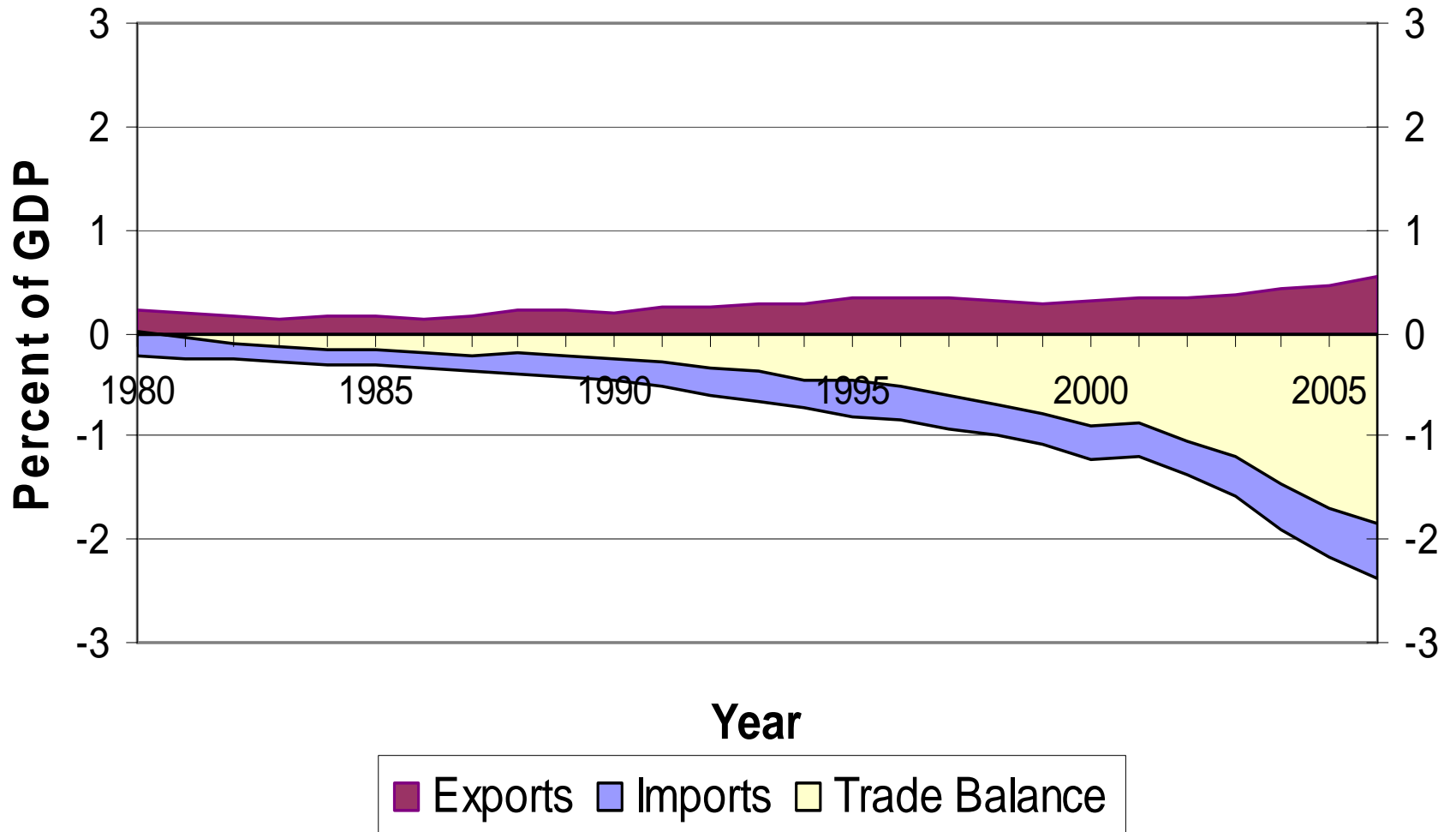
	United States	Japan	EU-15
Exports to China	0.55	2.96	0.76
Imports from China	2.38	2.75	1.78
Balance	-1.83	0.21	-1.02

Source: IMF Directions of Trade Database and World Economic Outlook. Trade data are for mainland China plus Hong Kong and Macao.

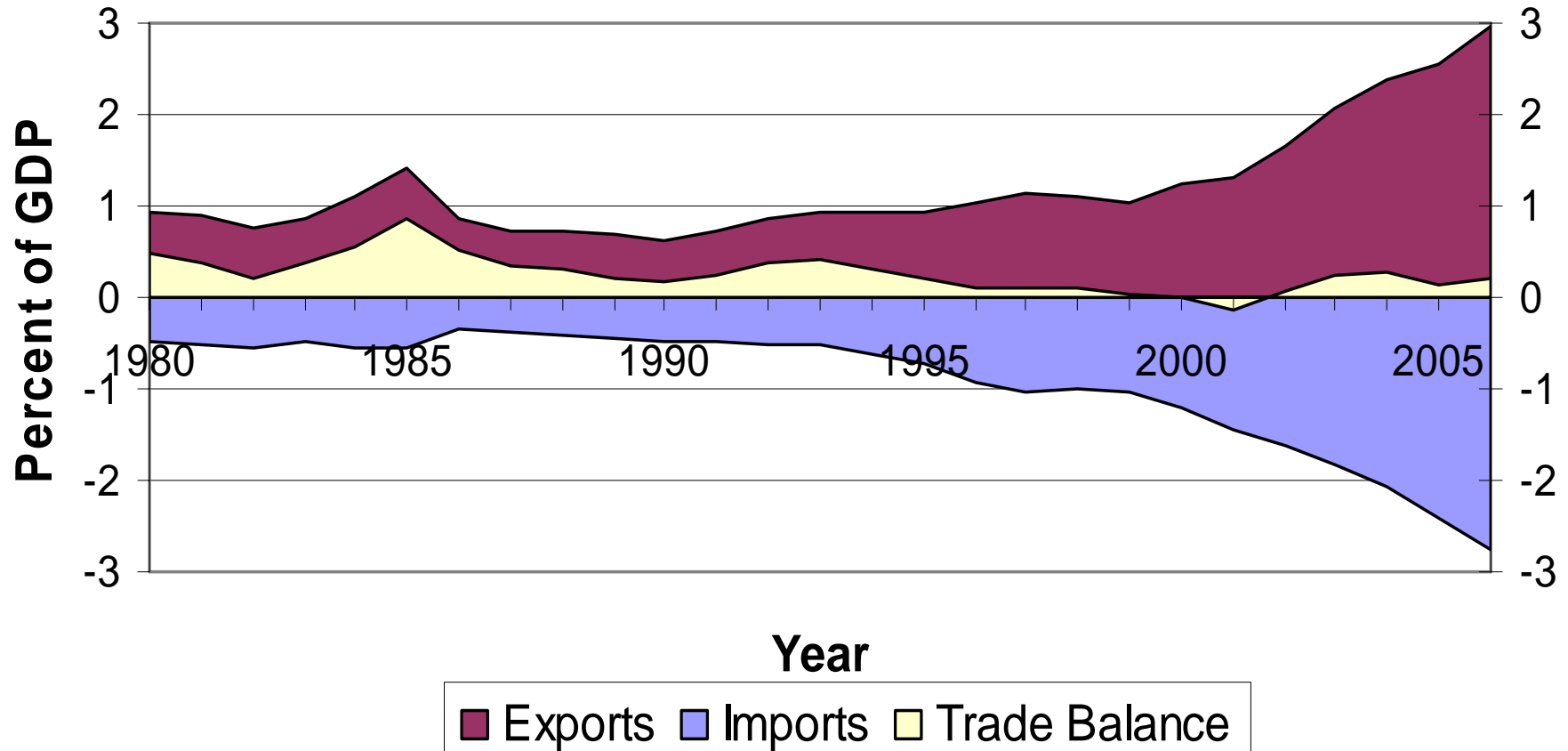
Long-Standing Trade Imbalance

- Steady growth in imports from China as a share of GDP
 - Rising from 0.2% of GDP in 1980 to 2.4% in 2006.
 - But exports only expanded to 0.5 percent of GDP by 2006
 - Japan experienced strong growth in both exports and imports
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U.S. Trade with China as a Percent of Own-GDP



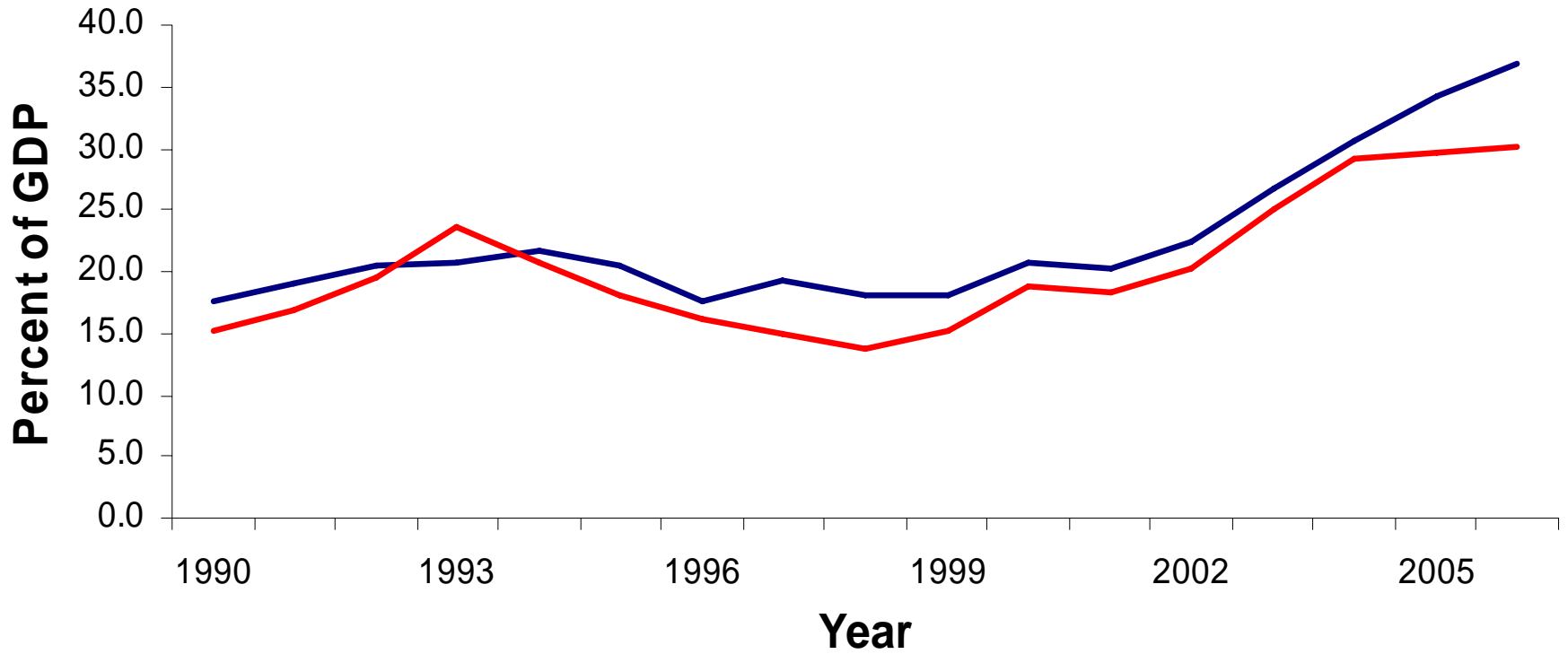
Japan Trade with China as a Percent of Own-GDP



China's Overall Trade

- Trade was a stable share of GDP up to China's joining of WTO
 - Small trade surplus
 - Not export-led growth
 - Trade shares rose rapidly after 2001
 - Trade surplus is a post-2004 phenomenon
 - Break in pattern is on the import side
 - U.S. export growth to China still strong - 20% pa
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Mainland China Exports and Imports to World, 1990-2006



— Exports % GDP — Imports % GDP

Why have U.S. exports failed to grow?

- Export composition?
 - Is there are sharp difference in what the U.S export to the world and to China.
 - 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

- Composition of exports to China seem very similar to those exported to World
 - High rank order correlation for commodities at 2-digit level
 - Similar patterns for Japan and EU-15
 - U.S., Japan and EU-15 are competitors in China
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Correlation of Trade by Commodity, 2005

Commodity Ranking

US World / US China	0.85
Japan World / Japan China	0.96
EU-15 World / EU-15 China	0.86
US China / Japan China	0.82
US China / EU-15 China	0.82
Japan China / EU-15 China	0.90

Export Commodity Correlation: US-China / US-World



Export Composition

- Exports are concentrated in a few product groups with an emphasis on capital equipment
 - Top 10 groups account for 62 percent of total trade.
 - 4 groups are in the top 10 for Japan and 5 for the EU-15
 - Competitor correlations remain strong even at 3-digit detail of 237 product categories.
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Export Composition

- Problem is not lack of market in China for the products that the U.S. normally exports.
 - United States appears to lose out to Japan
 - Japan's large exports to China are in the same product groups as US exports
 - Issue may be US-Japan exchange rate, not US-China.
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II. Multinational Corporations

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

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

billions of U.S. dollars

	1994	1999	2004
<i>U.S. Multinational Affiliate Sales</i>			
Total Sales	33	68	124
Sales to the U.S.	5	10	14
Local Sales	19	43	74
Sales to other foreign countries	9	15	36
<i>Exports to Affiliates (Percent of Total US Exports to China)</i>	27.6	29.3	10.7
<i>Imports from Affiliates (Percent of Total US Imports from China)</i>	7.8	8.7	4.4

Japanese Affiliates

- Affiliate operation 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.
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Japanese Affiliate Sales by Destination

billions of U.S. dollars

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

Affiliate Operations

- Multinational companies not a relevant part of US–China trade imbalance.
 - Affiliates are independent businesses in China with only minor trade links to parent.
 - Local-content production for sale within China.
 - Motivated by desire to be part of a rapidly growing market.
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III. Role of Distance

- Simplest explanation for low exports is that China is 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.
 - Why would this role be different for exports versus imports?
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Role of Distance

- 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)

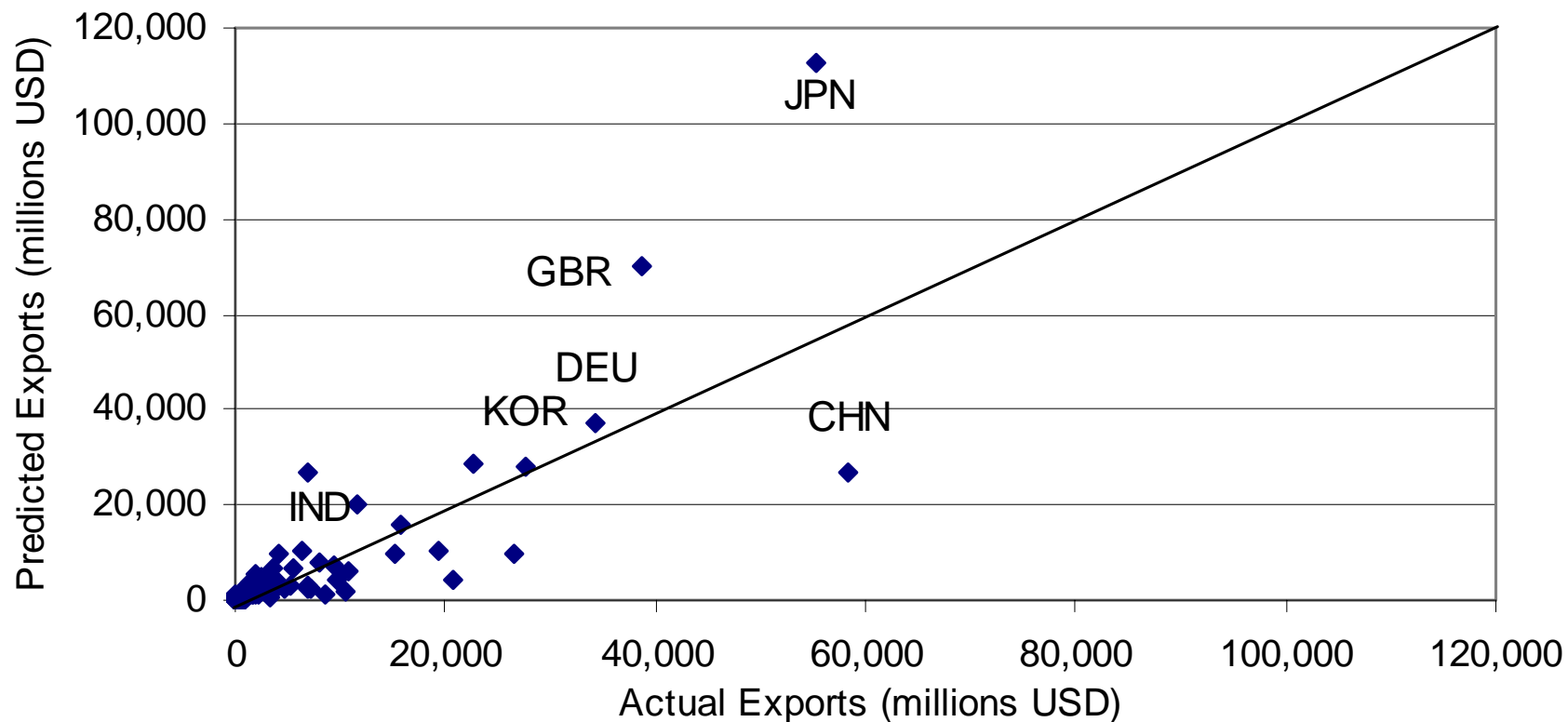
Other variables: Common Language and Colony Dummies.

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)

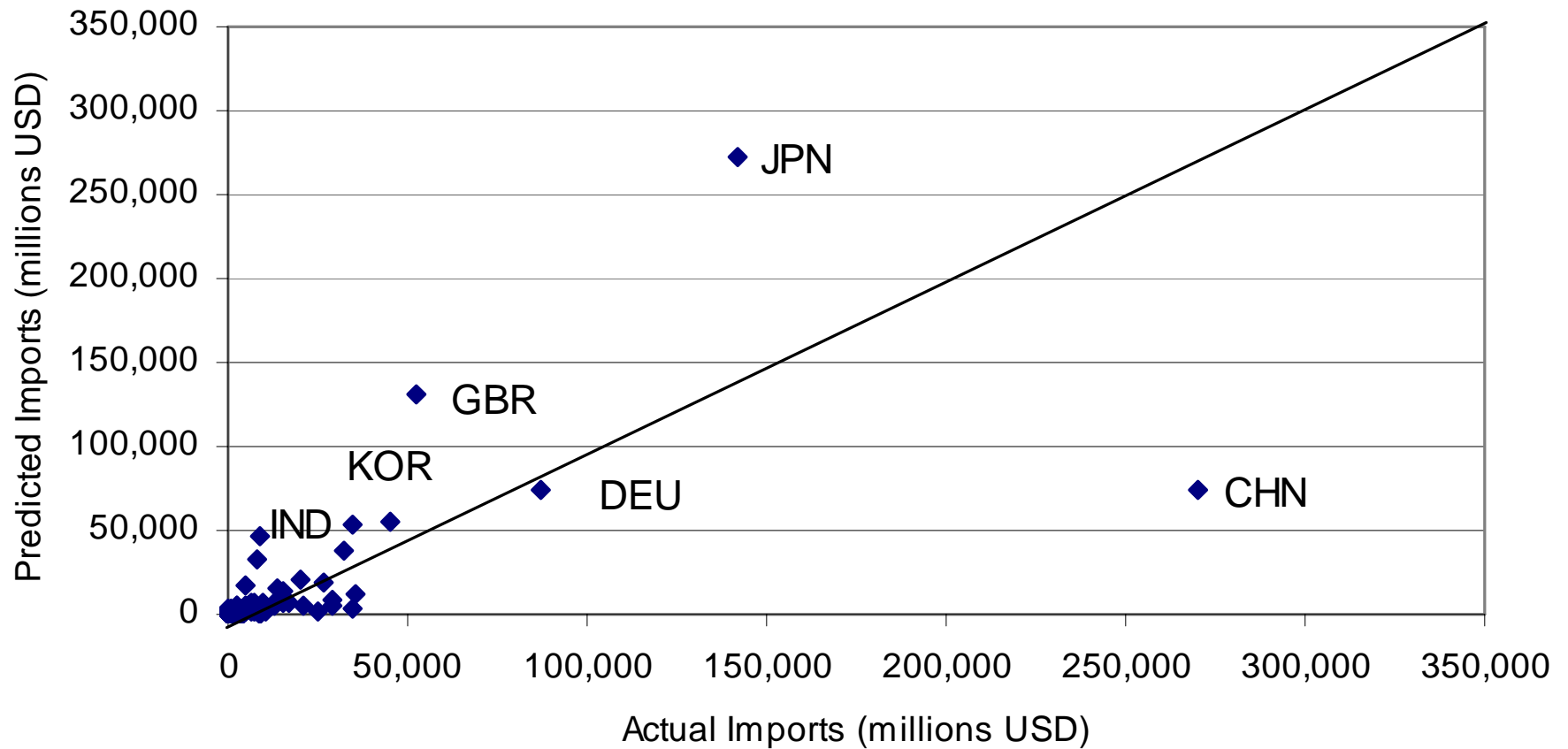
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Actual and Predicted US Goods Exports, 2005



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

Actual and Predicted US Goods Imports, 2005



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

Distance Adjustment

- Adjusted for distance, U.S. is a strong exporter to China
 - Much more than to Japan
 - Both exports and imports are larger than expected
 - China is 3rd largest export market.
 - U.S. exports to everyone are low compared to those of EU-15 and Japan.
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Total Trade Shares

<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

Combined Gravity Equations for Exports

	Exports/GDP (1)	Exports/GDP (2)	Exports/GDP (3)
Weighted Distance	-1.10 (-61.2)	-1.10 (-62.6)	-1.12 (-63.4)
Population	0.83 (172.3)	0.84 (178.0)	0.84 (178.8)
GDP per Capita	0.97 (153.1)	0.97 (157.4)	0.97 (157.5)
East Asia Region	0.40 (15.1)	0.41 (15.8)	0.41 (16.1)
United States		-0.59 (-24.2)	-0.61 (-25.1)
Avg Exchange Rate			-1.12 (-8.7)

Other variables included: categorical variables of common language and colonial link. All variables measured in logarithm except categorical variables.

Combined Gravity Equations for Imports

	Imports/GDP (1)	Imports/GDP (2)	Imports/GDP (3)
Weighted Distance	-1.02 (-39.7)	-1.02 (-39.7)	-1.01 (-38.6)
Population	0.98 (139.5)	0.98 (139.4)	0.98 (139.4)
GDP per Capita	1.06 (116.6)	1.06 (116.6)	1.06 (116.6)
East Asia Region	0.76 (19.9)	0.76 (19.9)	0.75 (19.8)
United States		0.00 (0.0)	0.01 (0.3)
Avg Exchange Rate			0.586 (3.1)

Other variables included: categorical variables of common language and colonial link. All variables measured in logarithm except categorical variables.

Conclusion

- U.S. exports to China low relative to those of Europe and Japan and low relative to US imports from China.
 - The poor performance is not explained by the composition of trade or by the role of affiliates in the Chinese market
 - There is a large role for distance, and it appears to inhibit exports more than imports.
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Conclusion (2)

- United States, Japan, and EU-15 are strong competitors in China with similar product compositions
 - U.S. has a small market share relative to Japan
 - Relative cost comparison?
 - Distance does not explain contrast between imports and exports
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Conclusion (3)

- Low level of U.S. exports to China is the result of U.S. global trade imbalance, not special to China.
 - Reduction in external trade imbalance will be most evident in a rise of exports.
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