

IMPORTING GROWTH
THE CRITICAL ROLE OF IMPORTS IN A TRADE-LED GROWTH STRATEGY

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*“Imports, not exports, are the purpose of trade.
That is, what a country gains from trade is the ability to import things it wants.
Exports are not an objective in and of themselves:
the need to export is a burden that a country must bear
because its import suppliers are crass enough to demand payment.”*

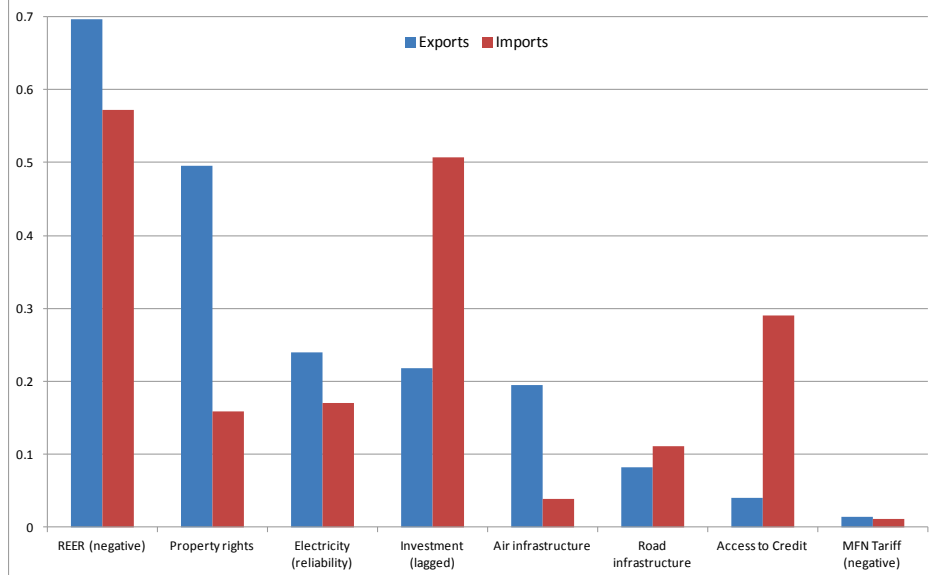
Paul Krugman (1993, p. 24)

Journal of World Trade,

critical

I. IMPORTS... A CRUCIAL ELEMENT OF AN EXPORT-LED GROWTH STRATEGY

Figure 1. Constraints to Trade of Developing and Emerging Countries



Source: Hallaert et al. (2011).

Note: The chart reports elasticities (in absolute value) on the change in the constraint on the export-to-GDP ratio and import-to-GDP ratio. When the elasticity is negative it is reported in the data label.

Figure 2. Imports of intermediates and export growth
(1995-2011)

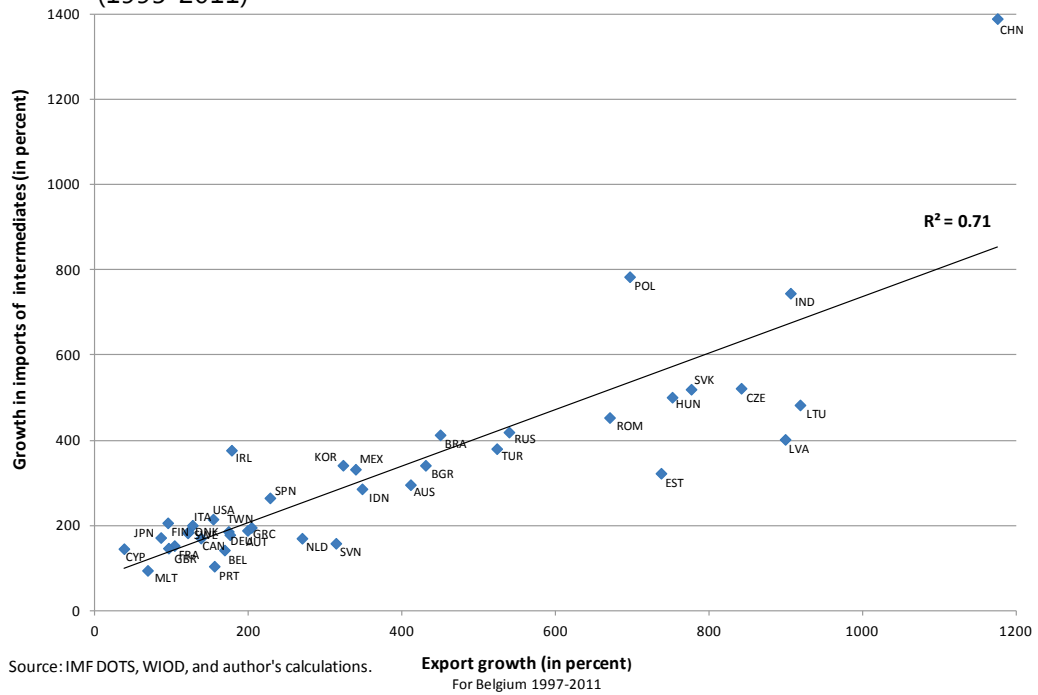


Figure 3. Imports of intermediates and export performance
(1995-2011)

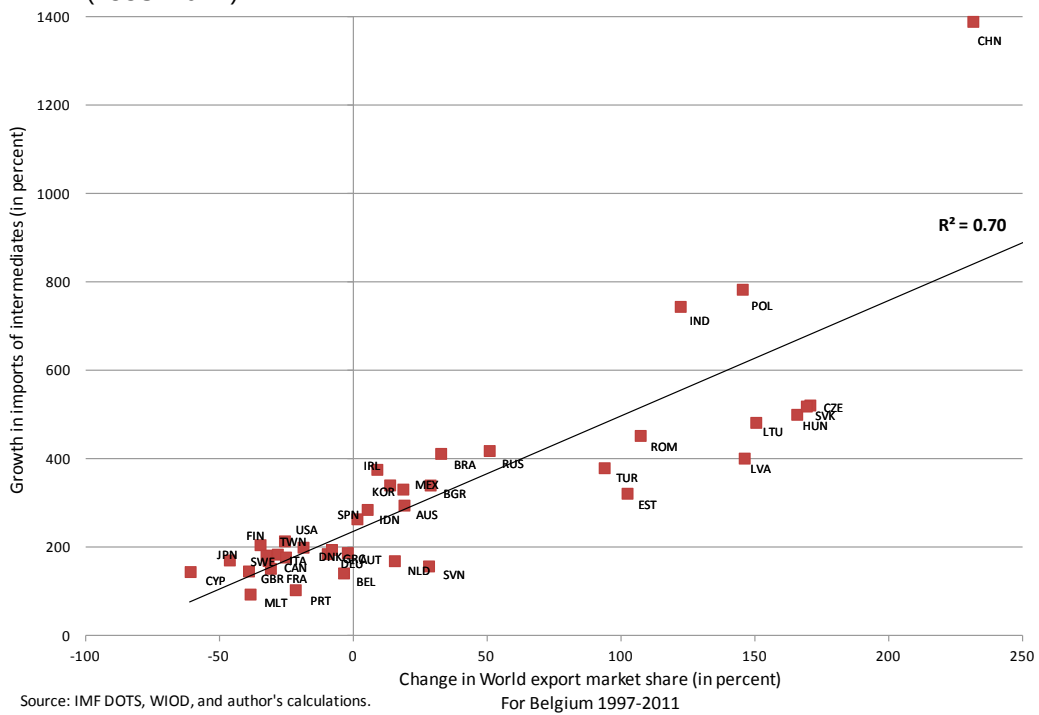


Table 1. The impact of imports and import policy on exports

Source	Country	Period	Measure	Impact
I. Impact of import policy on exports				
Francois and Manchin (2014)	103 countries	1988-2002	Import policy of a country affects its export performance as much as the import policy of the destination market
Hallaert et al. (2011)	36 developing and emerging economies	1981-2009	10 percent cut in MFN tariff result in an increase in import-to-GDP and exports-to-GDP ratios by 0.1 percentage point
Tokarick (2006)	26 developing countries	2001	Import tariffs...	... are equivalent to a 12.5 percent tax on a country's export
Bas (2012)	Argentina	1992-1996	Firms experiencing falling input tariffs...	... expanded exports more rapidly than firms that did not benefit from similar reduction.
Fan, Li, and Yeapple (2014)	China	2001-2006	A unilateral tariff cut (following WTO accession)...	... leads firms to increase the quality and price of exports where there is scope for differentiation ... or lower export price when there is little scope for quality differentiation
II. Impact of imports on exports				
Hallaert (2013)	34 OECD countries	1997-2011	A 1 percent increase in the import content (goods) of exports is associated with higher world merchandise export market shares by 0.3-0.4 percentage points
Feng, Li, and Swenson (2012)	China	2002-2006	1) A 10 percent increase in imported inputs... 2) A 1 percent increase in imported value... 3) A 1 percent increase in diversity of imported inputs...	... increases exports by 1.84 percent ... increases exports value by 1.35 percent ... increases exports by 1.69 percent
Bas and Strauss-Khan (2011)	France	1995-2005	The increase in imported inputs...	... explains 12 percent of the increase in the variety of exports of the firms
Le Bris, Disdier & Jaud (2013)	Morocco	2002-2011	A 10 percent increase in the imported inputs value increases a firm exports by 3.2 percent
II. Impact of import policy and import costs on the number of exporters				
Bas (2012)	Argentina	1992-1996	A 10 percentage point fall in input tariffs increases by 6 percent the probability of exporting of the average firm, and ... increases by 3 percent the share of exports in total sales for the average firm
Lo Turco & Maggioni (2013)	Italy	2000-2004	1 percent increase in the share of imported inputs in total imported input from low-income countries increases the probability that a firm becomes an exporter by 0.25 percent; ... from advanced countries increases the probability by 0.04 percent (not robust)
Bernard, Jensen, and Schott (2006)	USA	1987-1997	A reduction in import cost...	... increases the probability of non-exporters to become exporters, and ... increases exports of exporters

Source: Author.

II. THE GROWTH IMPACT OF IMPORTS

Table 2. The productivity impact of imports

Source	Country	Period	Productivity	Imports	Importers	Impact	Channel tested
I. Cross-Country Analysis							
Bloom et al. (2011)	12 European countries	2000-2007	Total Factor Productivity	All imports	Up to half a million firms	Competition from Chinese imports explains 12 percent of productivity growth during 2000-2007 and is associated by increased innovation.	Competition
Coe and Helpman (1995)	21 OECD countries + Israel	1971-1990	Total Factor Productivity	All imports	All economy	Both foreign R&D (through imports) and domestic R&D improve TFP.	Technology embodied in imported inputs and equipment
Coe et al. (1997)	77 developing countries	1971-1990	Total Factor Productivity	Machinery and equipment goods from 22 advanced countries	All economy	R&D spillover through imports are substantial. Productivity in developing countries is positively and significantly related to R&D in their industrial trade partners and to their imports of equipment and machineries from industrial countries.	Technology embodied in imported inputs and equipment
Eaton and Kortum (2001)	34 countries	1985	Labor productivity	Capital goods	All economy	1/4 of productivity difference between developed and developing countries is due to variation in the relative price of equipment; almost 1/2 of this variation is due to barriers to trade in capital goods.	Technology embodied in imported inputs and equipment
Keller (2000)	8 OECD countries	1970-1991	Total Factor Productivity	Machinery goods	6 manufacturing sectors	Both domestic and foreign (through imports) R&D stocks have a positive and significant impact on productivity.	Technology embodied in imported inputs and equipment
Keller (2002)	8 OECD countries	1970-1991	Total Factor Productivity	Intermediates	13 manufacturing sectors	20 percent of the impact of R&D on productivity is due to foreign R&D accessed through imports	Technology embodied in imported inputs and equipment
Stone and Shepherd (2010)	115 countries	?	Total Factor Productivity	Intermediates and equipment goods	100,000 firms	Imports have (i) a positive impact of imports on firm productivity and (ii) a positive role on firm-level innovation	Access to inputs
Xu and Wang (1999)	21 OECD countries	1983-1990	Total Factor Productivity	Capital goods and non-capital goods	All economy	Imports are an important channel for transfers of technology. It is due to capital goods imports. The impact of non-capital goods is statistically insignificant.	Technology embodied in imported inputs and equipment
II. Industry-, Firm-, and plant-level analysis							
Muendler (2004)	Brazil	1986-1998	Total Factor Productivity	Intermediates and equipment goods	9500 manufacturing firms	Competition increases productivity immediately; access to foreign inputs is negligible for productivity; the elimination of less productive firm has a slow and small impact on aggregate productivity.	Competition (trade liberalization), access to inputs, and relocation of output
Schor (2004)	Brazil	1989-1998	Total Factor Productivity	Inputs and final goods	4484 manufacturing firms	Impact of reducing tariffs on inputs (access channel) is slightly stronger than the impact of reducing tariffs on final goods (competition channel).	Competition (trade liberalization) and access to inputs
Trefler (2004)	Canada, USA	1989-1996	Labor productivity	All imports	Manufacturing plants	Productivity of manufacturing increased by 6 percent as a result of tariff cuts of the Canada-U.S. Free Trade Agreement.	Competition (trade liberalization)
Kasahara and Rodrigue (2008)	Chile	1979-1996	Total Factor Productivity	Intermediates	3,598 manufacturing plants	Uses of imported intermediates immediately raises productivity by 2.6 percent (downward biased estimates) to 22 percent.	Access to inputs

Pavcnik (2002)	Chile	1979-1986	Plant productivity and industry-level aggregate productivity	All imports	4,379 manufacturing plants	Productivity of import-competing industries increased by 3 to 10 percent more than non traded goods sectors due to the liberalization. Reallocation of output explains about 2/3 of the manufacturing sector productivity growth after trade liberalization.	Competition (trade liberalization)
Yu, Ye and Qu (2013)	China	1998-2002	Total Factor Productivity	Import penetration	Over 150,000 manufacturing plants	Positive for firm producing differentiated goods. Negative for firm producing homogenous goods.	Competition (trade liberalization)
Fernandes (2007)	Colombia	1977-1991	Total Factor Productivity	Intermediates and equipment goods	6,474 manufacturing plants	Imports have a strong positive impact on productivity due to access to inputs (within-plants productivity) and reallocation of output.	Competition (trade liberalization), access to imports (technology embodied in imported inputs)
Smeets and Warzynski (2010)	Denmark	1998-2005	Total Factor Productivity	Intermediates and equipment goods	About 4,500 Manufacturing firms	Imports increase productivity.	Access to inputs (input cost and technology embodied in imported inputs)
Bas and Strauss-Khan (2011)	France	1995-2005	Total Factor Productivity	Intermediates	About 21,000 manufacturing firms	Increase in imported inputs boosted average firm's productivity by 1.5 percent.	Access to inputs (technology embodied in imported inputs and variety)
Halpern <i>et al.</i> (2005)	Hungary	1992-2001	Total Factor Productivity	Product-level imports	2,043 large exporting manufacturing firms	Imports explain 30 percent of productivity growth. Half of this effect is through the reallocation of output across continuing firms and the remaining is intra-firm increase of productivity due to access to imported inputs.	Access to inputs (variety and quality) and reallocation of output
Harrison <i>et al.</i> (2011)	India	1985-1994; 1998-2004	Total Factor Productivity	Inputs and final goods	Up to 587,303 manufacturing firms	Trade liberalization and FDI reforms explain a large part of productivity growth. Within-firm improvement is the main source of productivity growth on the whole period but immediately after the 1991 trade liberalization, reallocation is the main source. Cut in tariffs on inputs has the largest productivity impact followed by the cut of tariffs on final goods.	Competition (trade liberalization): reallocation of output and within-firm improvement
Topalova and Khandelwal (2011)	India	1989-1996	Total Factor Productivity	Inputs and final goods	About 4,100 manufacturing firms	Lower tariffs on final goods and lower input tariffs, both increased firm-level productivity, with input tariffs having a larger impact.	Competition (trade liberalization) for final goods Access to (better) inputs
Amiti and Koenigs (2007)	Indonesia	1991-2001	Total Factor Productivity	Inputs and final goods	Plant level (manufacturing)	Productivity impact of a fall in input tariffs is at least twice as high as the impact of lower tariff on final goods.	Competition (tariff cuts) and access to input
Lawrence and Weinstein (1999)	Japan	1964-1973	Total Factor Productivity	All imports	Industry level	Lower tariffs and higher import volume boosted productivity. The impact stems more from competition (which promotes innovation) than from intermediate inputs	Competition and access to inputs
Tybout and Westbrook (1995)	Mexico	1984-1990	Total Factor Productivity	All imports	2,227 manufacturing plants	Trade liberalization increased productivity by 11.2 percent during the period. 9.6 percent was due to within-firm improvements, 1 percent to reallocation, and 0.6 percent to economies of scale.	Competition (reallocation of output and within-firm improvement) and economies of scale

Augier <i>et al.</i> (2013)	Spain	1991-2002	Total Factor Productivity	Intermediates and capital goods	2,354 manufacturing firms	10 ppts increase in imports raises productivity by 1.5 percent.	Access to inputs (technology embodied in the imported inputs)
Andersson, Lööf and Johannsson (2010)	Sweden	1997-2004	Labor Productivity	All imports	57,000 manufacturing firm level observations	Firms that import or export are more productive than firm that do not trade. That premium is larger for firm that both imports and exports.	No specific channel tested
Lööf and Andersson (2010)	Sweden	1997-2004	Labor Productivity	All imports	57,000 manufacturing firm level observations	Imports cause higher productivity. The larger the share of imports from the G7 in total imports the stronger the productivity impact of imports.	Access to inputs (technology spillovers through imports)
Bernard, Jensen, and Schott (2006)	USA	1982-1997; 1987-1997	Total Factor Productivity	Industry specific import cost (ad valorem effective tariff and transport cost)	210,000 manufacturing plants	A reduction in import cost leads to higher productivity growth. These results are driven by a reallocation of activity toward more productive plants within industries. Less important source of productivity gains are reallocation across industries and within plants.	Competition (reallocation of output and within-plant improvement)
Keller and Yeaple (2009)	USA	1987-1996	Total Factor Productivity	All imports (import penetration)	1,277 manufacturing firms	Imports have a positive but non significant impact.	Access to inputs (technology spillovers through imports)

Source: Author.

III. IMPORTS FOSTER GROWTH BY DIFFERENT CHANNELS THAN EXPORTS

precede

is a source

level of productivity

productivity growth

Table 3. Productivity premium of international trade

Source	Country	Period	Measure of Productivity	Productivity premium over non-traders (in percent)	
Muûls and Pisu (2009)	Belgium	1996-2004	Total Factor Productivity	Two-way traders	21
				Importers only	9
				Exporters only	6
Vogel and Wagner (2008)	West Germany	2005	Labor Productivity	Two-way traders	47
				Importers only	18
				Exporters only	15
Vogel and Wagner (2008)	East Germany	2005	Labor Productivity	Two-way traders	41
				Importers only	21
				Exporters only	10
Sjöholm (1999) ^{1/}	Indonesia	1991	Labor Productivity	Importers	33
				Exporters	31
Castellani, Serti, and Tomasi (2008)	Italy		Labor Productivity	Two-way traders	55.7
				Importers only	38.4
				Exporters only	24.9
			Total Factor Productivity	Two-way traders	74.0
				Importers only	27.8
				Exporters only	25.7
Hagemejer and Kolase (2008) ^{1/}	Poland	1991	Labor Productivity	Importers	41.7
				Exporters	21.5
			Total Factor Productivity	Importers	24.7
				Exporters	17.4
Bernard, Jensen, Redding and Schott (2007)	USA		Labor Productivity	Two-way traders	25
				Importers only	23
				Exporters only	23
			Total Factor Productivity	Two-way traders	7
				Importers only	12
				Exporters only	7
Anderson et al. (2008)	Sweden	1997-2004	Labor Productivity	Productivity premium is similar for exporters and importers. The productivity premium of two-way traders is about twice as large	

^{1/} The importers and exporters include two-way traders.

Source: Author.

First, competition

Second access to inputs

Third, technology transfers



IV. IMPORTS OF SERVICES AND IMPORTS OF GOODS: IS THE IMPACT DIFFERENT?

Table 4. The productivity impact of offshoring

Source	Country	Period	Measure of Productivity	Impact
I. Goods Offshoring				
Egger and Egger (2006)	EU(12)	1992-1997	Labor Productivity (Low-skilled workers) in 21 manufacturing industries.	Short term: Negative; Long Term: Positive.
Egger <i>et al.</i> (2001)	Austria	1990-1998	Total Factor Productivity in 18 manufacturing industries.	Positive.
Jabbour (2010)	France	1990-2001	About 1,950 manufacturing firms.	Positive but only for outsourcing to developing countries.
Görg and Hanley (2005)	Ireland	1990-1995	Total Factor Productivity of 652 plants of 12 electronics industries.	Short term: Positive (1 percentage point increase in offshoring intensity increases TFP by 1.2 percent).
Görg, Hanley, and Strobl (2008)	Ireland	1990-1998	Total Factor Productivity in 1,099 manufacturing plants.	Positive but not always significant depending on the simulation method. The Impact is smaller than for service offshoring.
Daveri and Jona-Lasinio (2008)	Italy	1995-2003	Labor productivity in 21 manufacturing industries.	Positive.
Morrisson Paul and Yassar	Turkey	1990-1996	Labor productivity and total factor productivity of 1193 plants of the textile and apparel sector.	Positive. The impact of offshoring is larger than the impact of domestic outsourcing.
Amiti and Wei (2009)	USA	1992-2000	Labor and Total Factor Productivity in 96 manufacturing industries.	Positive on both measures of productivity. Good offshoring explains 5 percent of labor productivity growth. This impact is both smaller and less significant than the impact of Service offshoring.
Mann (2003)	USA	1995-2002	Total Factor Productivity.	Positive: Offshoring led to a drop in IT hardware prices triggering investment in IT and change in production process. As a result productivity growth was about 0.3 percentage point higher per year.
II. Services Offshoring				
Winkler (2010)	Germany	1995-2006	Labor Productivity of manufacturing.	0.9 to 2.0 percent per year.
Görg and Hanley (2003)	Ireland	1990-1995	Labor Productivity of 12 electronics industries.	Not clear for the all sample Positive for downstream firms only.
Görg and Hanley (2005)	Ireland	1990-1995	Total Factor Productivity of 652 plants of 12 electronics industries.	Short term: Positive but insignificant.
Görg, Hanley, and Strobl (2008)	Ireland	1990-1998	Total Factor Productivity in 1,099 manufacturing plants.	A 10 percentage point increase in service offshoring increases productivity by 0.8-0.9 percent (full sample). This is fully due to the positive impact for exporters (no significant impact for non-exporters).
Daveri and Jona-Lasinio (2008)	Italy	1995-2003	Labor productivity.	No impact.
Crisuolo and Leaver (2005)	UK	2000-2003	Total Factor Productivity in manufacturing and services (about 37,000 plants).	Positive for the full sample (10 percent increase in svices offshoring intensity is associated with 0.37 percent increase in productivity). When separating manufacturing and services firms, positive only for services firms (impact on productivity is 0.68 percent).
Amiti and Wei (2009)	USA	1992-2000	Labor and Total Factor Productivity in 96 manufacturing industries.	Positive. Services ooffshoring explains 10 percent of labor productivity growth. This is 2 times more than the impact of goods offshoring.

V. CONCLUSION

expand their trade

increase exports

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