

PubPol/Econ 541

Class 12

Export Policies

by

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Announcements

- Next Monday, 10/14: (Fall Break)
 - No class. I'll be out of town.
- Quizzes
 - Quiz 6 on NTBs & Export Policies
 - due this Friday Oct 11
 - No quiz Oct 18
 - Quiz 7 due Oct 25

For next Monday

- If you've time and interest,
 - Optional: read and view:
 - Scott and Trade Talk on trade and women
 - Economist on Making trade greener: When environmental protection turns into trade protection
 - Telling on developing countries
 - Economist on The urge to protect: How trade restrictions are being used as a tool to protect human rights
 - Swanson on black and disadvantaged workers
 - Trade Talks: "Is Trade Bad for Women?"

Outline

- Export policies
- How common are they
- Economic analysis
- Empirics of export restrictions
- Recent uses

Export policies

- Types of export policies
 - Bans
 - Taxes
 - Subsidies

Export policies

- Reasons for export policies
 - Bans
 - To keep products away from other countries
 - To lower prices to home consumers
 - Taxes
 - To raise revenue
 - To lower prices to home consumers
 - Subsidies (see later, Dec 4. Not GATT-legal)
 - To support domestic producers

Outline

- Export policies
- **How common are they**
- Economic analysis
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How common are export taxes

- See Laborde et al.
- Note first why they've been neglected:
 - Countries usually want to export more, not less
- Export taxes are used by about 1/3 of WTO members
- Average was 0.48% per cent in 2007
 - This is less than half a percent. This must be an average including ones that are zero.

How common are export taxes

- Export taxes are concentrated on
 - Raw agricultural products
 - Minerals
 - Processed oilseeds
 - Aluminum and iron
 - Timber.
 - Energy products (esp. Russia natural gas)

(2007)

TABLE 3
Average Export Taxes (Per Cent), by Sector

<i>Code Sector GTAP7</i>	<i>Sector</i>	<i>Trade-weighted Export Tax</i>
GAS	Gas	24.1
FRS	Forestry	8.9
VOL	Vegetable oils and fats	5.7
OIL	Oil	3.9
CMT	Bovine meat products	2.3
OSD	Oilseeds	2.0
P_C	Petroleum, coal products	1.8
OCR	Crops n.e.c.	1.7
GRO	Cereal grains n.e.c.	1.3
WHT	Wheat	1.3
OMN	Minerals n.e.c.	0.8
LUM	Wood products	0.5
NFM	Metals n.e.c.	0.3
CTL	Bovine cattle, sheep and goats, horses	0.3
PFB	Plant-based fibres	0.2
PDR	Paddy rice	0.2
LEA	Leather products	0.2
WOL	Wool, silk-worm cocoons	0.2
COA	Coal	0.2
V_F	Vegetables, fruit, nuts	0.1

Note bias:
High taxes
cause less
trade and
lower
weight.

Note:

(i) n.e.c., not elsewhere classified.

Source: Authors' computation.

TABLE 4
Average Export Taxes (Per Cent), Top 20 Countries (2007)

<i>Code Country GTAP7</i>	<i>Country</i>	<i>Trade-weighted Export Tax</i>
RUS	Russian Federation	23.1
ARG	Argentina	9.1
XWF	Rest of Western Africa	4.3
XNF	Rest of North Africa	3.8
BLR	Belarus	2.0
XSU	Rest of former Soviet Union	1.9
XOC	Rest of Oceania	1.6
XCF	Rest of Central Africa	1.3
IDN	Indonesia	1.0
BOL	Bolivia	1.0
LAO	Lao People's Democratic Republic	0.8
XSC	Rest of South African Customs Union	0.7
AUS	Australia	0.6
IND	India	0.5
UGA	Uganda	0.5
ZAF	South Africa	0.4
MOZ	Mozambique	0.4
NOR	Norway	0.4
MAR	Morocco	0.4
MYS	Malaysia	0.3

Source: Authors' computation.

Pause for Discussion

Questions on Laborde et al.

- In 2006, what sector had the most export taxes?
- What are some of the motives for export taxes mentioned?

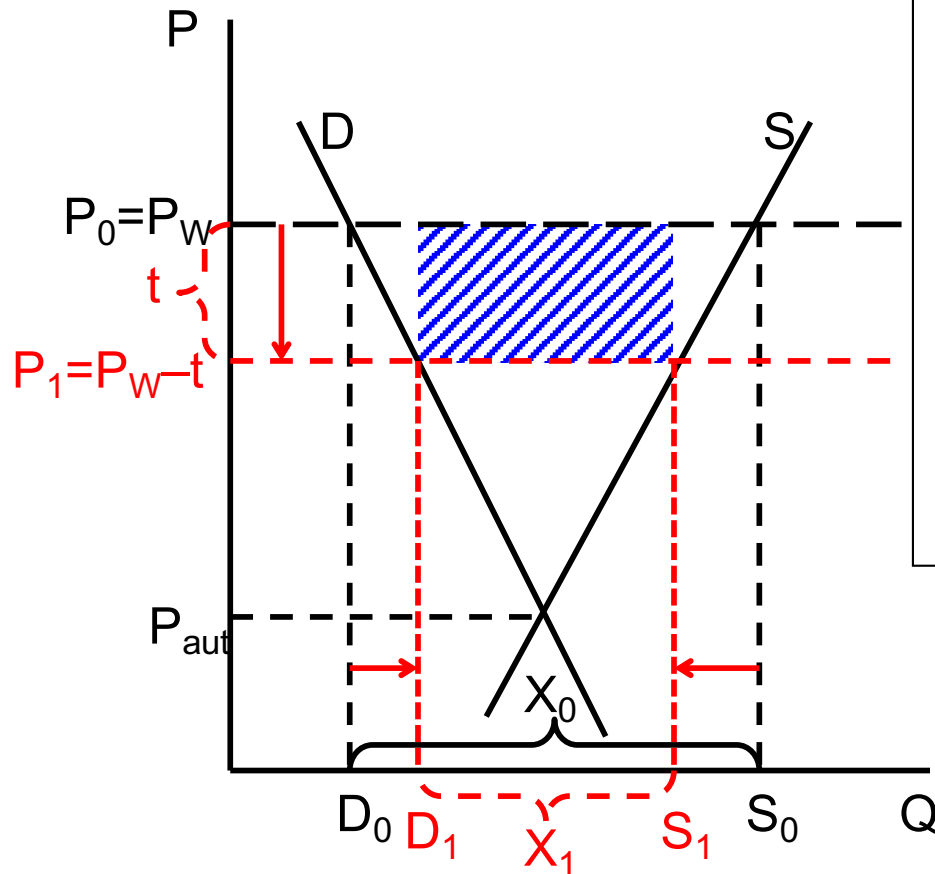
Outline

- Export policies
- How common are they
- **Economic analysis**
- Empirics of export restrictions
- Recent uses

Economic Analysis

- Use the same tools and assumptions as for tariffs
- Export tax causes domestic price to be below the world price by the amount of the tax (if country still exports)
- Why? If suppliers continue to sell both at home and for export,
 - They must get the same at home as for export
 - And that is the world price minus the tax

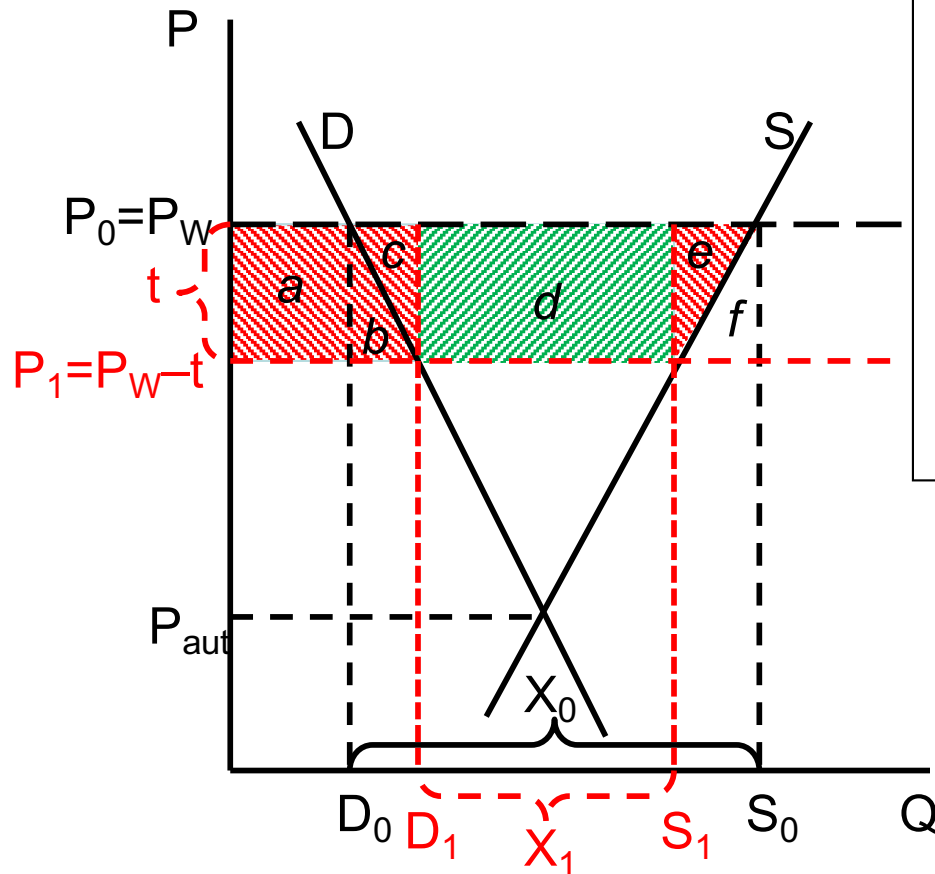
Small country export tax



- Effects of an export tax, starting from free trade
 - Price falls
 - Quantity demanded rises
 - Quantity supplied falls
 - Quantity of exports falls
 - Tax revenue rises from zero

Specific Export Tax t

Small country export tax

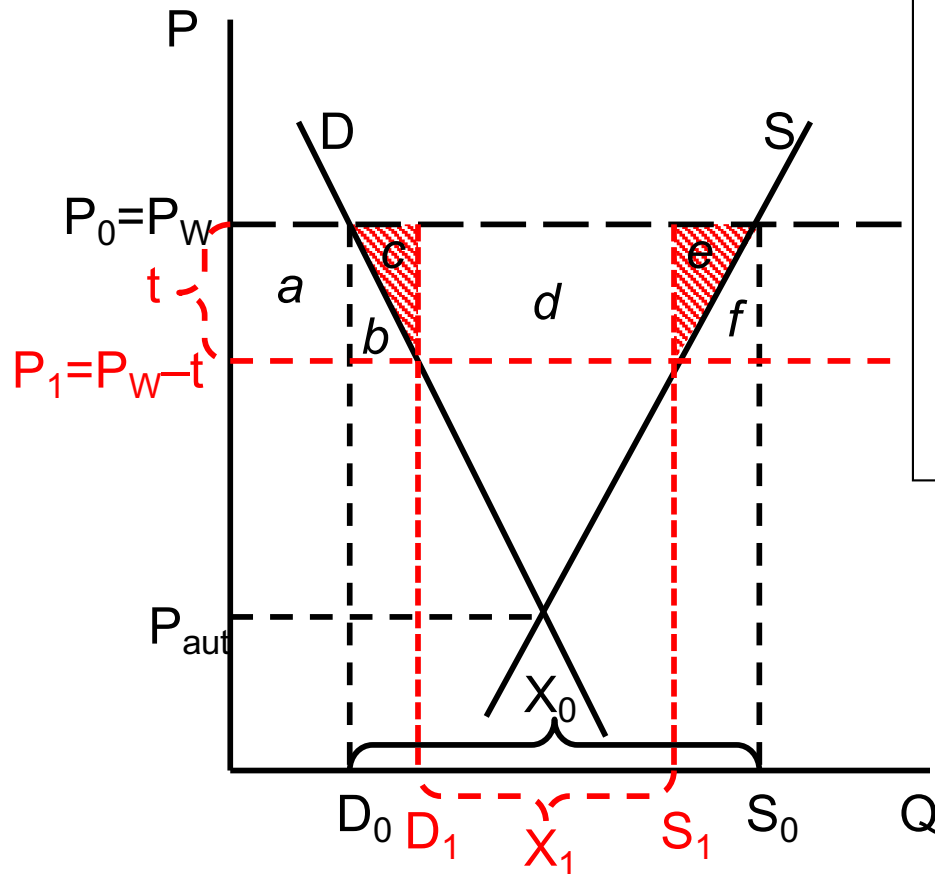


- Welfare effects of an export tax, starting from free trade
 - Suppliers lose $-(a+b+c+d+e)$
 - Demanders gain $+(a+b)$
 - Government gains $+d$
 - Country loses $-(c+e)$

“Dead weight loss”

Specific Export Tax t

Small country export tax

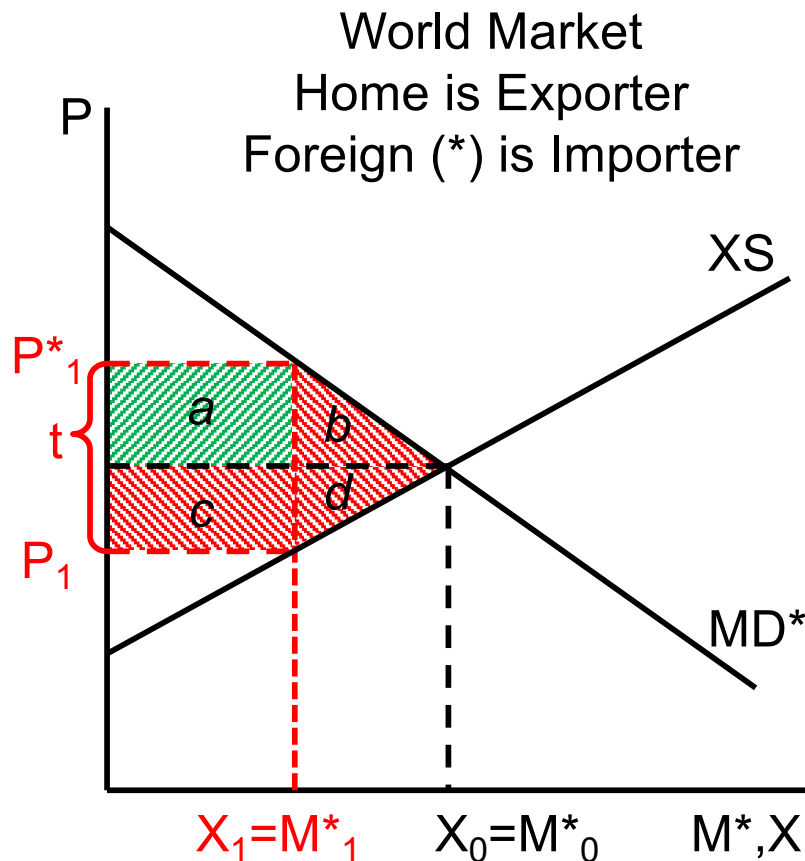


- Welfare effects of an export tax, starting from free trade
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"Dead Weight Loss" =

Specific Export Tax t

Large country, World Market



Welfare effects of a large-country tariff, starting from free trade

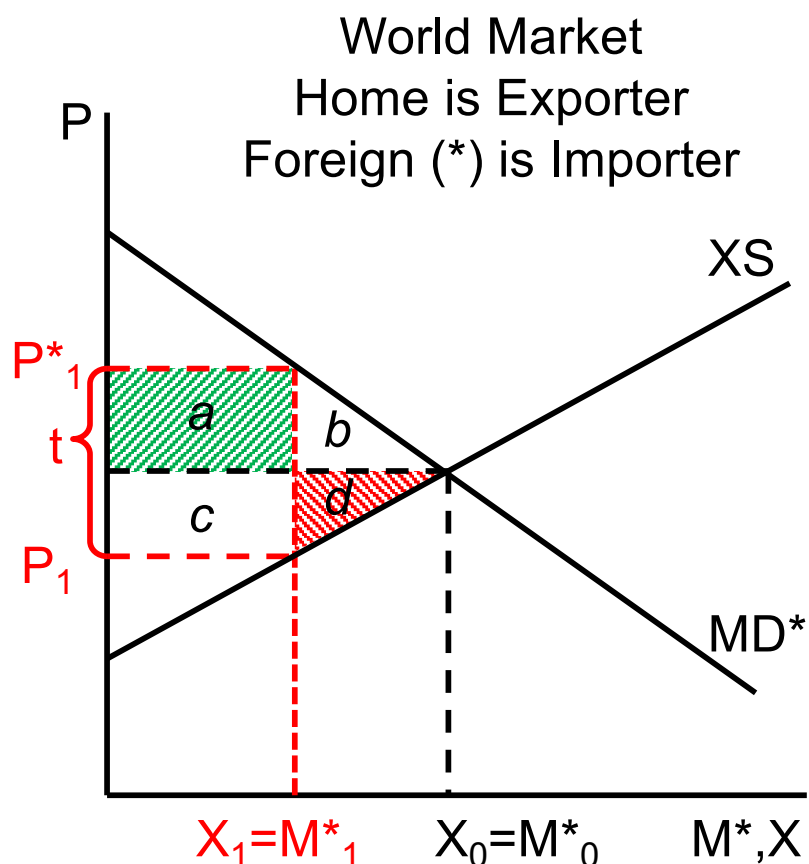
- Home:

Private sector (S&D) loses	$-(c+d)$
Government gains	$+(a+c)$
Country may gain or lose:	$+a-d$
- Foreign

Private sector (S&D) loses	$-(a+b)$
- World loses $-(b+d)$

"Dead Weight Loss" =

Large country, World Market



Thus large country, again, will gain from export tax if $a > d$

- What is area a ?
 - The portion of the tax paid by foreign importers, who pay a higher price
 - A transfer from foreign demanders to the home government
 - The result, again, of improving the home country's

“terms of trade”

“Terms of Trade” $\equiv$ Relative price of exports $= P^X/P^M$

Pause for Discussion

Questions

(not asked about readings)

- Explain why an export tax pushes down the price at home.
- Explain why an export tax pushes up the price abroad.
- Who are hurt and who are helped by an export tax?
- Statement above said
 - “Export tax causes domestic price to be below the world price by the amount of the tax (if country still exports)”
 - What happens if exports stop?

Outline

- Export policies
- How common are they
- Economic analysis
- **Empirics of export restrictions**
- Recent uses

Empirics

- Laborde et al.
 - They use computer model of trade to quantify the effects of removing export taxes that existed in 2007
 - (CGE Model = Computable General Equilibrium Model)

Empirics

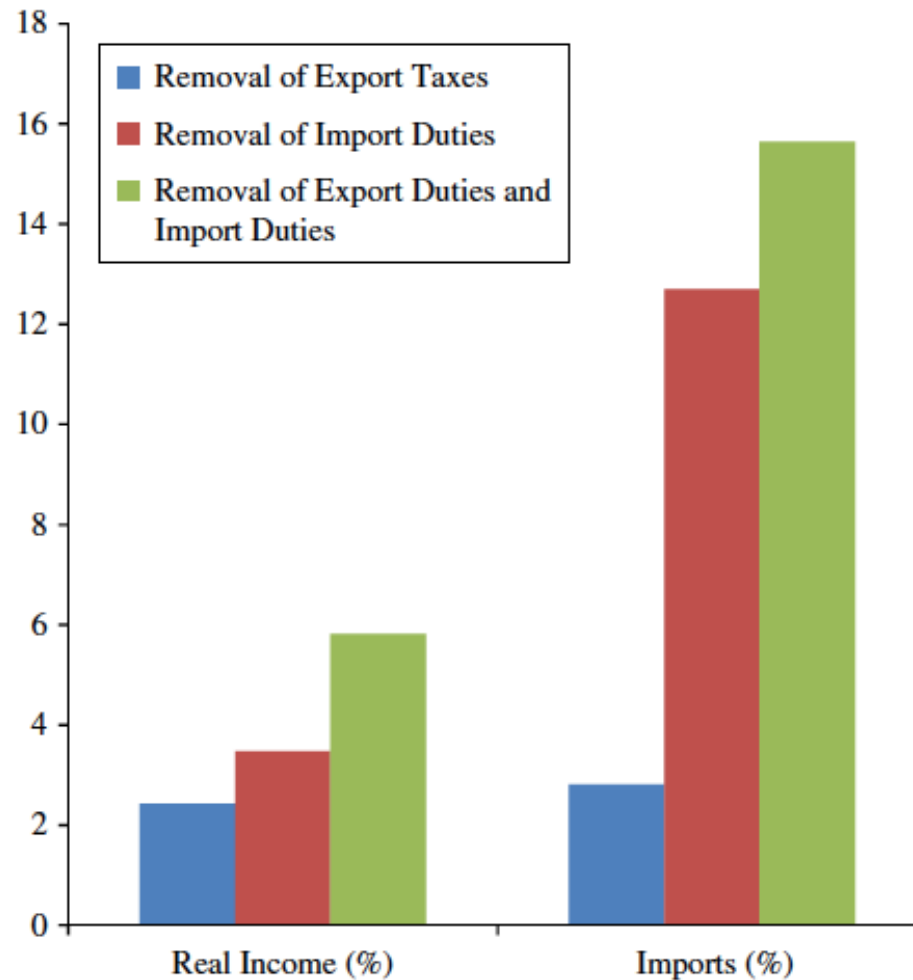
- Findings: Export tax removal causes
 - an overall gain of 0.24 per cent in world real income
 - +1.6 per cent in oil-exporting countries,
 - +0.2 per cent in developed countries and
 - +0.1 per cent in other developing countries.
 - boosts world trade volumes by 2.8 per cent
 - reduces the world price of these products.

Empirics

CIS =
Commonwealth of
Independent States
= Russia et al.

- Findings on export tax removal:
 - The largest winner is the CIS block (whose real income increases by 3.5 per cent)
 - Other oil exporters are negatively hit
 - Importing countries can benefit
 - May cause deindustrialization
 - Despite their much smaller size, export taxes effects on real incomes are more than half those of import taxes

FIGURE 6
Comparing Elimination of Tariff Export Restrictions and Import Restrictions



Note:

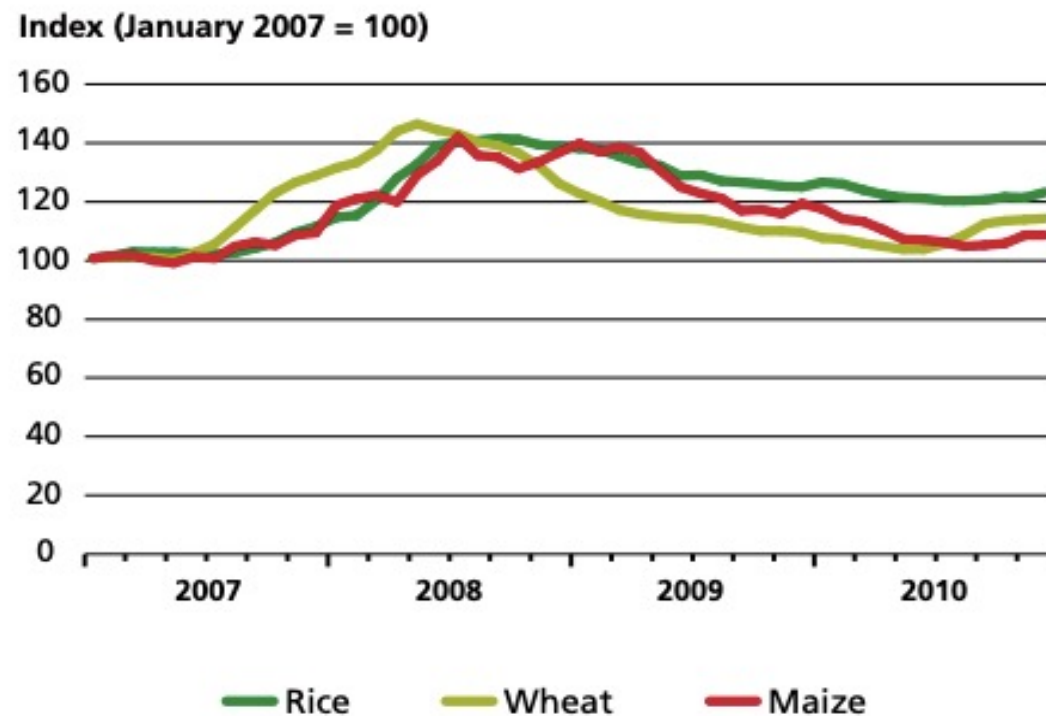
(i) Three scenarios are displayed in this graph: the complete elimination of export taxes by all countries in the world, the complete elimination of import duties by all countries in the world and the combination of both scenarios.

Source: MIRAGE simulations.

Empirics

- Beckman et al.
 - Reports effect of export taxes in agriculture, 2006-2008
 - “In times of high or volatile prices, they are generally applied to guarantee domestic food supply and lower domestic prices.”
 - Results from both a partial equilibrium model and a CGE model

Domestic prices for rice, wheat and maize increased substantially during the crisis



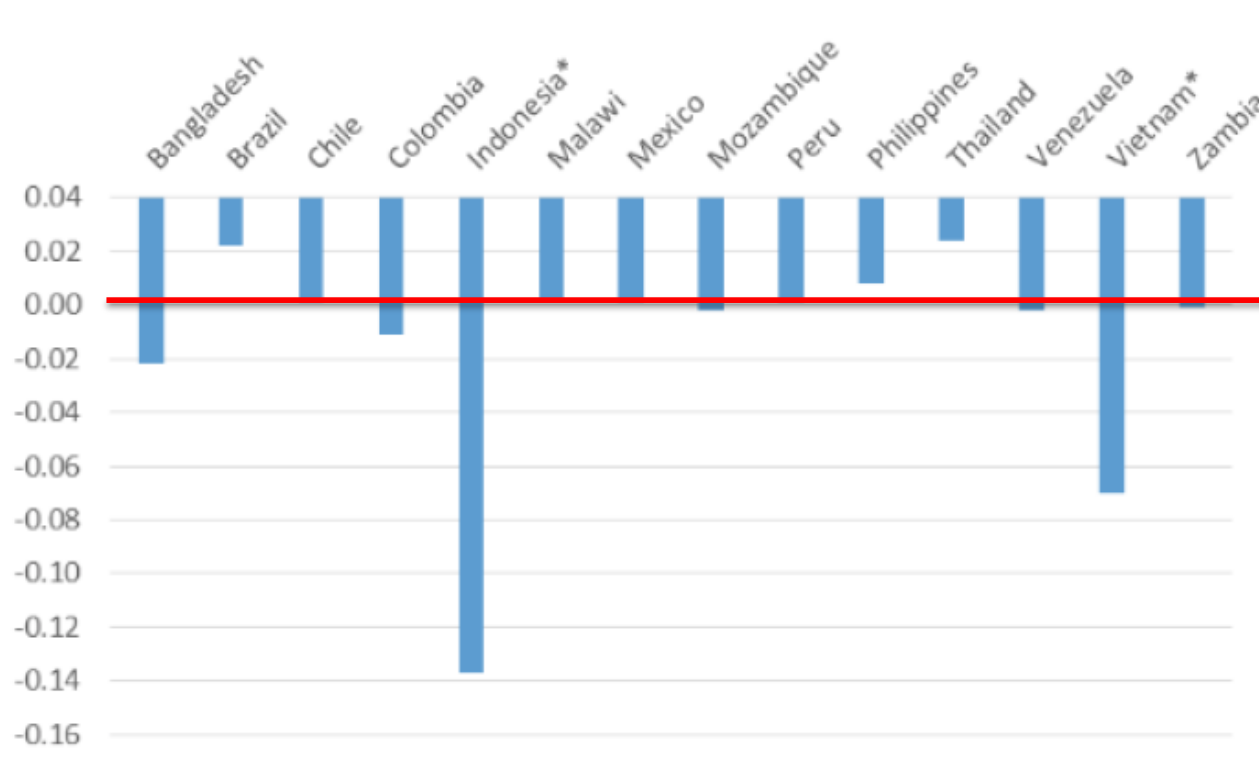
Note: The graph shows average inflation-adjusted trends in domestic prices for rice, wheat and maize across countries from January 2007 to December 2010. The domestic price is set equal to 100 in January 2007 for all countries, and the index value for subsequent months is equal to the average index value across all countries. The domestic price indices for rice, wheat and maize include 42, 27 and 34 countries, respectively, and include all countries for which data were available at the time of writing.

Source of raw data: FAO Global Information and Early Warning System.

Empirics

- Effects of export taxes, Beckman et al.:
 - lower domestic prices.
 - increased international prices
 - if exporter is large or if many exporters tax
 - negative impacts on welfare
 - countries that implemented these policies tended to weather the food-price crisis the best.
 - countries that are dependent on food imports were not as insulated

Figure 2 Percent change in poverty when export taxes are removed



Note the zero line. This is a very odd way to present results.

Source: CGE results.

Note: The countries with an asterisk are those that had export taxes removed in the CGE scenario.

Authors' note: The findings and conclusions in this column have not been formally disseminated by the US Department of Agriculture and should not be construed to represent any agency determination or policy.

Pause for Discussion

Questions on Laborde et al., “Economic Effects of Export Taxes”

- What are some of the main effects of removing export taxes?
- What are some of the limitations of this analysis?

Questions on Beckman et al., “Export taxes on agricultural ...”

- What was the main reason for export taxes examined here?
- Can you tell from this whether the policies have the desired effects?
- Does Figure 2 show poverty falling in all the countries?

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- **Recent uses**

Recent Uses

- India:
 - Banned all export of onions in 2020
 - Due to drought, then rain, and resulting onion shortage
 - Neighboring country consumers hit hard
 - Began restricting exports of rice in September 2022
 - World price had risen after Russia invaded Ukraine
 - Purposes
 - To lower price at home
 - Recover part of its “huge subsidies” on fertilizer and power

Recent Uses

- Mozambique: Cashews
 - Since 2001
 - Export tax of 18-22% on raw cashews
 - Export tax of zero on processed cashews
 - Purpose: to support processing industry
 - Growers are hurt, but the processing industry has thrived
 - But quality of raw cashews became “one of the lowest in the world”

Recent Uses

- Bans on export of sand
 - Several countries
 - Indonesia in 2003, Vietnam in 2010, Cambodia in 2017, Malaysia in 1997-2015, and again in 2020.
 - Why?
 - Mining sand threatens natural habitats
 - Huge amounts needed for construction and land reclamation.
 - Many countries but especially
 - China
 - Singapore

Recent Uses

- Cocoa
 - In summer 2019:
 - “Governments of Ghana and Ivory Coast formed a cocoa cartel that will charge an extra \$400 per metric ton of the crop to give a better deal to farmers.”
 - Why might this succeed?
 - The two produce about 65% of the world’s cocoa.
 - Smaller producers can’t serve the needs of the largest brands

Recent Uses

- Rare earths from China
 - In 2010, “restricted exports of rare earths to Japan following a territorial dispute”
 - Announced July 3, 2023, it would “impose export restrictions on gallium and germanium”
 - It controls ~80% of world supply
 - Crucial for many high-tech products
 - Including American F-35 fighter jets

Recent Uses

- Indonesia
 - 2020 banned exports of nickel
 - to encourage processing of it in the country
 - Added ban on exporting bauxite (used for aluminum) in June 2023
 - Next may come export bans on copper, then tin and gold.

Recent Uses

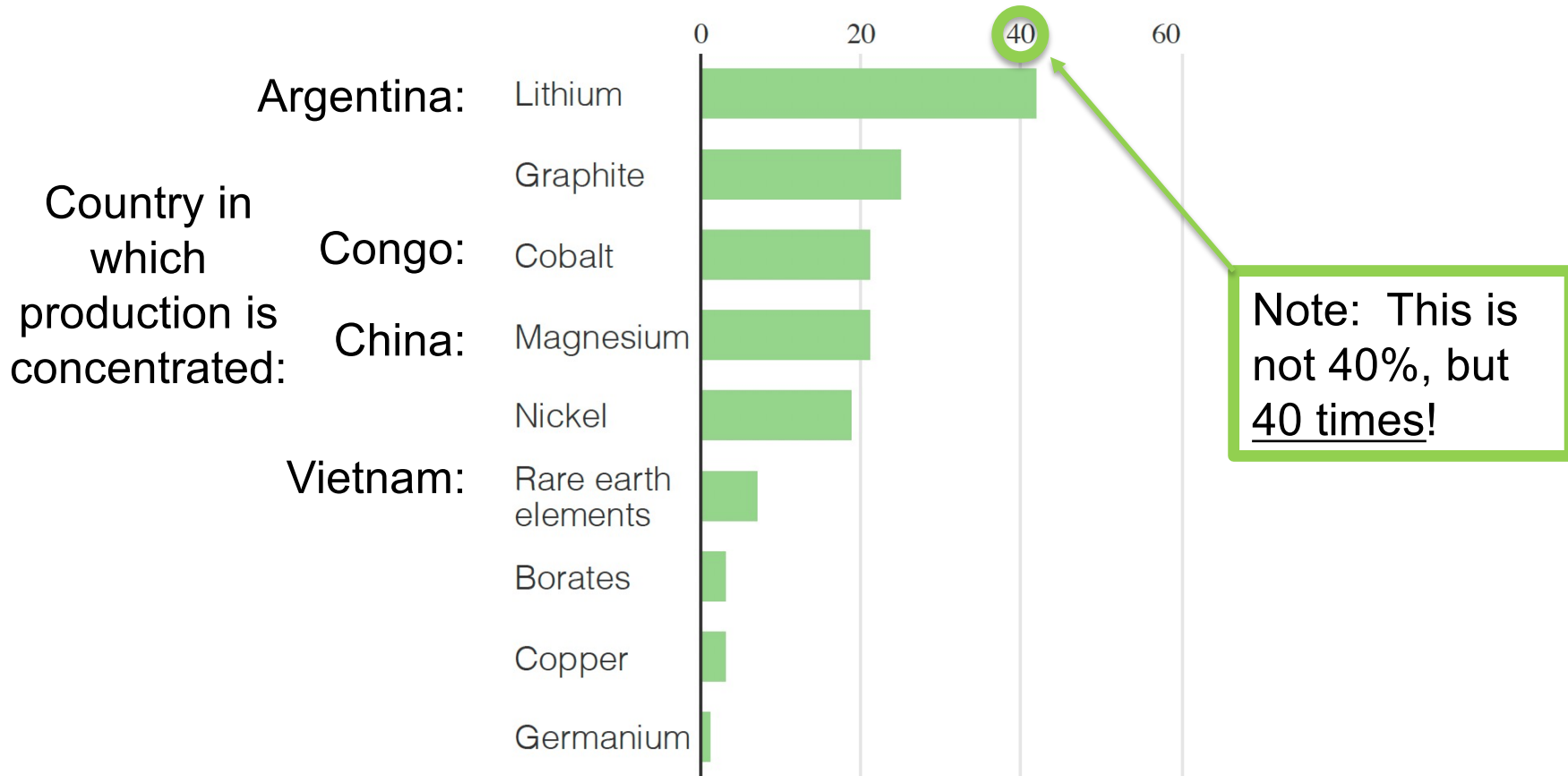
- Australia energy policies
 - New policies in 2023 on exports of LNG (liquified natural gas)
 - Price caps
 - Export controls
 - Countries relying on Australia LNG:
 - Japan 42%
 - China 34.5 %
 - South Korea 22%

Recent Uses

- Multiple countries restricting exports of critical minerals
 - New report in 2023:
 - “export restrictions have increased over the last decade more than fivefold.”
 - Top countries with new restrictions:
 - China,
 - India,
 - Vietnam,
 - Russia,
 - Argentina and Kazakhstan.”

Projected Growth in Global Demand by 2040

Projected increase factor (1=current demand)



Note: IEA's Sustainable Development Scenario, an indicative trajectory to meet Paris Agreement goals.
Source: International Energy Agency, 2021

Recent Uses

- China
 - Restrictions on exports of gallium and germanium, critical inputs for semiconductor manufacturing
 - See Godek on their effectiveness
 - Earlier 2010 limits on China's rare earth exports did less than expected
 - [Godek was student in this course two years ago, now works a Stimson Center in DC.]

Pause for Discussion

Questions on Godek, “Why China’s Export Controls...”

- Did China meet pushback from the WTO?
- What two mechanisms lessened the impact of China’s policy?
- By how much did China’s exports of rare earths fall?

Questions on Beattie, “Why China’s Export Controls ...”

- What is “weaponization of trade”?
- What are some recent examples of this?
- Why do “export controls contain the seeds of their own destruction” and why is this similar to “producer cartels and attempts to interdict narcotics.”?
- What examples does the author argue of controls that are effective and worth doing?

Prices high but not hysterical

Gallium \$/kg



Ingots in warehouse at Rotterdam

Source: Fastmarkets

© FT

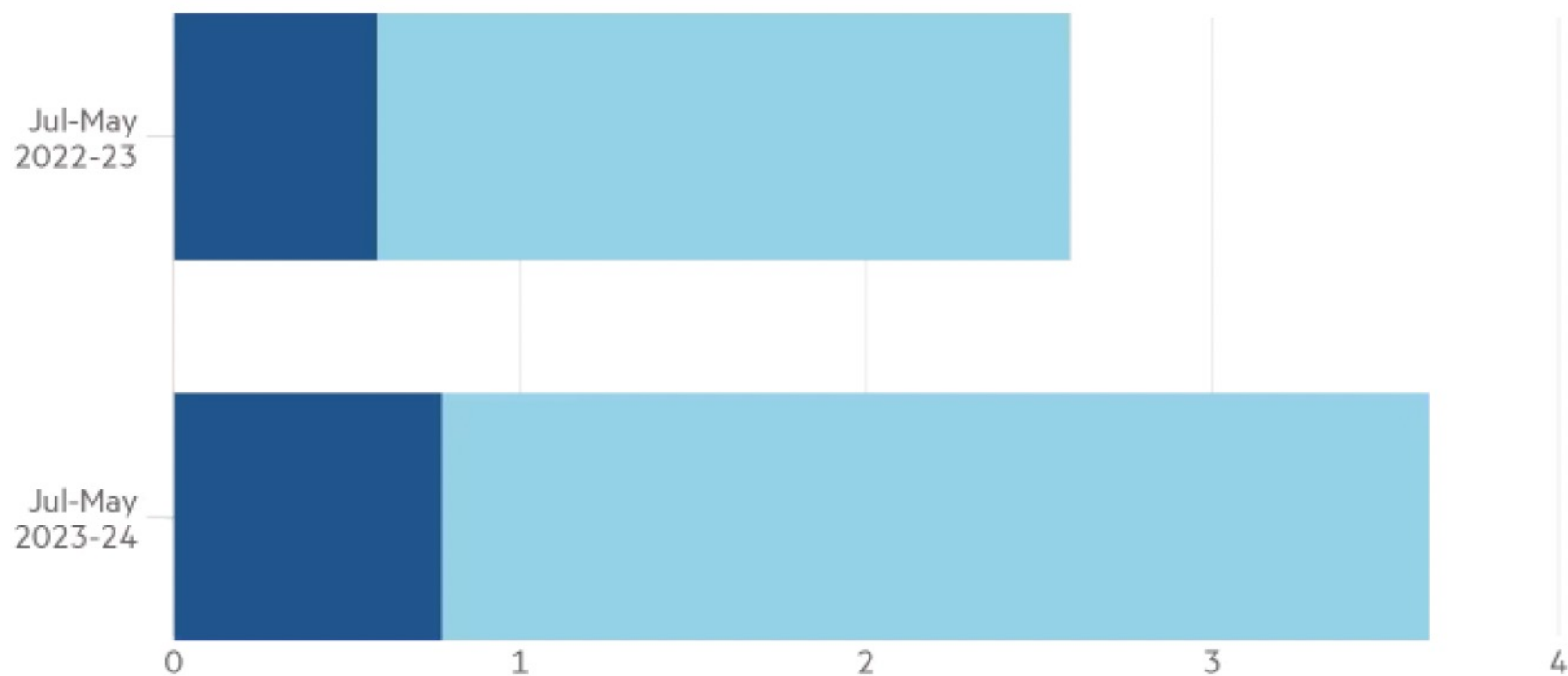
Questions on Savage & Jilani, “Pakistan rice exports ...”

- Why did India restrict its rice exports starting in 2023?
- What did this do to the world price of rice?
- By how much did Pakistan’s rice exports rise after India’s policy?
- Was all of this increase due to India’s policy?
- What role has been played by the Red Sea Crisis?

The value of Pakistan's rice exports has increased 80% over the year prior

\$mn

■ Basmati ■ Others



Source: Pakistan Bureau of Statistics

