TRADE

U.S. exports as a share of U.S. products

Import share of U.S. food consumption steadily grows

Percent

TRADE

Agricultural Exports and Imports as a Share of All U.S. Exports and Imports

Year

TRADE

World Agricultural exports

Source: International Trade Administration, Trade Data by Year (www.itab.usitc.gov)
WHY TRADE?

• Comparative Advantage:
  – There are economic gains when nations produce and export those goods that they can produce RELATIVELY more efficiently by virtue of their resource endowment, and import those goods that other nations can produce RELATIVELY more efficiently.

TRADE: COMPARATIVE ADVANTAGE

• Example:
  – Suppose Country A can produce either
    • 90 million DVD players and 0 hogs, or
    • 0 DVD players and 60 million hogs, or
    • Any combination in between
TRADE: COMPARATIVE ADVANTAGE

Example:
- Country A can produce either
  - 50 million DVD players and 0 hogs
  - 0 DVD players and 60 million hogs
  - Any combination in between
TRADE: COMPARATIVE ADVANTAGE

Production Possibilities Frontier for Country A

Along Production Possibilities Frontier, Country A must give up 0.67 (= 60/90) hogs to get 1 DVD player.

Along Production Possibilities Frontier, Country A must give up 1.5 (= 90/60) DVD players to get 1 hog.
TRADE: COMPARATIVE ADVANTAGE

• Example:
  – Suppose Country A can produce either
    • 90 million DVD players and 0 hogs, or
    • 0 DVD players and 60 million hogs, or
    • Any combination in between
  – Suppose Country B can produce either
    • 25 million DVD players and 0 hogs, or
    • 0 DVD players and 50 million hogs, or
    • Any combination in between

TRADE: COMPARATIVE ADVANTAGE

Example:
• Country B can produce either
  – 25 million DVD players and 0 hogs
  – 0 DVD players and 50 million hogs
  – Any combination in between
TRADE: COMPARATIVE ADVANTAGE

Production Possibilities Frontier for Country B

Along Production Possibilities Frontier, Country B must give up 2 (50/25) hogs to get 1 DVD player.
TRADE: COMPARATIVE ADVANTAGE

Along Production Possibilities Frontier, Country B must give up 0.5 (= 25/50) DVD players to get 1 hog.

Example:
- Country A has an absolute advantage producing both hogs and DVD players.

Example:
- Country A has a comparative advantage producing DVD players.
TRADE: COMPARATIVE ADVANTAGE

Example:
- Country B has a comparative advantage producing hogs.

<table>
<thead>
<tr>
<th>Cost of Producing 1 Hog for Countries A and B</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD Players</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>70</td>
</tr>
</tbody>
</table>

Cost of Producing 1 Hog for Countries A and B

- Country B must give up 0.5 (= 25/50) DVD players to get 1 hog.
- Country A must give up 1.5 (= 90/60) DVD players to get 1 hog.

TRADE: COMPARATIVE ADVANTAGE

Example:
- Cost of producing 1 hog
  - Country A: 1.5 (= 90/60) DVD players
  - Country B: 0.5 (= 25/50) DVD players
- Cost of producing 1 DVD player
  - Country A: 0.67 (= 60/90) hogs
  - Country B: 2.00 (= 50/25) hogs

TRADE: COMPARATIVE ADVANTAGE

Example:
- Suppose each country wants to be “self-sufficient”:
  - Country A produces and consumes 45 million DVD players and 30 million hogs.
  - Country B produces and consumes 12.5 million DVD players and 15 million hogs.
TRADE: COMPARATIVE ADVANTAGE

Example:

- Suppose each country wants to be "self-sufficient":
  - Country A produces and consumes:
    - 45 million DVD players
    - 30 million hogs
  - Country B produces and consumes:
    - 12.5 million DVD players
    - 15 million hogs

Self-Sufficiency Projections for Countries A and B

TRADE: COMPARATIVE ADVANTAGE

- Example:
  - Production under self-sufficiency
    
    | Country | Country | Total Output |
    |---------|---------|-------------|
    | A       | B       | DVD Players |
    | 45      | 12.5    | 57.5        |
    | 30      | 25      | 55          |

  - Consumption under self-sufficiency
    
    | Country | Country | Total Consumption |
    |---------|---------|--------------------|
    | A       | B       | DVD Players |
    | 45      | 12.5    | 57.5          |
    | 30      | 25      | 55            |

TRADE: COMPARATIVE ADVANTAGE

- Example:
  - Production under self-sufficiency
    
    | Country | Country | Total Output |
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    | A       | B       | DVD Players |
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  - Consumption under self-sufficiency
    
    | Country | Country | Total Consumption |
    |---------|---------|--------------------|
    | A       | B       | DVD Players |
    | 45      | 12.5    | 57.5          |
    | 30      | 25      | 55            |
TRADE: COMPARATIVE ADVANTAGE

Example:
- Suppose each country wants to be "self-sufficient":
  - Country A produces and consumes 45 million DVD players and 30 million hogs
  - Country B produces and consumes 12.5 million DVD players and 15 million hogs
- Suppose each country produces more of the good in which it is good at and trades:
  - Country A produces 67.5 million DVD players and 15 million hogs
    - To produce additional 22.5 million DVD players at a cost of 0.67 hogs per DVD player, must reduce hog output by 15 (= 22.5 \times 0.67) million
  - Country B produces 50 million hogs and 0 DVD players

TRADE: COMPARATIVE ADVANTAGE

Example:
- Suppose each country produces more of the good in which it is good at and trades:
  - Country A produces
    - 67.5 million DVD players
    - 15 million hogs
  - Country B produces
    - 0 DVD players
    - 50 million hogs

TRADE: COMPARATIVE ADVANTAGE

Example:
- Production under self-sufficiency

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<thead>
<tr>
<th>Country</th>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>DVD Players</td>
<td>45</td>
<td>12.5</td>
</tr>
<tr>
<td>Hogs</td>
<td>30</td>
<td>50</td>
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</table>

- Production under comparative advantage allocation and trade

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<tr>
<th>Country</th>
<th>A</th>
<th>B</th>
<th>Total Output</th>
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<tbody>
<tr>
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<td>15</td>
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TRADE: COMPARATIVE ADVANTAGE

- Example:
  - Production under comparative advantage allocation and trade

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- Consumption under comparative advantage allocation and trade

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<tr>
<td>A</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>DVD Players</td>
<td>50 (= 67.5 - 17.5)</td>
<td>17.5 (= 0 + 17.5)</td>
</tr>
<tr>
<td>Hogs</td>
<td>35 (= 15 + 20)</td>
<td>30 (= 50 - 20)</td>
</tr>
</tbody>
</table>

TRADE: COMPARATIVE ADVANTAGE

- Example:
  - Consumption under self-sufficiency

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- Consumption under comparative advantage allocation and trade

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TRADE: COMPARATIVE ADVANTAGE

- There are economic gains when nations
  - produce and export those goods that they can produce RELATIVELY more efficiently, and
  - import those goods that other nations can produce RELATIVELY more efficiently

- Comparative advantage principle holds for nations, states, and individuals
  - Hogs: Iowa, North Carolina
  - Beef: Iowa, Texas
  - Corn and soybeans: Iowa, Illinois
  - Wheat: Kansas
  - Apples: Washington
  - Grapes: California
**TRADE:**
**COMPARATIVE ADVANTAGE**

- There are economic gains when nations
  - produce and export those goods that they can produce RELATIVELY more efficiently, and
  - import those goods that other nations can produce RELATIVELY more efficiently
- Comparative advantage principle holds for nations, states, and individuals
- However, not everybody wins
  - But winners gain more than losers lose

**IMPACTS OF TRADE**

<table>
<thead>
<tr>
<th>Country A</th>
<th>Country B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Price</td>
</tr>
<tr>
<td>ProdA,0</td>
<td>ProdB,0</td>
</tr>
<tr>
<td>ConsA,0</td>
<td>ConsB,0</td>
</tr>
<tr>
<td>SA</td>
<td>SB</td>
</tr>
<tr>
<td>DA</td>
<td>DB</td>
</tr>
<tr>
<td>CSA,0</td>
<td>CSB,0</td>
</tr>
<tr>
<td>PSA,0</td>
<td>PSB,0</td>
</tr>
</tbody>
</table>
TRADE: PROTECTIONISM

- Protectionism:
  - Policies to prevent free trade
    - Typically protect domestic industry
    - Support internal policy

TRADE

- Protectionism in agriculture
  - Historically, agriculture has been highly protected in many countries
    - Main reasons advanced by governments for supporting domestic farmers:
      1. Food security
         - Ensure country’s food supply
      2. Risk reduction
         - Shield farmers from weather and world price volatility
      3. Rural society
         - Stimulate rural economy
         - Promote rural development

TRADE

Index of World Agricultural Production and Exports

- Index of World Agricultural Production
- Index of World Agricultural Exports

TRADE

Indexes of World Production and Exports of Manufactures

TRADE

World Exports/Production Indexes for Agricultural Goods and Manufactures

TRADE: PROTECTIONISM

• Protectionist tools:
  – Limit imports
    • Tariffs
    • Quotas
    • Licenses
    • Nontariff restrictions
  – Subsidies to domestic industries
    • Production
    • Exports
  – Embargo
    • Prohibit trade with other countries (e.g., Cuba)
  – Dumping
    • Selling surplus below cost
      – Mexico for tomatoes
      – Canada for cattle in the 1990s and hogs in 2005
TRADE: PROTECTIONISM

- Protectionism:
  - Easy to implement, hard to reverse
  - Protection benefits focused and visible
  - Trade benefits disperse and hard to see
  - Balance micro and macro effects
  - Distribution of gains and losses

TRADE: PROTECTIONISM

- Reversing Protectionism:
  - Most favored nation status
    - Preference given to one country (e.g., China)
  - Free trade areas
    - Freer trade among members
    - EU, NAFTA, CAFTA
  - World Trade Organization (WTO)

TRADE

- World Trade Organization (WTO):
  International organization dealing with rules of trade between nations
• World Trade Organization (WTO):
  – Created in 1995
  – Replaced General Agreement on Tariffs and Trade (GATT), created in 1948

• World Trade Organization (WTO):
  – Based on multilateral trading agreements, negotiated and signed by most of world's main trading nations
    • Agreements are contracts that guarantee member countries important trading rights
    • Agreements bind governments to keep their trade policies within agreed limits

• World Trade Organization (WTO):
  – Objective
    • Help trade flow
      – Smoothly
      – Freely
      – Fairly
      – Predictably
TRADE

- World Trade Organization (WTO):
  - Means for achieving purpose
    - Administering trade agreements
    - Acting as forum for trade negotiations
    - Settling trade disputes
    - Reviewing national trade policies
    - Assisting developing countries in trade policy issues
    - Cooperating with other international organizations

TRADE

- WTO’s Agreement on Agriculture
  - Objective:
    - Make agricultural policies more market-oriented
      - Allow governments to support domestic agriculture, but through policies that do not distort trade

TRADE

- WTO’s Agreement on Agriculture established rules regarding:
  1. Market access
    - All import restrictions (e.g., quotas) replaced by tariffs that provide more-or-less equivalent levels of protection
TRADE

- WTO’s Agreement on Agriculture established rules regarding:
  1. Market access
  2. Domestic support
     - Restrict domestic policies that stimulate production directly
       - Subsidies and other programs that raise or guarantee farmgate prices and farmers’ incomes
  3. Export subsidies
     - Prohibition of export subsidies on agricultural products, unless specified in a member’s lists of commitments