MACROECONOMICS
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WEEK 3
Why do nations trade?

- To exchange plentiful goods for scarce or nonexistent goods
  - To take advantage of different factor endowments
- To increase diversity of choice
- To increase wealth
  - Specialization
  - Productivity and efficiency
  - Currency fluctuations
  - Growth
  - Innovation
- To spread dependency and reduce risk
- To limit inflation
- To grow the wealth of those who have political influence
- To serve a geopolitical aim
Why do nations limit trade?

• To protect industries
  • Established
  • Infant
• To protect jobs
• To protect intellectual capital
• National security
• Limit dependency
• Unfair competition
• Environmental and labor concerns
• To achieve some geopolitical aim
A Brief History of International Trade

• Trade between nomads in Arabia and the Far East, linked to the domestication of camels, can be traced back 4500 years

• Ancient Greek philosophers recognized the dual view of trade: the benefits of international exchange and the concern that certain domestic industries or laborers or culture could be harmed
  • In 380 BC, Plato discussed the practical impossibility of self-sufficiency for a city state and explained that a division of labor and specialization brings higher productivity
  • At about the same time, Aristotle argued for self-sufficiency to limit foreign commerce and unwanted contact with foreigners

• Perhaps the most famous of the early trading routes was the Silk Road (or Routes)
  • Established around 130 BC and remained in use for about 1500 years
  • Connected China and western lands in the Roman Empire, Persia and India
  • Generally traded silk, tea, spices and medicine from the East and horses, grape vines, honey, and textiles from the West

• The Middle Ages saw increasing trade in Asia and along the Silk Road
INTERNATIONAL TRADE

A Brief History of International Trade

- Marco Polo was a key figure in the late 13th and early 14th century with travels between Italy and China

- Recall from our first class that the end of the Dark Ages in Europe around the 15th century marked the beginnings of a merchant class

- Activity picked up with increasing trade to and from Italy, Portugal, Japan, and The Netherlands
  - The Dutch East India Company was formed in 1602
    - …and goes bankrupt in 1799 partly due to the rise in competitive free trade
  - The first English trading outpost was established in Sumatra in 1685

- Mercantilism was the first systematic body of economic thought devoted to international trade
  - Emerged with the “Dutch Puzzle” of the 1600s
  - Promoted the idea that a key objective of trade to achieve a “favorable” balance of trade, by which was meant high value exports (principally manufactured goods) and low value imports (raw materials)
  - States were in perpetual economic and political conflict with each other and, therefore, saw trade as a “zero-sum” game
  - Led to protectionist policies such as tariffs, quotas and subsidies in support of national producers
A Brief History of International Trade

- 18th century French economists known as physiocrats argued in favor of trade liberalizations.

- Adam Smith’s “Wealth of Nations” in 1776 fundamentally changed economic thinking about international trade by arguing that growth depended upon specialization and the division of labor.
  - As with Plato 2000 years earlier, specialization promoted greater productivity and, through specialization, international trade could increase the market for any given country and, therefore, for all countries.
  - Smith is remembered not only for his support of free trade but for exposing the costs of government intervention (tariffs and subsidies), thus attacking mercantilism.
  - Smith noted that trade restrictions did not come about to serve general interests but rather because of pressure of special interests that sought to diminish competition for their own benefit.

- Britain unilaterally adopts free trade policies in 1846 by dropping restrictions on imported food and grain that had been in place since 1815 to protect domestic producers.

- The first international free trade agreement is finalized in 1860 between France and the United Kingdom sparking similar agreements with other countries in Europe.
A Brief History of International Trade

- David Ricardo’s “Principles of Political Economy” built on Smith’s support for free trade by being most associated with the concept of comparative advantage which is still being taught today
  - The theory of comparative advantage states that a country should export goods in which their relative cost advantage, not their absolute cost advantage, is greatest in comparison to other countries
  - If Country A can produce cloth and wine more efficiently than Country B but its efficiency is greatest with respect to cloth, than Country A should produce cloth and Country B should produce wine
- This is counterintuitive since it states that a less developed country that lacks an absolute advantage in any good can still engage in mutually beneficial trade and a well-developed country that has an absolute advantage in producing all goods will still benefit from trade even though its domestic industries face import competition
A Brief History of International Trade

- The post-1990 period began a reexamination of international trade with one main question in mind: What are the welfare effects of international trade?

- A consensus, albeit a weak one, was that countries trade as a result of productivity differences among industries and countries, essentially as a result of differences in cost and quality.

- A strong consensus was formed around the value of government intervention to ensure the proper development of international trade.

- Various analyses supported the comparative advantage and economies of scale and their relationship to the gravity model of trade (industries cluster geographically and are able to feed off one another for talent and ideas; think Silicon Valley).
  - The “New Economic Geography” theories added by Paul Krugman and others introduced monopolistic competition (industries providing similar but differentiated products and services with low barriers to entry and exit).

- Other theories of trade abound, including some that are quite eclectic, but mainstream economists still remain faithful to mathematical formalism found in comparative advantage and similar theories and hold to the view that international trade is largely beneficial and that trade barriers need to be minimized.

- On the other hand, heterodox economists take the point of view that traditional trade models consistently overemphasize the gains from trade without presenting the negative effects.
INTERNATIONAL TRADE

A Brief History of International Trade

• An economic recession beginning in 1873 led to increasing support for protectionism

• In 1946, the Bretton Woods system established rules for commercial and financial relations among the U.S., Canada, Western Europe, Australia and Japan

• In 1947, 23 countries signed onto the General Agreement on Tariffs and Trade (GATT) to rationalize trade among nations
  • Reduced barriers to free by eliminating quotas, tariffs and subsidies
  • Instituted the most-favored-nation (MFN) principle in tariff agreements, a concept from the 11th C, extending reciprocal favorable treatment between trading countries; meant to give smaller or underdeveloped countries benefits of larger countries; extended to China and Russia in the 1990’s and made permanent for China in December 2001
  • Reduced average tariffs from about 40% after WWII to about 5%

• The European Union was formed in November 1993

• NAFTA takes effect on January 1994

• The World Trade Organization is launched in January 1995 with 125 countries
  • Outgrowth of GATT
  • Based on principles of non-discrimination, reciprocity, binding and enforceable commitments, transparency, and safety values
  • Average worldwide tariffs about 1.6% in 2016

• Trans-Pacific Partnership (TPP) – Besides the purely trade-related pros and cons, a fundamental purpose was to balance the trade dominance of China and India in East Asia
Equilibrium Without Trade...
International Trade in an Exporting Country...
How Free Trade Affects Welfare in an Exporting Country...
How Free Trade Affects Welfare in an Importing Country...

- **Price of Steel**
- **Consumer surplus after trade**
- **Imports**
- **Producer surplus after trade**
- **Domestic supply**
- **World Price**
- **Domestic demand**

Diagram showing the effects of free trade on welfare, including consumer surplus, producer surplus, and imports.
The Effects of a Tariff...

- Domestic supply
- Deadweight loss
- Imports with tariff
- Domestic demand
- Imports without tariff

- Tariff
- World price
- Quantity of Steel

- Price of Steel

- Price with tariff
- Price without tariff

- Imports with tariff
- Imports without tariff

- Q1s, Q2s, Q2d, Q1d
The Impact of Tariff (Tax) Barriers

Tariff Barriers tend to **Increase:**
1. Inflationary pressures
2. Special interests’ privileges
3. Government control and political considerations in economic matters
4. The number of tariffs they beget via reciprocity

Tariff Barriers tend to **Weaken:**
1. Balance-of-payments positions
2. Supply-and-demand patterns
3. International relations (they can start trade wars)

Tariff Barriers tend to **Restrict:**
1. Manufacturer’s supply sources
2. Choices available to consumers
3. Competition
INTERNATIONAL TRADE
THE NUMBERS

• Balance of Payments
  • Not just exports minus imports

• Current Account = Capital Account + Financial Account + Statistical Discrepancy

• Current Account
  • Exports – Imports + Net Income from Abroad (income and dividends)
    + Net Current Transfers (donations, tax payments)

• Capital Account
  • Records changes in assets/liabilities
    • Non-produced, non-financial assets (e.g., rights to natural resources, patents)
    • Capital transfer (e.g., debt forgiveness, migrant transfers)
    • Usually relatively small and sometimes ignored

• Financial Account
  • Records changes in international ownership of financial assets
  • U.S.-owned assets abroad
  • Foreign-owned assets in the U.S. (financial and direct investment)

• Generally, current account deficit = increase in foreign-owned assets
GLOBAL INTERNATIONAL TRADE
THE NUMBERS

  - Global: $25.1 trillion (30.1% of GDP)
  - U.S.: $2.5 trillion (12.2% of GDP)
  - China: $2.7 trillion (19.5% of GDP)
  - Germany: $1.9 trillion (47.4% of GDP)

- Percent of GDP →
  
  • Global: $25.1 trillion (30.1% of GDP)
  • U.S.: $2.5 trillion (12.2% of GDP)
  • China: $2.7 trillion (19.5% of GDP)
  • Germany: $1.9 trillion (47.4% of GDP)

• Value in US$ →
INTERNATIONAL TRADE
THE NUMBERS


  - Global: $25.1 trillion (30.1% of GDP)
  - U.S.: $2.5 trillion (12.2% of GDP)
  - China: $2.7 trillion (19.5% of GDP)
  - Germany: $1.9 trillion (47.4% of GDP)

• Value in local currency →
### U.S. International Trade (2019)

<table>
<thead>
<tr>
<th>Exports</th>
<th>Imports</th>
<th>Surplus (Deficit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goods</strong>: $1.7 trillion</td>
<td><strong>Goods</strong>: $2.5 trillion</td>
<td><strong>Goods</strong>: ($0.8 trillion)</td>
</tr>
<tr>
<td><strong>Services</strong>: $0.8 trillion</td>
<td><strong>Services</strong>: $0.6 trillion</td>
<td><strong>Services</strong>: $0.2 trillion</td>
</tr>
<tr>
<td><strong>Total</strong>: $2.5 trillion</td>
<td><strong>Total</strong>: $3.1 trillion</td>
<td><strong>Total</strong>: ($0.6 trillion)</td>
</tr>
</tbody>
</table>

![Graph of Exports, Imports, and Balance](chart.png)

**[ Millions of dollars]**
• U.S. International Trade
## Table 1. U.S. International Transactions—Table Ends

**[Millions of dollars]**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>Net U.S. acquisition of financial assets excluding financial derivatives (net increase in assets / financial outflow (+))</td>
<td>310,827</td>
<td>426,912</td>
<td>116,085</td>
</tr>
<tr>
<td>62</td>
<td>Direct investment assets</td>
<td>-76,457</td>
<td>197,670</td>
<td>274,127</td>
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<tr>
<td>63</td>
<td>Equity</td>
<td>-151,614</td>
<td>207,046</td>
<td>358,660</td>
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<tr>
<td>64</td>
<td>Debt instruments</td>
<td>-9,376</td>
<td>-82,533</td>
<td>-91,909</td>
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<tr>
<td>65</td>
<td>Portfolio investment assets</td>
<td>334,033</td>
<td>35,875</td>
<td>-298,158</td>
</tr>
<tr>
<td>66</td>
<td>Equity and investment fund shares</td>
<td>194,087</td>
<td>-250,967</td>
<td>-445,054</td>
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<tr>
<td>67</td>
<td>Debt securities</td>
<td>132,846</td>
<td>286,842</td>
<td>154,996</td>
</tr>
<tr>
<td>68</td>
<td>Short term</td>
<td>16,341</td>
<td>167,502</td>
<td>151,161</td>
</tr>
<tr>
<td>69</td>
<td>Long term</td>
<td>123,604</td>
<td>119,339</td>
<td>-4,265</td>
</tr>
<tr>
<td>70</td>
<td>Other investment assets</td>
<td>50,262</td>
<td>188,709</td>
<td>138,447</td>
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<tr>
<td>71</td>
<td>Currency and deposits</td>
<td>71,792</td>
<td>106,199</td>
<td>34,407</td>
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<tr>
<td>72</td>
<td>Loans</td>
<td>-22,423</td>
<td>81,427</td>
<td>103,850</td>
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<td>73</td>
<td>Insurance technical reserves</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td>74</td>
<td>Trade credit and advances</td>
<td>893</td>
<td>1,083</td>
<td>190</td>
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<tr>
<td>75</td>
<td>Reserve assets</td>
<td>4,989</td>
<td>4,659</td>
<td>-330</td>
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<tr>
<td>76</td>
<td>Monetary gold</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>77</td>
<td>Special drawing rights</td>
<td>156</td>
<td>237</td>
<td>81</td>
</tr>
<tr>
<td>78</td>
<td>Reserve position in the International Monetary Fund</td>
<td>4,824</td>
<td>4,271</td>
<td>-553</td>
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<tr>
<td>79</td>
<td>Other reserve assets</td>
<td>150</td>
<td>150</td>
<td>0</td>
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<tr>
<td>80</td>
<td>Currency and deposits</td>
<td>-12</td>
<td>-12</td>
<td>0</td>
</tr>
<tr>
<td>81</td>
<td>Securities</td>
<td>10</td>
<td>162</td>
<td>152</td>
</tr>
<tr>
<td>82</td>
<td>Financial derivatives</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>83</td>
<td>Other claims</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>84</td>
<td>Net U.S. incurrence of liabilities excluding financial derivatives (net increase in liabilities / financial inflow (+))</td>
<td>735,583</td>
<td>784,440</td>
<td>48,857</td>
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<tr>
<td>85</td>
<td>Direct investment liabilities</td>
<td>258,392</td>
<td>310,811</td>
<td>52,419</td>
</tr>
<tr>
<td>86</td>
<td>Equity</td>
<td>357,164</td>
<td>282,418</td>
<td>-74,746</td>
</tr>
<tr>
<td>87</td>
<td>Debt instruments</td>
<td>56,773</td>
<td>28,393</td>
<td>28,380</td>
</tr>
<tr>
<td>88</td>
<td>Portfolio investment liabilities</td>
<td>315,676</td>
<td>231,317</td>
<td>-84,359</td>
</tr>
<tr>
<td>89</td>
<td>Equity and investment fund shares</td>
<td>142,396</td>
<td>-220,801</td>
<td>-363,197</td>
</tr>
<tr>
<td>90</td>
<td>Debt securities</td>
<td>173,280</td>
<td>456,418</td>
<td>283,138</td>
</tr>
<tr>
<td>91</td>
<td>Short term</td>
<td>28,096</td>
<td>-44,792</td>
<td>-72,888</td>
</tr>
<tr>
<td>92</td>
<td>Long term</td>
<td>145,151</td>
<td>503,210</td>
<td>358,059</td>
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<tr>
<td>93</td>
<td>Other investment liabilities</td>
<td>161,515</td>
<td>242,012</td>
<td>80,497</td>
</tr>
<tr>
<td>94</td>
<td>Currency and deposits</td>
<td>32,320</td>
<td>196,387</td>
<td>164,067</td>
</tr>
<tr>
<td>95</td>
<td>Loans</td>
<td>114,066</td>
<td>35,687</td>
<td>-78,379</td>
</tr>
<tr>
<td>96</td>
<td>Insurance technical reserves</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>97</td>
<td>Trade credit and advances</td>
<td>15,123</td>
<td>9,967</td>
<td>-5,156</td>
</tr>
<tr>
<td>98</td>
<td>Special drawing rights allocations</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>99</td>
<td>Financial derivatives other than reserves, net transactions</td>
<td>-20,721</td>
<td>-38,378</td>
<td>-17,657</td>
</tr>
<tr>
<td>100</td>
<td>Statistical discrepancy</td>
<td>42,266</td>
<td>102,456</td>
<td>60,190</td>
</tr>
<tr>
<td>101</td>
<td>Balance on current account (line 1 less line 31)</td>
<td>-490,978</td>
<td>-498,351</td>
<td>-7,373</td>
</tr>
<tr>
<td>102</td>
<td>Balance on goods and services (line 2 less line 32)</td>
<td>-627,679</td>
<td>-616,425</td>
<td>-11,254</td>
</tr>
<tr>
<td>103</td>
<td>Balance on goods (line 3 less line 33)</td>
<td>-887,338</td>
<td>-866,244</td>
<td>-21,094</td>
</tr>
<tr>
<td>104</td>
<td>Balance on services (line 13 less line 42)</td>
<td>269,858</td>
<td>28,559</td>
<td>-241,304</td>
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<tr>
<td>105</td>
<td>Balance on primary income (line 23 less line 52)</td>
<td>253,985</td>
<td>256,997</td>
<td>3,012</td>
</tr>
<tr>
<td>106</td>
<td>Balance on secondary income (line 30 less line 58)</td>
<td>-117,284</td>
<td>-138,923</td>
<td>-21,639</td>
</tr>
<tr>
<td>107</td>
<td>Balance on capital account (line 59 less line 60)</td>
<td>3,235</td>
<td>-10</td>
<td>-3,245</td>
</tr>
<tr>
<td>108</td>
<td>Net lending (+) or net borrowing (-) from current-account transactions (line 101 plus line 107)</td>
<td>-487,743</td>
<td>-498,361</td>
<td>-10,618</td>
</tr>
<tr>
<td>109</td>
<td>Net lending (+) or net borrowing (-) from financial-account transactions (line 61 less line 84 plus line 99)</td>
<td>-445,477</td>
<td>-395,806</td>
<td>49,671</td>
</tr>
</tbody>
</table>
• U.S. International Trade

• 2019 Balance of Payments (prelim.)
  • Current account:
    • Exports and income receipts: $3.8 trillion
    • Imports and income payments: $4.3 trillion
    • Deficit: $0.5 trillion
  • Capital account: Approx. $0
  • Financial account:
    • Net acquisition of financial assets: $$0.4 trillion
    • Net incurrence of liabilities: $0.8 trillion
    • Deficit: $0.4 trillion
  • Statistical discrepancy: $0.1 trillion
### Which Countries Are Net Exporters & Importers?

Selected countries by positive/negative current account balance* (in billion U.S. dollars)

#### Net exporters

<table>
<thead>
<tr>
<th>Country</th>
<th>Balance (billion U.S. dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>296.6</td>
</tr>
<tr>
<td>Japan</td>
<td>195.4</td>
</tr>
<tr>
<td>China</td>
<td>164.9</td>
</tr>
<tr>
<td>South Korea</td>
<td>78.5</td>
</tr>
<tr>
<td>Italy</td>
<td>56.1</td>
</tr>
<tr>
<td>Ireland</td>
<td>41.9</td>
</tr>
<tr>
<td>Russia</td>
<td>40.3</td>
</tr>
<tr>
<td>Spain</td>
<td>21.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>17.0</td>
</tr>
</tbody>
</table>

#### Net importers

<table>
<thead>
<tr>
<th>Country</th>
<th>Balance (billion U.S. dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>-9.8</td>
</tr>
<tr>
<td>Egypt</td>
<td>-15.4</td>
</tr>
<tr>
<td>Argentina</td>
<td>-30.8</td>
</tr>
<tr>
<td>Australia</td>
<td>-32.3</td>
</tr>
<tr>
<td>France</td>
<td>-36.8</td>
</tr>
<tr>
<td>Turkey</td>
<td>-47.1</td>
</tr>
<tr>
<td>Canada</td>
<td>-49.3</td>
</tr>
<tr>
<td>India</td>
<td>-51.2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>-106.7</td>
</tr>
<tr>
<td>United States</td>
<td>-466.2</td>
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</tbody>
</table>
### U.S. Trade in Goods and Services by Selected Countries and Areas - BOP Basis

In millions of dollars. (-) Represents zero or less than one-half of measurement shown.

<table>
<thead>
<tr>
<th>Country and Area</th>
<th>Annual 2017</th>
<th>Annual 2018</th>
<th>Annual 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>29,162</td>
<td>31,741</td>
<td>32,402</td>
</tr>
<tr>
<td>Canada</td>
<td>2,814</td>
<td>3,639</td>
<td>-5,320</td>
</tr>
<tr>
<td>China</td>
<td>-337,204</td>
<td>-380,804</td>
<td>-307,597</td>
</tr>
<tr>
<td>France</td>
<td>-14,009</td>
<td>-13,421</td>
<td>-17,356</td>
</tr>
<tr>
<td>Germany</td>
<td>-66,889</td>
<td>-67,372</td>
<td>-66,245</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>33,747</td>
<td>33,761</td>
<td>29,309</td>
</tr>
<tr>
<td>India</td>
<td>-27,514</td>
<td>-25,280</td>
<td>-27,103</td>
</tr>
<tr>
<td>Italy</td>
<td>-34,651</td>
<td>-35,454</td>
<td>-37,583</td>
</tr>
<tr>
<td>Japan</td>
<td>-57,211</td>
<td>-57,981</td>
<td>-57,498</td>
</tr>
<tr>
<td>Korea, South</td>
<td>-9,512</td>
<td>-7,421</td>
<td>-9,886</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>5,396</td>
<td>-3,084</td>
<td>9,106</td>
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<tr>
<td>Singapore</td>
<td>23,480</td>
<td>18,316</td>
<td>18,085</td>
</tr>
<tr>
<td>Taiwan</td>
<td>-14,314</td>
<td>-12,754</td>
<td>-20,077</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>15,646</td>
<td>18,629</td>
<td>18,226</td>
</tr>
<tr>
<td>All other countries</td>
<td>-31,658</td>
<td>-51,615</td>
<td>-73,779</td>
</tr>
<tr>
<td>CAFTA-DR</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>European Union</td>
<td>-101,180</td>
<td>-114,625</td>
<td>-123,036</td>
</tr>
<tr>
<td>OPEC</td>
<td>9,098</td>
<td>1,254</td>
<td>24,385</td>
</tr>
<tr>
<td>South/Central America</td>
<td>79,926</td>
<td>84,427</td>
<td>83,513</td>
</tr>
</tbody>
</table>
Top 5 U.S. Trade Partners

Percentages based on the total volume of goods traded, and the total deficit amounts for the top 5 U.S. partners in 2019.

<table>
<thead>
<tr>
<th>Volume of Trade</th>
<th>Deficit Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>28%</td>
</tr>
<tr>
<td>Canada</td>
<td>28%</td>
</tr>
<tr>
<td>China</td>
<td>26%</td>
</tr>
<tr>
<td>Germany</td>
<td>(9%)</td>
</tr>
<tr>
<td>Japan</td>
<td>(10%)</td>
</tr>
</tbody>
</table>

Total: 2,192
The countries with which the United States has the largest trade deficits in goods are not always its most important trading partners. Some nations export a lot without importing much. But the top five trading partners also have the largest deficits.

1. **Mexico** - $615 billion traded with a $102 billion deficit.
2. **Canada** - $612 billion traded with a $27 billion deficit.
3. **China** - $559 billion traded with a $346 billion deficit.
4. **Japan** - $218 billion traded with a $69 billion deficit.
5. **Germany** - $188 billion traded with a $67 billion deficit.
INTERNATIONAL TRADE
IMPACT ON GDP

\[ \text{GDP} = C + I + G - NX = C + I + G + (X - M) \]

\[ \text{GNP} = \text{GDP} + \text{Net income from abroad (R)} = C + I + G + (X - M) + R \]
Where \( (X - M) + R = \text{Current account, CA} \) (R = net income from abroad and transfers)

\[ \text{GNP} - T = C + I + G + (X - M) + R - T = (G - T) + C + I + CA \]

\[ \text{GNP} - T - C = (G - T) + I + CA \]
Total income – taxes – consumption = Personal Savings (S) = Government deficit + Investment + CA

Therefore \( (S - I) = \text{Government Deficit} + \text{CA} \)

This is another way of expressing the MMT sectoral balance concept where:
• \( (S - I) = \text{private domestic financial balance} \)
• \( (T - G) = \text{government financial balance} \)
• \( (X - M) + R = CA = \text{external financial balance} \)
• Private domestic financial balance = Government financial balance + External Financial Balance

If \( S > I \), then the private sector is spending less than its total income which is helping finance the government deficit,
Otherwise, the private sector isn’t saving enough and greater pressure is placed on the trade deficit to finance the government deficit.
National savings rates (2017)
- World: 9.6%
- China: 22.7%
- EU: 6.4%
- Germany: 10.5%
- Japan: 5.2%
- U.S. 2.9%
National investment rates (2016)
- World: 1.4%
- China: ??
- EU: 1.3%
- Germany: 0.7%
- Japan: 1.1%
- U.S. 1.3%

Savings minus Investment
- World: 8.2%
- China: ??
- EU: 5.1%
- Germany: 9.8%
- Japan: 4.1%
- U.S. 1.6%
The implication of low U.S. excess savings, sometimes referred to as private domestic financial balance, \((S - I)\) is:

- The U.S. is importing excess savings from the rest of the world
- The U.S. federal deficit requires more out of the trade (current account) deficit in order to balance
- If the federal deficit increases, either U.S. savings must increase (that is, a reduction in domestic consumption) or the trade deficit will increase
It is counterintuitive but, for an economy as a whole, imports represent a real benefit while exports represent a real cost

- Exports are considered to be a cost in the sense that they deprive the domestic population of the use of real resources that are absorbed in the production of goods and services sold abroad – this is an opportunity cost

- On the other hand, imports represent foreigners giving us something real which puts the opportunity cost on them

- Net imports means that a nation gets to enjoy a higher material living standard by consuming more than it produces

- The U.S. current account deficit “finances” foreigners’ desire to accumulate financial claims denominated in U.S. dollars while the U.S. gains in “real” terms

- A trade deficit is a sign that the real “terms of trade” (TOT) are favorable
  - TOT = ratio of export prices to import prices = amount of import goods an economy can purchase per unit of export goods = an indication of a domestic currency’s relative strength
USMCA (nee NAFTA)

- USMCA goes into force July 1, 2020
  - Preceded by NAFTA implemented January 1994 to remove tariffs between the U.S., Mexico, and Canada
  - Preceded by U.S. Canada Free Trade Agreement (1/1/89)

- NAFTA
  - Pros:
    - Tripled trade between U.S., Mexico and Canada
    - Increased U.S. growth by an estimated 0.1% - 0.5%/year
    - Lowered energy costs from Mexico reduced reliance on OPEC
    - Lowered prices and increased competition
    - Fostered greater integration with Mexico
  - Cons:
    - Estimated 500-750,000 job losses but disputed
    - Significantly reduced Mexican fam employment
    - Reduced U.S. wages
USMCA (nee NAFTA)

- USMCA goes into force July 1, 2020
  - Few changes from NAFTA: Autos and Intellectual Property
  - Very similar language to TPP (one study found nearly 60% of language in USMCA came from TPP)

- USMCA
  - Pros and Cons
    - More U.S. auto jobs but higher automobile costs
    - More access to Canadian dairy markets but dispute mechanism changes U.S. wanted not changed
Trans-Pacific Partnership (TPP)

Pros:
• Expected increase of over $200 billion in global wage increases
• Reduction in tariffs
• Economic growth estimated to increase $300 billion/year
• Wildlife and environmental protections
• Intellectual property protections
• Increased access to technology

Cons:
• Reductions in U.S. negotiating power
• Additional income would accrue to the most wealthy (est. to be those earning over $90,000/year)
• Reductions in the availability of generic drugs
• Would result in more off-shoring
• Tariff reductions would lower government income
Does international trade cause job losses and reductions in wages in the U.S.?

- The data is mixed and hard to unravel from other causes, such as technology
- But does it really matter when the jobs gained are not by those whose jobs are lost
  - This is lost on orthodox economists

- Mitigation
  - Trade Adjustment Assistance (wage assistance and job retraining)
    - Reviews are mixed on eligibility and scope of benefits

- MMT view:
  - The government’s job is to maximize employment
  - There are many unfulfilled needs (see: http://www.dollarsandsense.org/archives/2020/0520nersisyan-wray.html)
  - The Job Guarantee
Uncertain but most likely to lessen as a result of coronavirus, revised supply chains, and increased nationalism
INTERNATIONAL TRADE
DISCUSSION