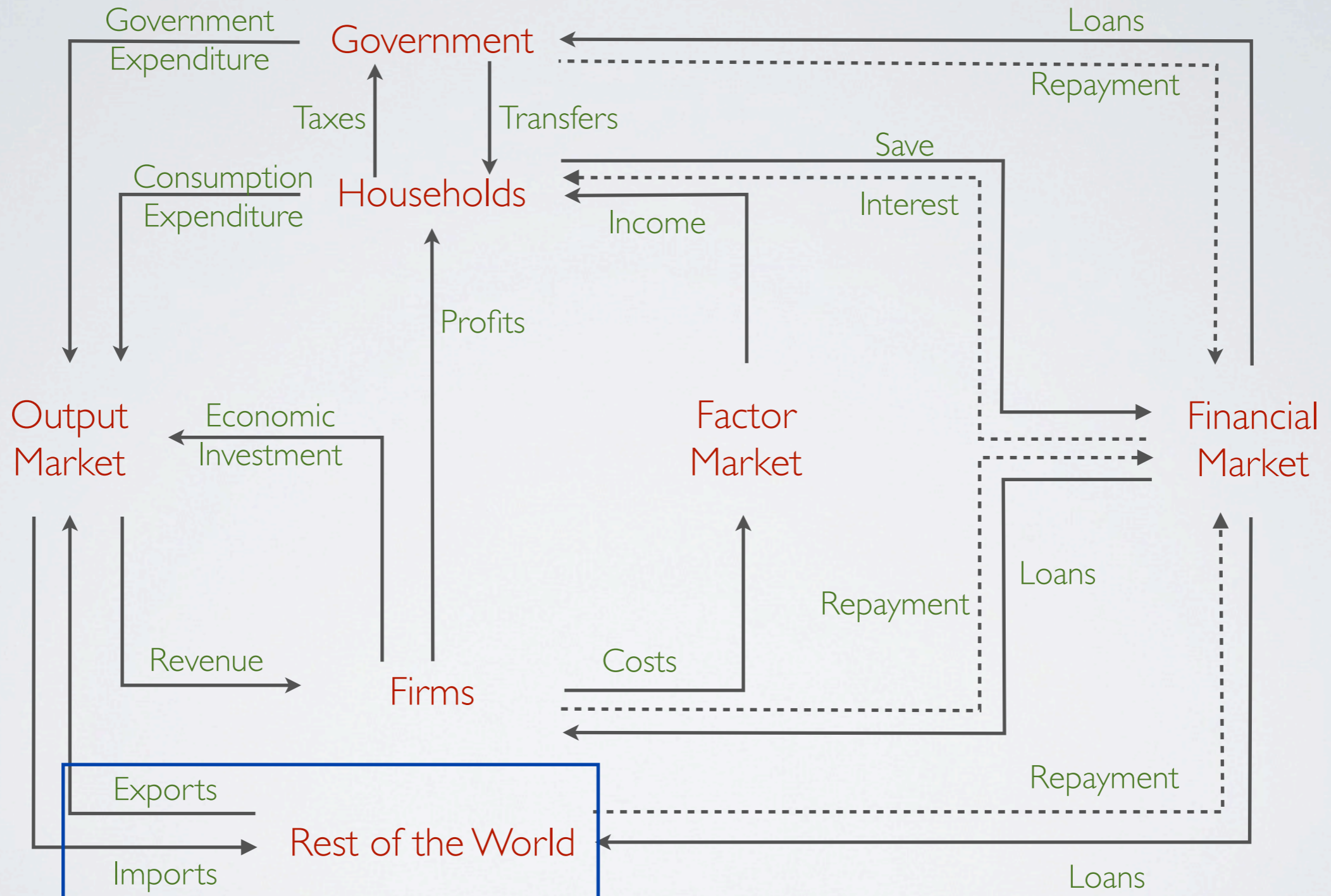


TOPIC 12

Motivation for Trade

BIG PICTURE

- How significant is world trade to the global economy?
- Why does trade occur and what are the theoretical benefits of trade?
- How can we motivate prices in international trade settings?



A VIEW OF TRADE

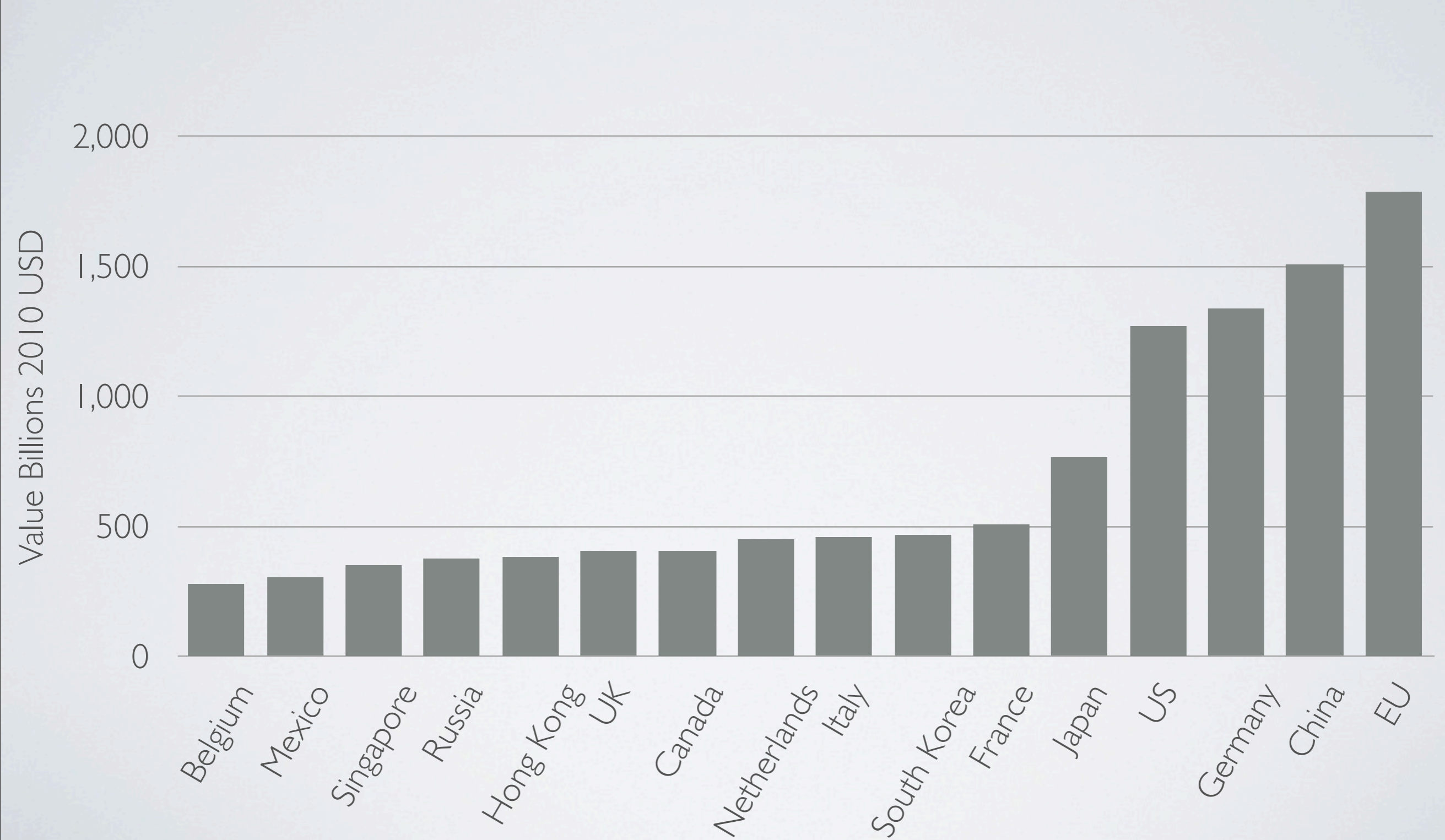


Artist: Eightfish; Cargo ships in Hong Kong harbor

WHY TRADE?

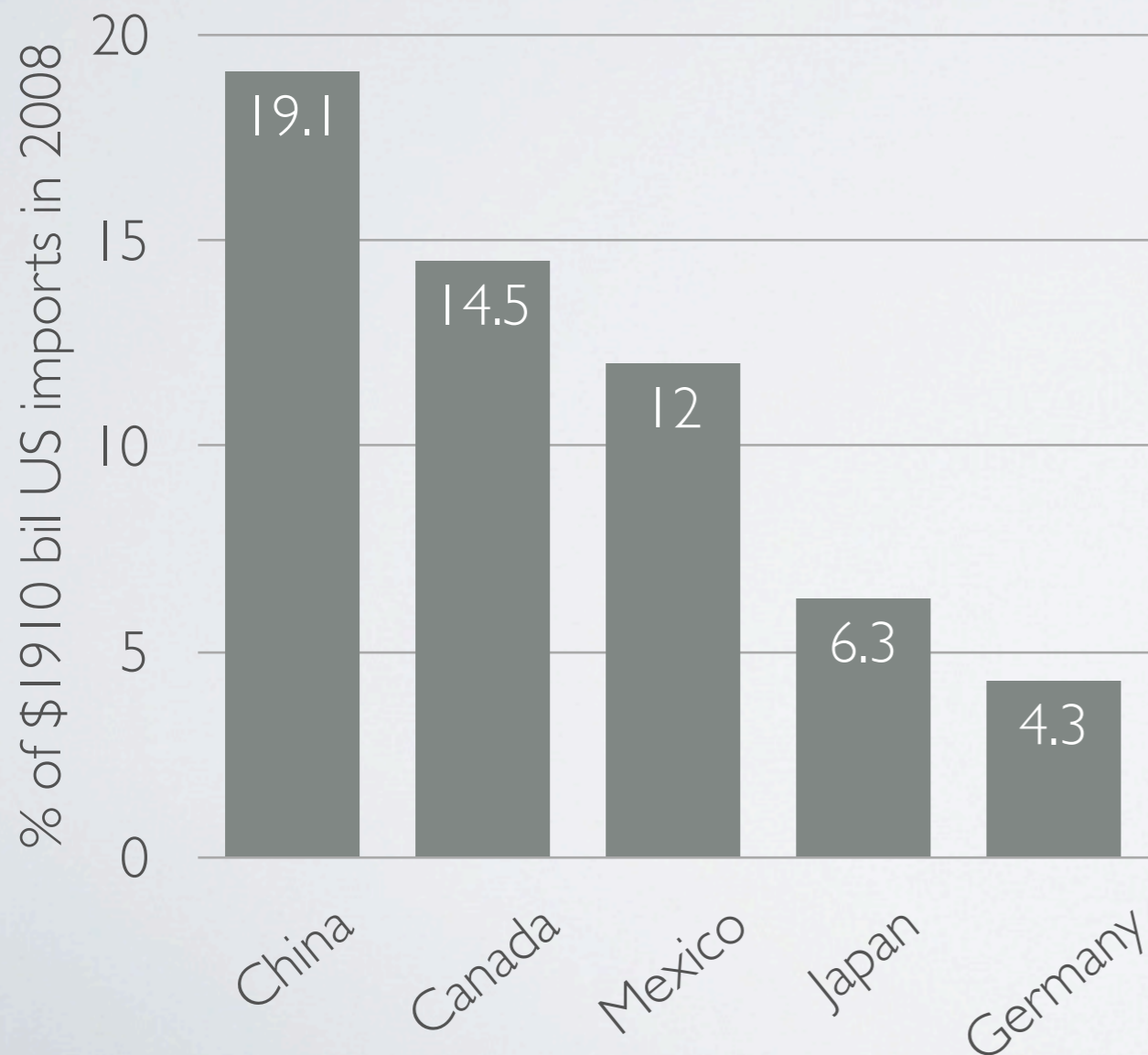
- Can't the US make everything?
- US relies on **imports** for bananas, cocoa, coffee, spices, tea, silk, nickel, tin, rubber, diamonds, luxury brands (Lexus?) ...
- US **exports** agricultural, computer, aircraft, coal, machine tool good

WORLD'S TOP EXPORTERS

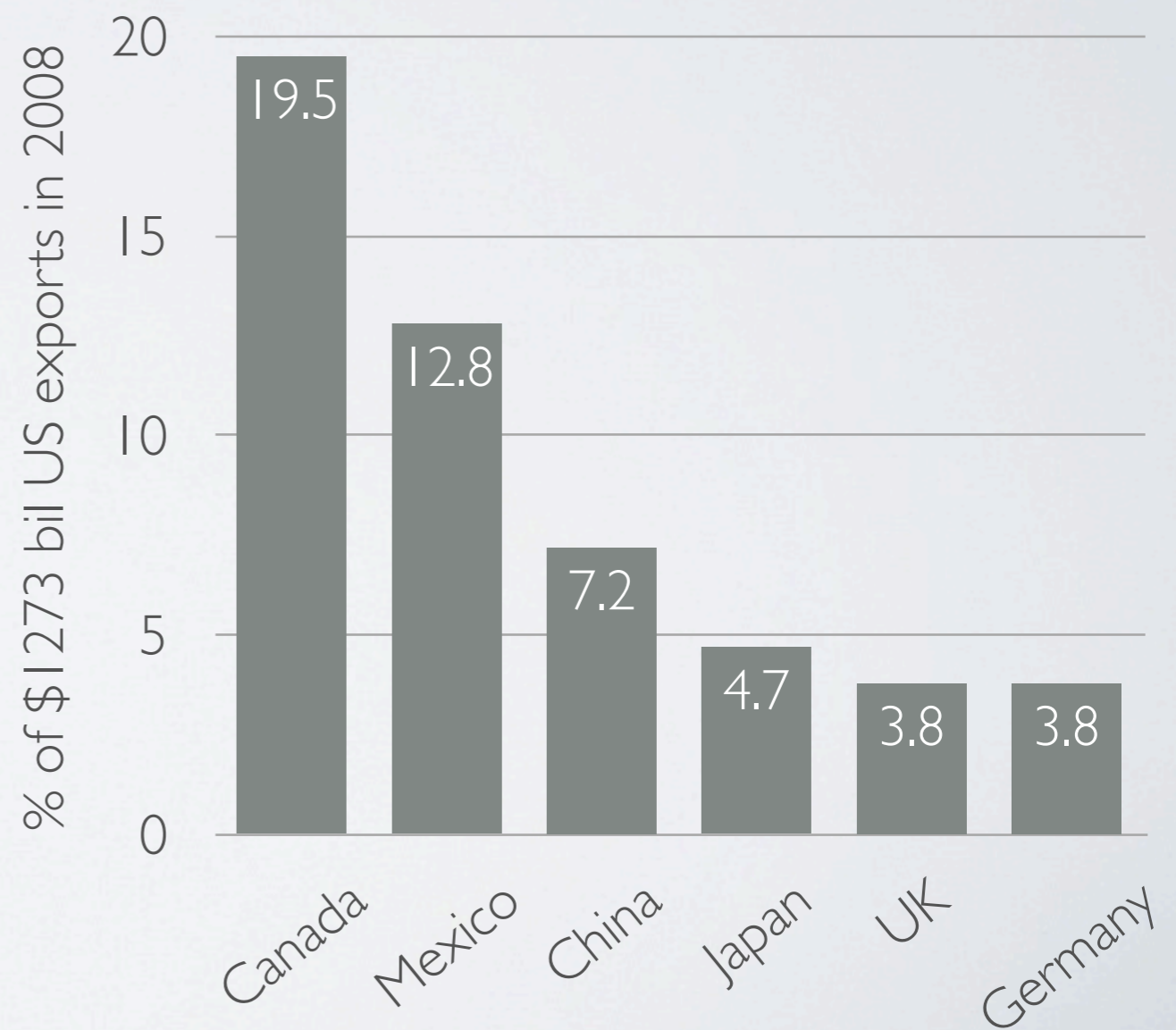


US TOP IMPORTERS / EXPORTERS

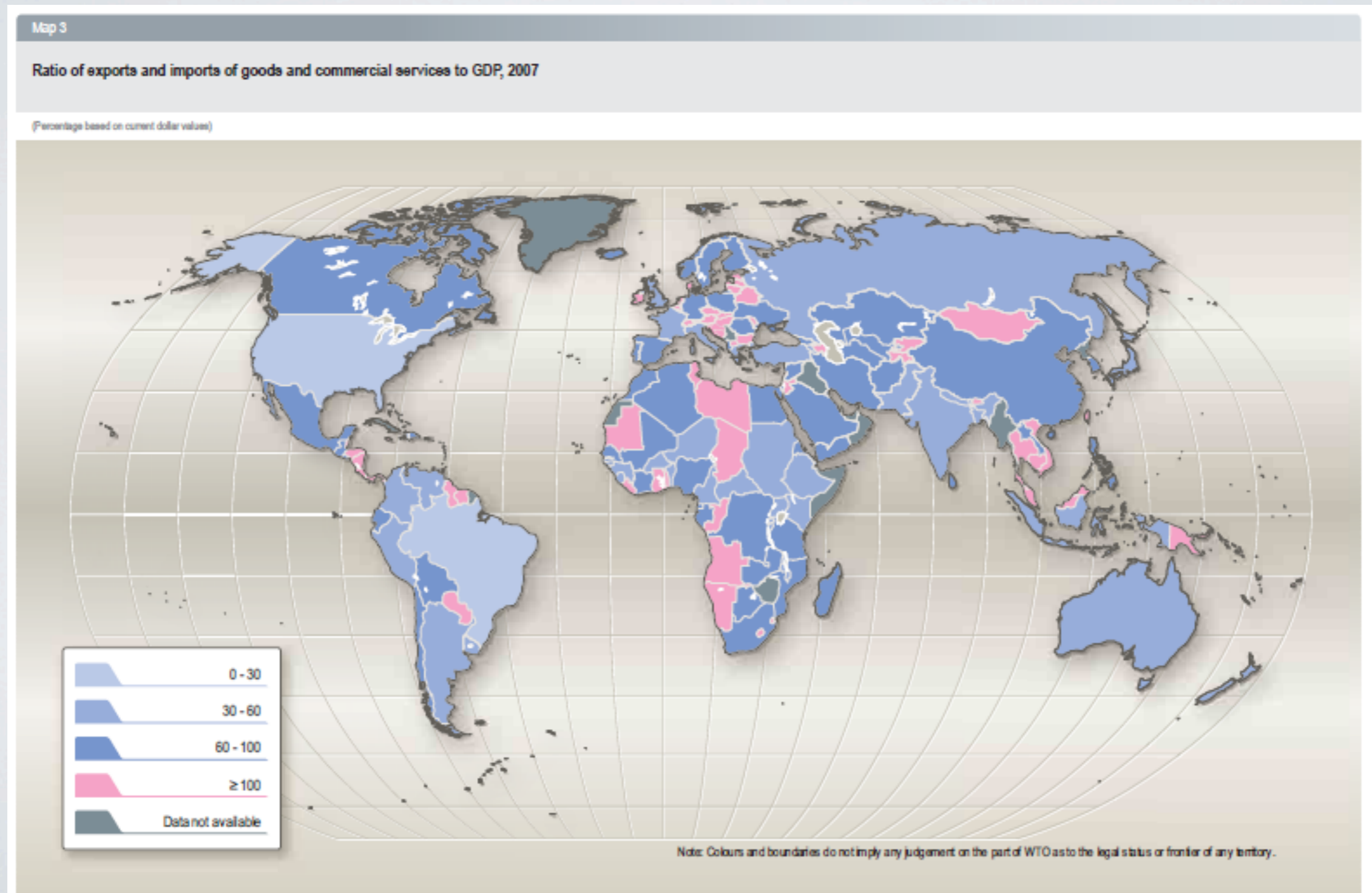
Top exporters to US by % value



Top importers from US by % value



HOW IMPORTANT IS TRADE TO GDP?

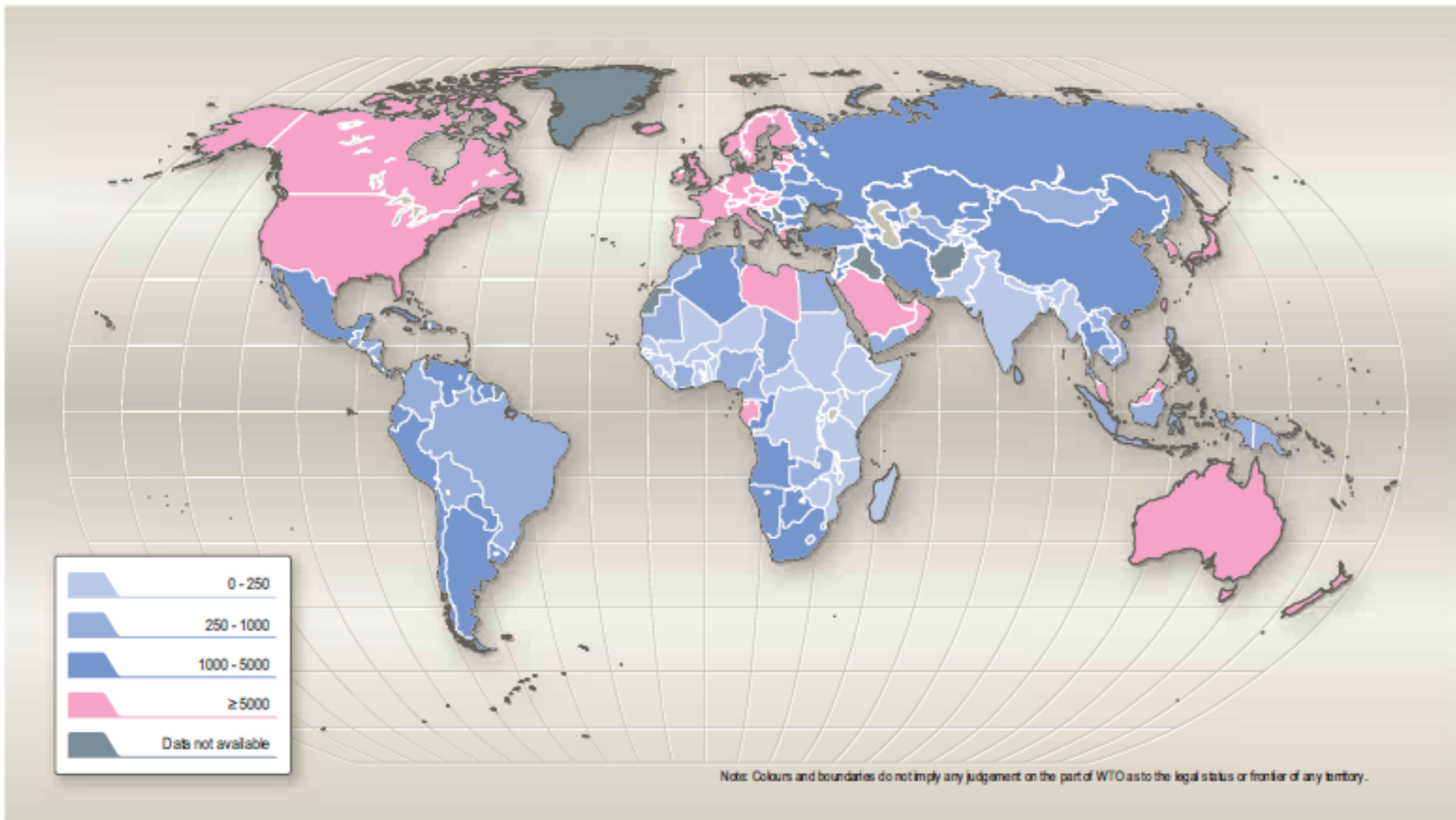


VALUE PER CAPITA?

Map 4

Exports of goods and commercial services per capita, 2007

(Current dollars)



ECONOMIC BASIS FOR TRADE



WHY BOTHER TRADING?

- Think about an extreme example: An Apple engineer and a farmer
 - The farmer can only grow food and the engineer only Apple computers
 - Life is pretty bland (or short-lived) without the other, so the two might change
- Why might the two trade if both are capable of producing both food and Apple computers?

REASONS FOR TRADE

- We will argue that with trade, both people are *able to consume more than before*
- Why?
 1. Distribution of natural, human, and capital resources among countries is not uniform
 2. Efficient production of various goods requires different technologies or allocations of resources
 3. We may have preference for goods only available in other countries
- We can see some of these in an expansion of the *production possibilities frontier*

SIMPLE RICARDIAN MODEL

- What if Brazil and the US only produce coffee and computers, and we look at explanations (1) and (2), that is there is some productivity and/or technology difference
- Time to create 1 computer or pound of coffee in the US and Brazil:

	Computers	Coffee
US	20 min / computer	10 min / pound
Brazil	1 hr / computer	15 min / pound

PRODUCTION POSSIBILITIES

- Remember, the **PPF describes the *most we can produce with full use of resources*** (topic 4)
- If there are 8 hr / day, how much can be produced each day?

	Computers	Coffee
US	24 computers	48 pounds
Brazil	8 computers	32 pounds

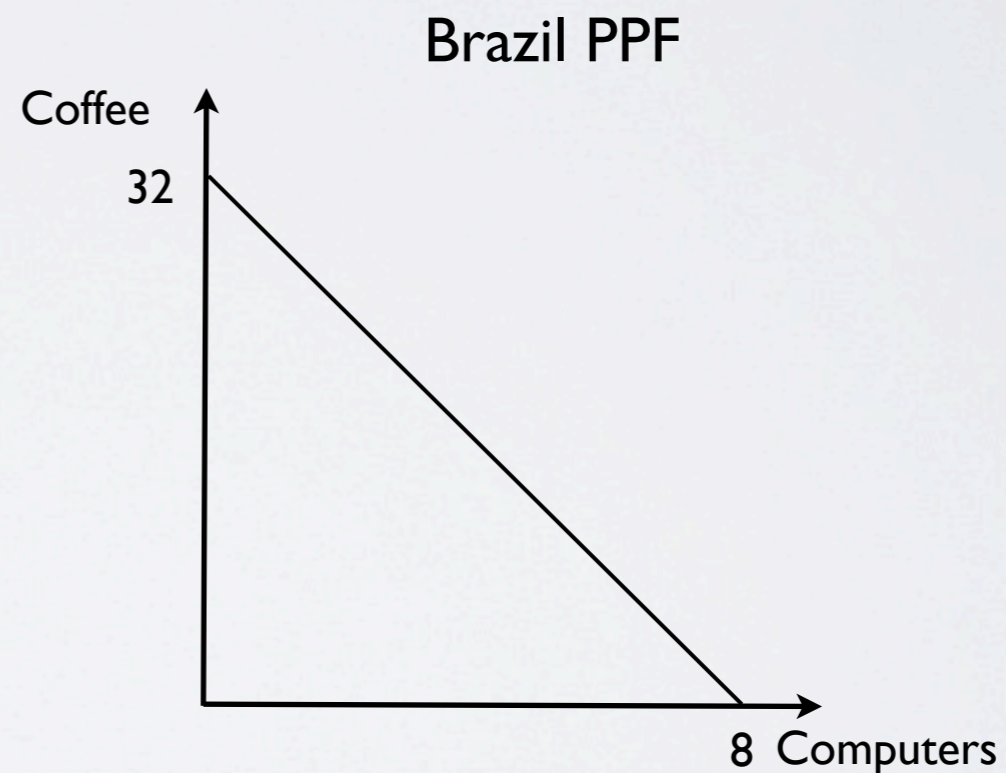
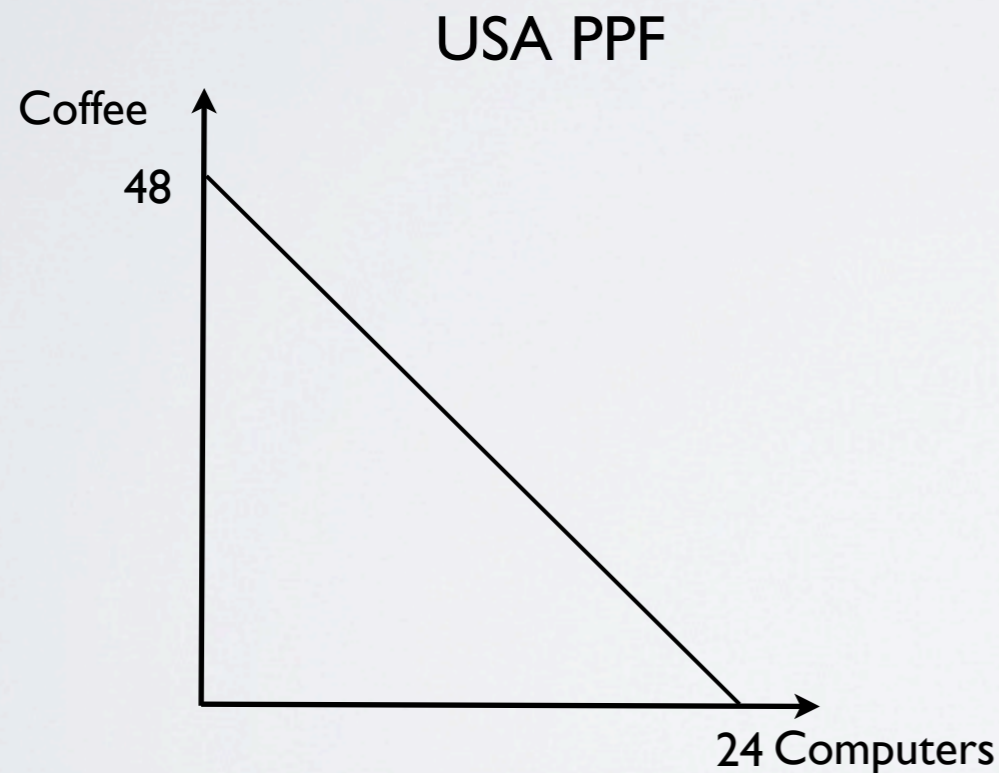
PRODUCTION POSSIBILITIES

- What is the country allocating?
- It could be labor, capital, let's assume time
 - So Brazil and the US have a stock of 8 hours; what are potential production options
 - Precisely what we derived when we showed the max production of each good by country in 8 hours

	Computers	Coffee
US	24 computers	48 pounds
Brazil	8 computers	32 pounds

PRODUCTION POSSIBILITIES

- We can illustrate these on a PPF since we have two points for each country



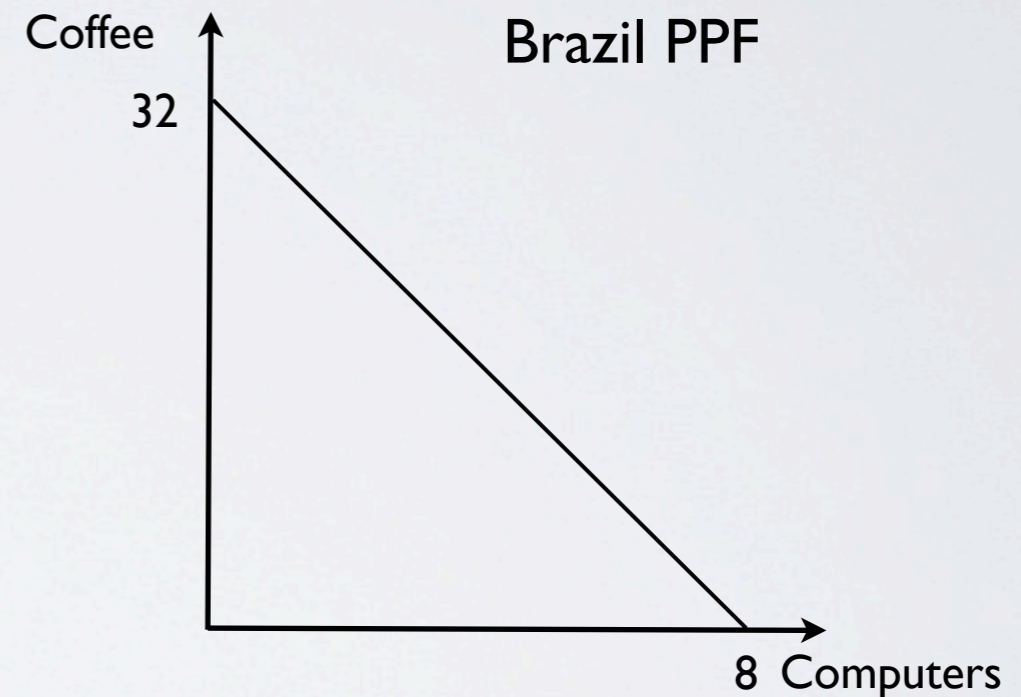
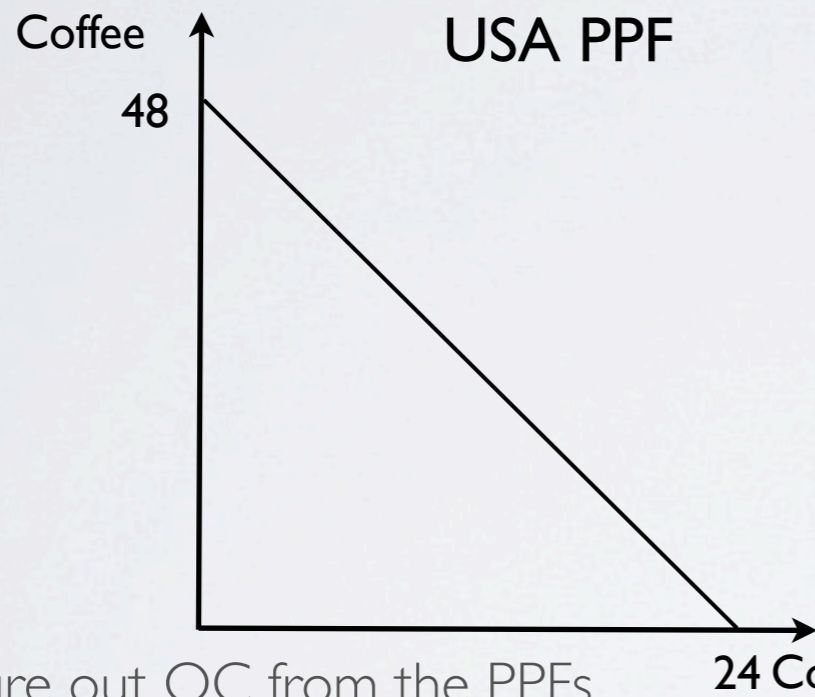
- The US can produce more of both goods in 8 hours, is there any reason to trade?

ABSOLUTE ADVANTAGE

- The fact that the US can produce more of both coffee and computers means it has an absolute advantage in both goods
- **Absolute advantage:** Able to produce more of a specific product than another country when it devotes all resources to producing it
- But, there can still be gains from trade
- In producing a computer, for example, the US (and Brazil) gives up some production of coffee because of limited time
 - (The same is true for limited resources in a case with resource not time allocation)

OPPORTUNITY COST

- Recall the price of one good in terms of what else is given up is **opportunity cost (OC)**



- We can figure out OC from the PPFs
 - For the US, if we produce one more computer, how many coffees must we give up?
 - It is simply the slope! So US $OC(\text{computers}) = 2$ coffee
- The (absolute value of) slope is the $OC(\text{good on x-axis})$ and the reciprocal is the $OC(\text{good on y-axis})$