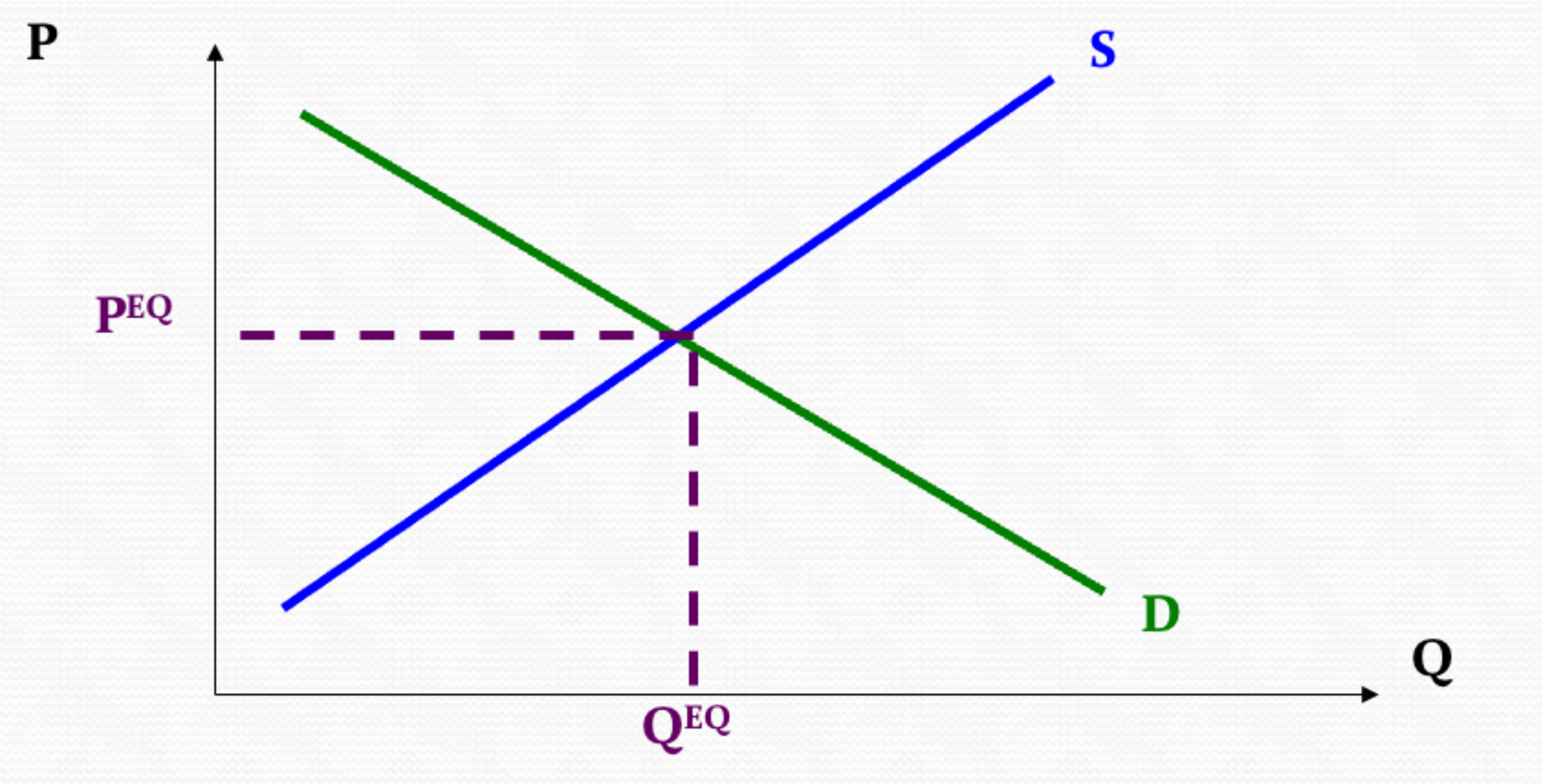
Externalities & Transaction Costs

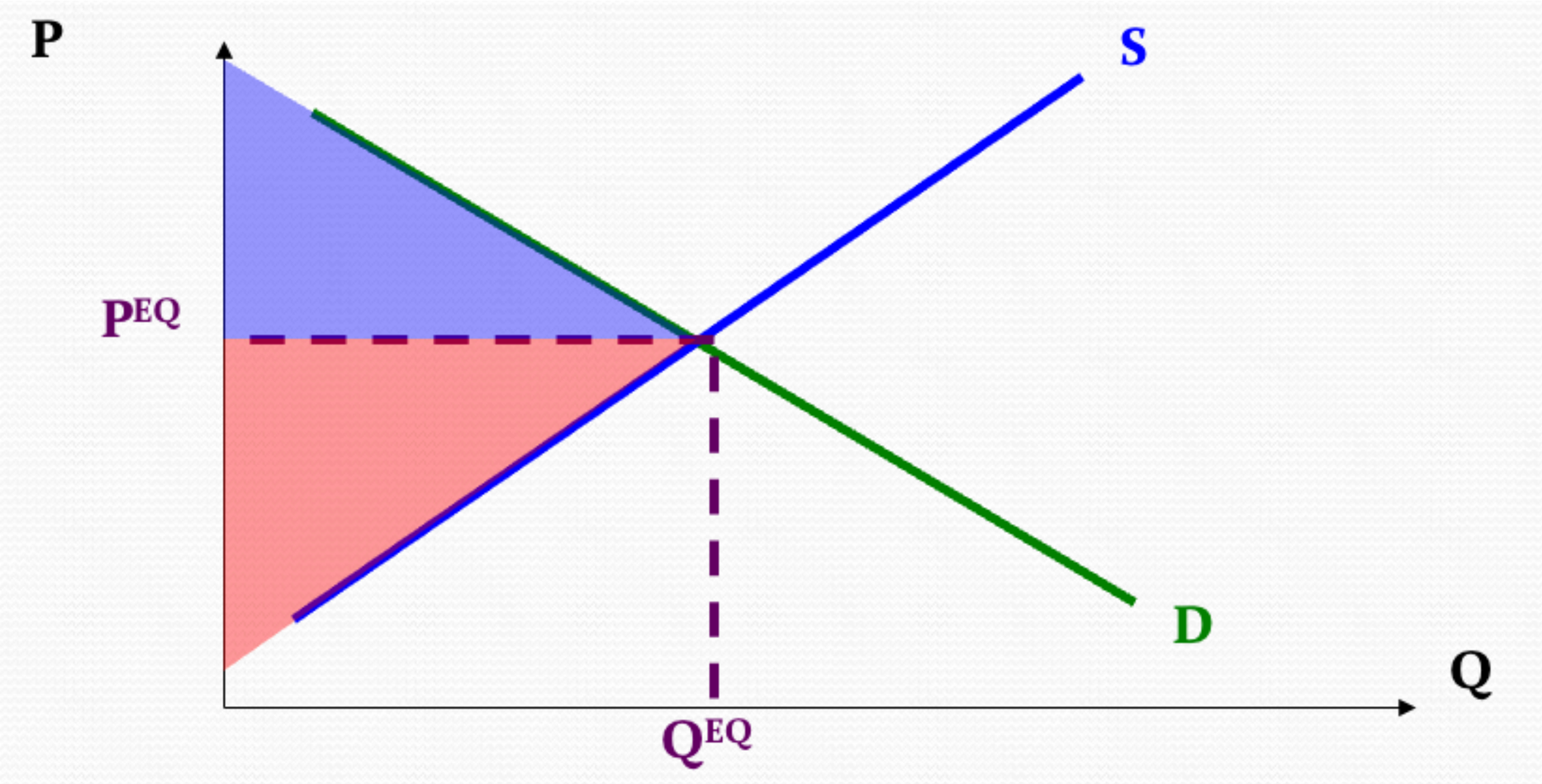
BECO-3310 Fall 2025

Markets generally lead to efficient outcomes.

- When individuals can voluntarily bargain with one another, all mutually beneficial exchanges can be identified and carried out.
- Total (consumer plus producer) surplus will be maximized.
- There‘s no deadweight losses associated with mutually beneficial exchanges not identified and carried out.



- At equilibrium, sellers bring to market exactly the amount that buyers are willing to purchase at that price.
- No wasteful production occurs, nor is anyone willing to pay for the good but unable to obtain it.



- The sum of consumer surplus and producer surplus (total surplus) is maximized.
- All mutually beneficial exchanges are identified and executed.

Markets generally lead to efficient outcomes.

- This assumes that when individuals exchange there are no *spillover effects* onto others not party to the exchange.
- It also assumes that individuals *can* costlessly identify mutually beneficial exchanges and cary them out.
- There are two key points:
  - The *absence of spillover effects.*
  - The *costs of identifying exchange partners and exchanging*.

Markets generally lead to efficient outcomes.

- This assumes that when individuals exchange there are no *spillover effects* onto others not party to the exchange.
- It also assumes that individuals *can* costlessly identify mutually beneficial exchanges and cary them out.
- There are two key points:
  - The *absence of spillover effects.*
  - The *costs of identifying exchange partners and exchanging*.

Externalities

- The technical term for spillovers is externalities.
- **Externalities (also external effects):** costs or benefits generated by one individual‘s actions that are borne or enjoyed by others.

Externalities

- The technical term for spillovers is externalities.
- **Externalities (also external effects):** costs or benefits generated by one individual‘s actions that are borne or enjoyed by others.
  - Each party to an exchange expects a benefit greater than the cost that he/she incurs.

Externalities

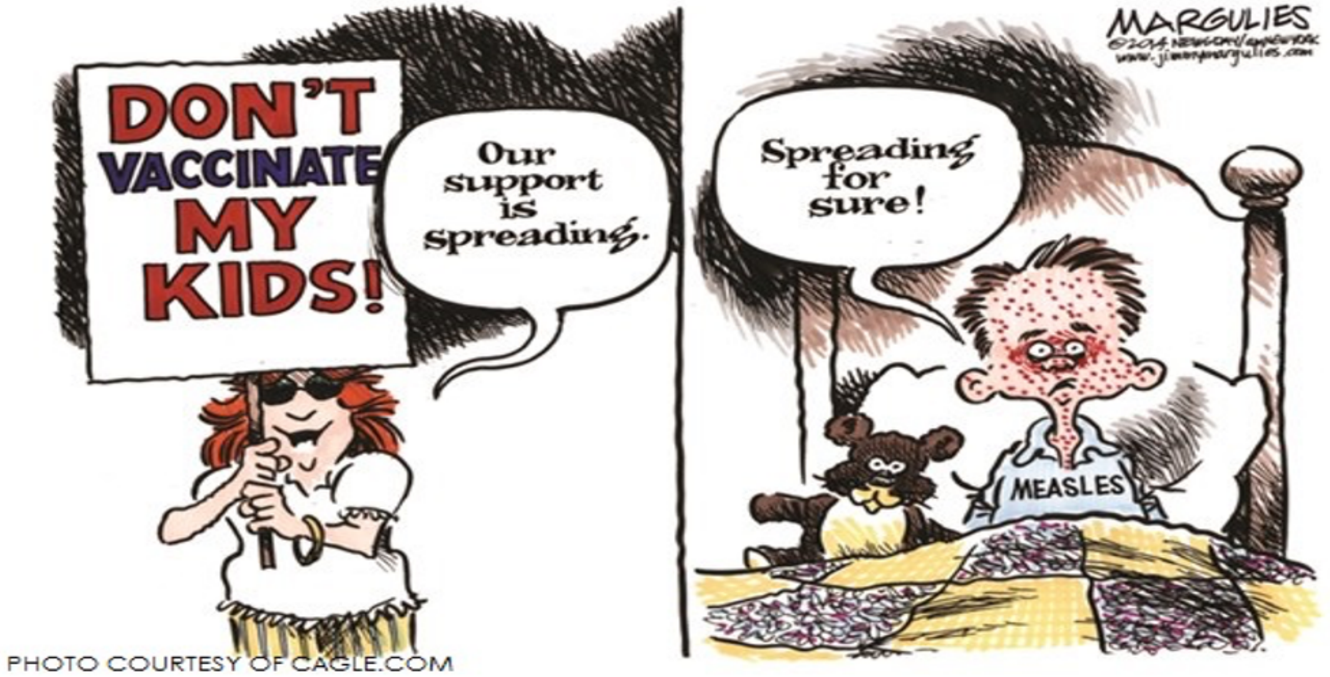
- The technical term for spillovers is externalities.
- **Externalities (also external effects):** costs or benefits generated by one individual‘s actions that are borne or enjoyed by others.
  - Each party to an exchange expects a benefit greater than the cost that he/she incurs.
  - When all benefits/costs are internalized by the parties exchanging, then all benefits/costs are taken into account.

Externalities

- The technical term for spillovers is externalities.
- **Externalities (also external effects):** costs or benefits generated by one individual‘s actions that are borne or enjoyed by others.
  - Each party to an exchange expects a benefit greater than the cost that he/she incurs.
  - When all benefits/costs are internalized by the parties exchanging, then all benefits/costs are taken into account.
    - No exchanges will occur that do not take into account costs on others.
    - No exchanges will fail to occur because they do not take into account benefits to others.

Externalities

- We can refer to positive externalities (or external benefits) ...
  - Example: Vaccines



Externalities

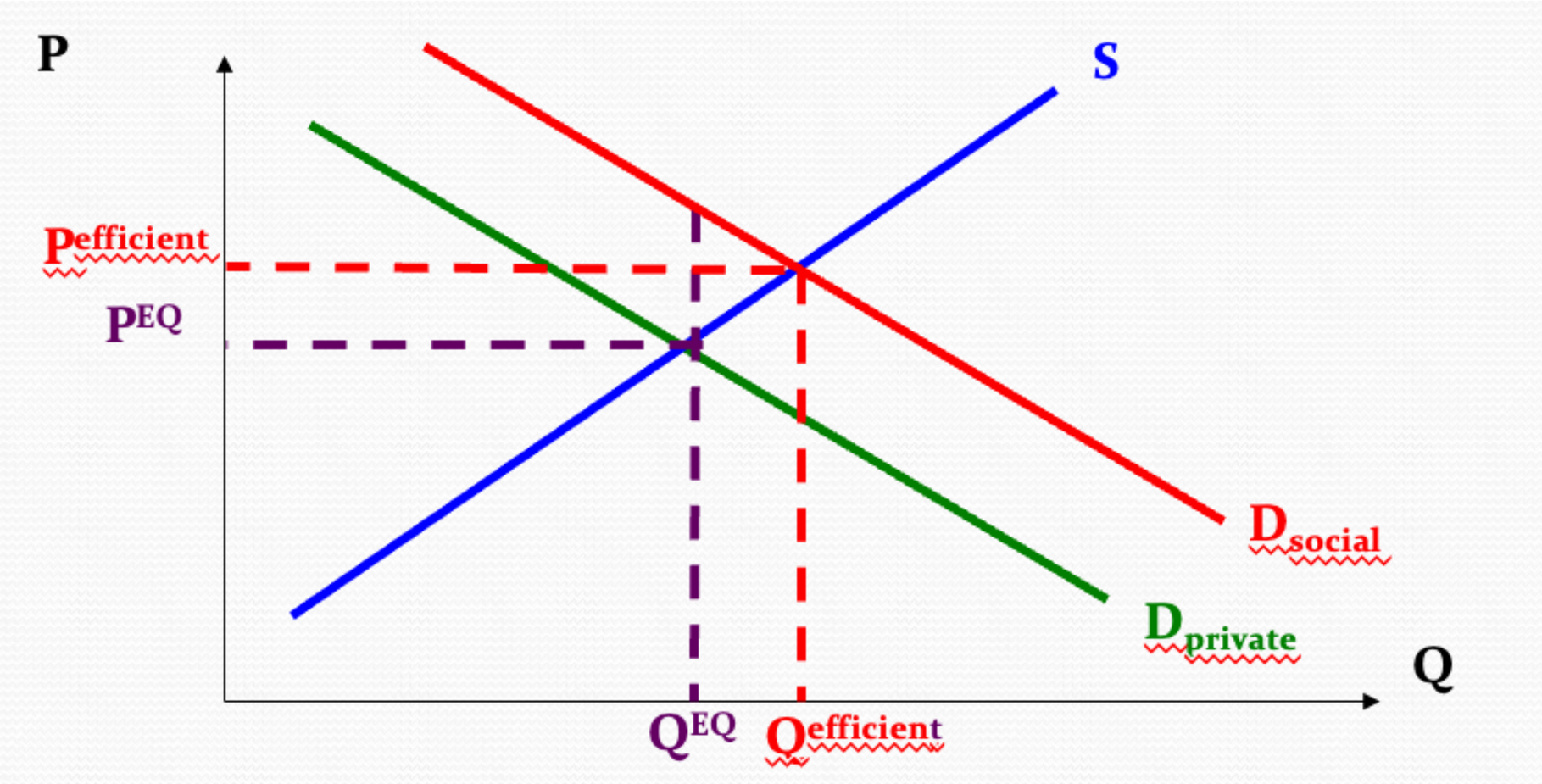
- Other examples of positive externalities?

Externalities

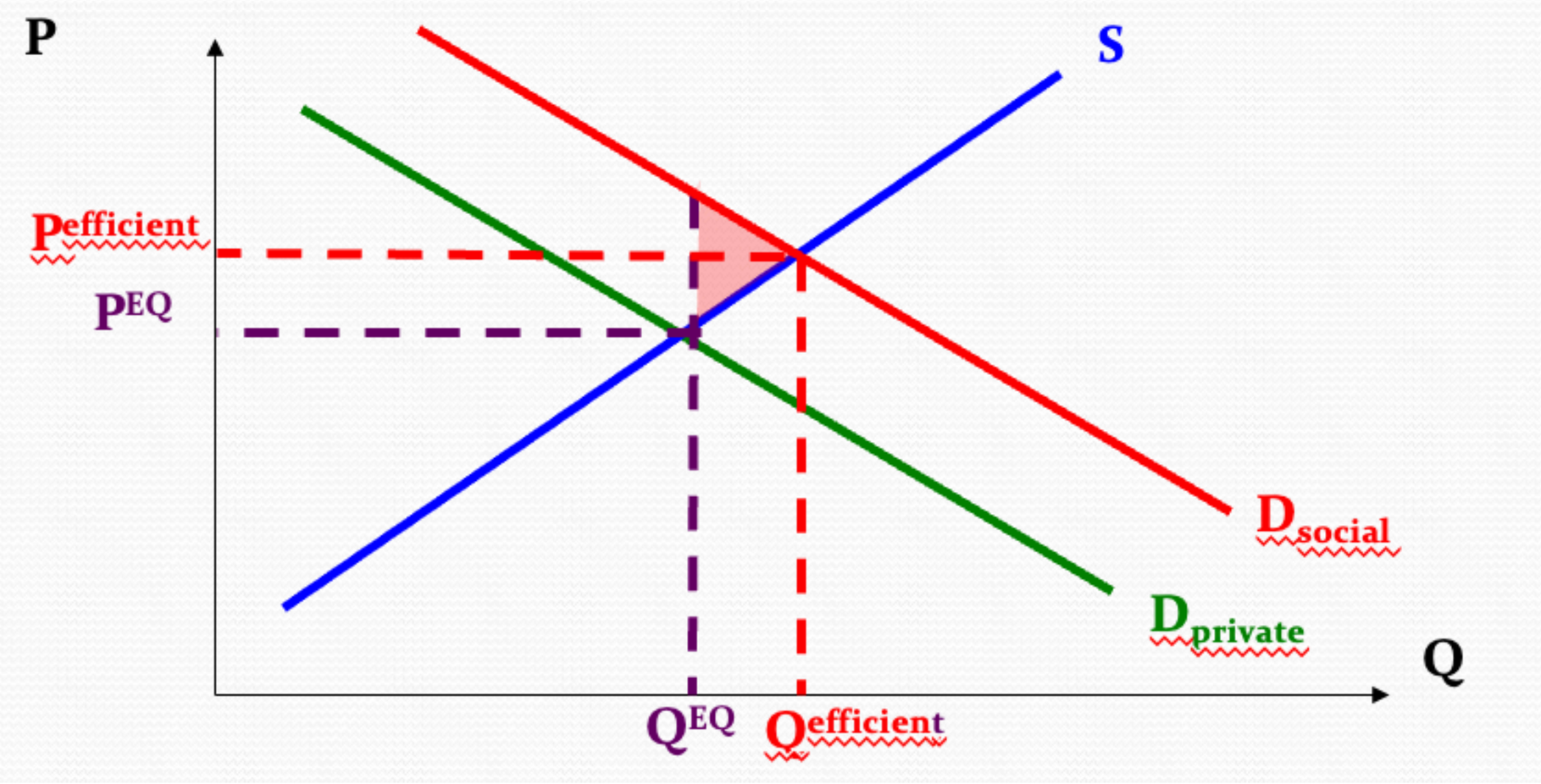
- Other examples of positive externalities?
- The benefit your neighbor receives from hearing you play your pleasant music is a positive externality?

Externalities

- Other examples of positive externalities?
- The benefit your neighbor receives from hearing you play your pleasant music is a positive externality?



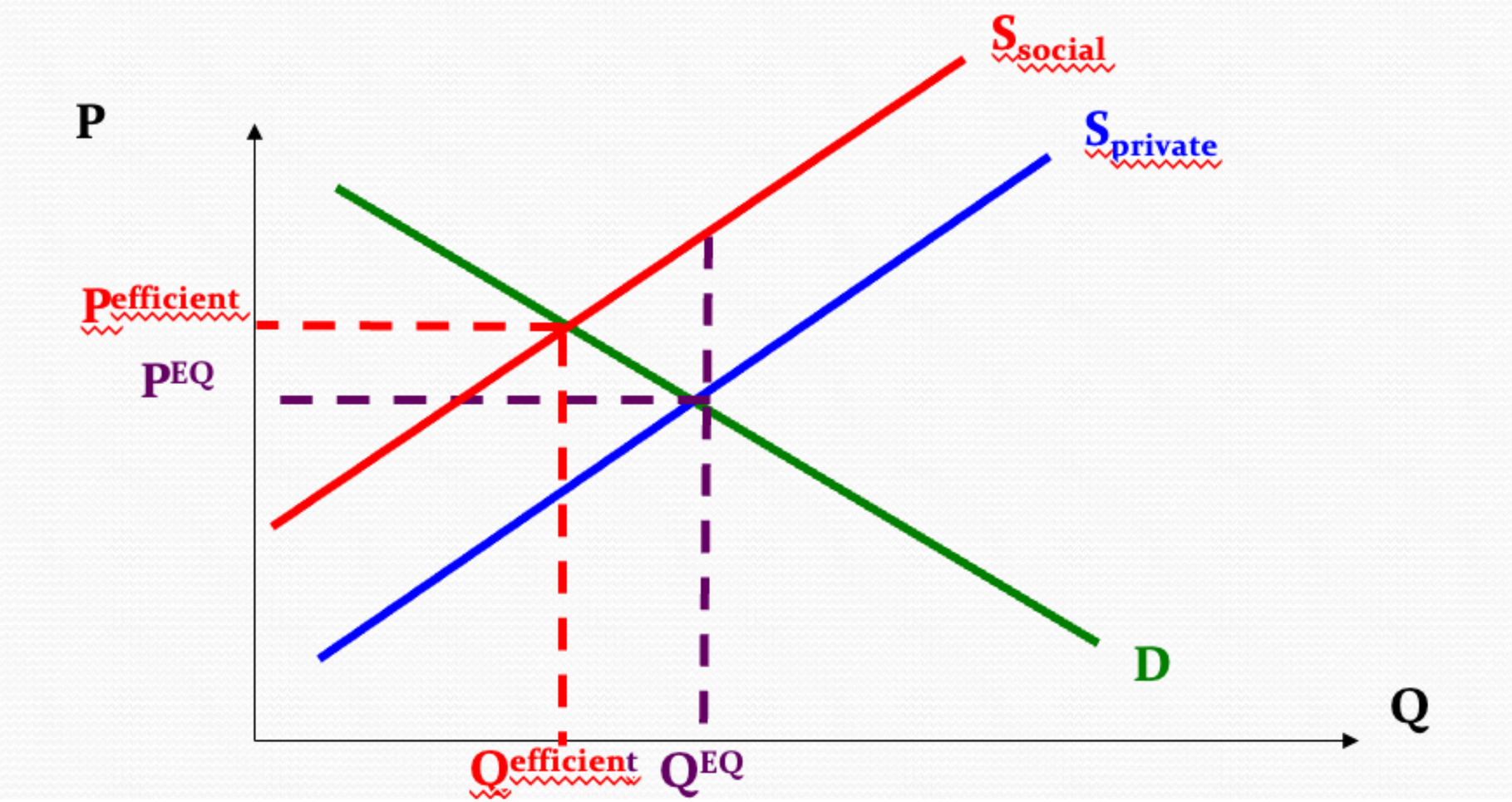
- Consumers do not have to pay for (external) benefits associated with others getting vaccinations.
- (Social) demand that takes into account those benefits would be higher than the market (private) demand.



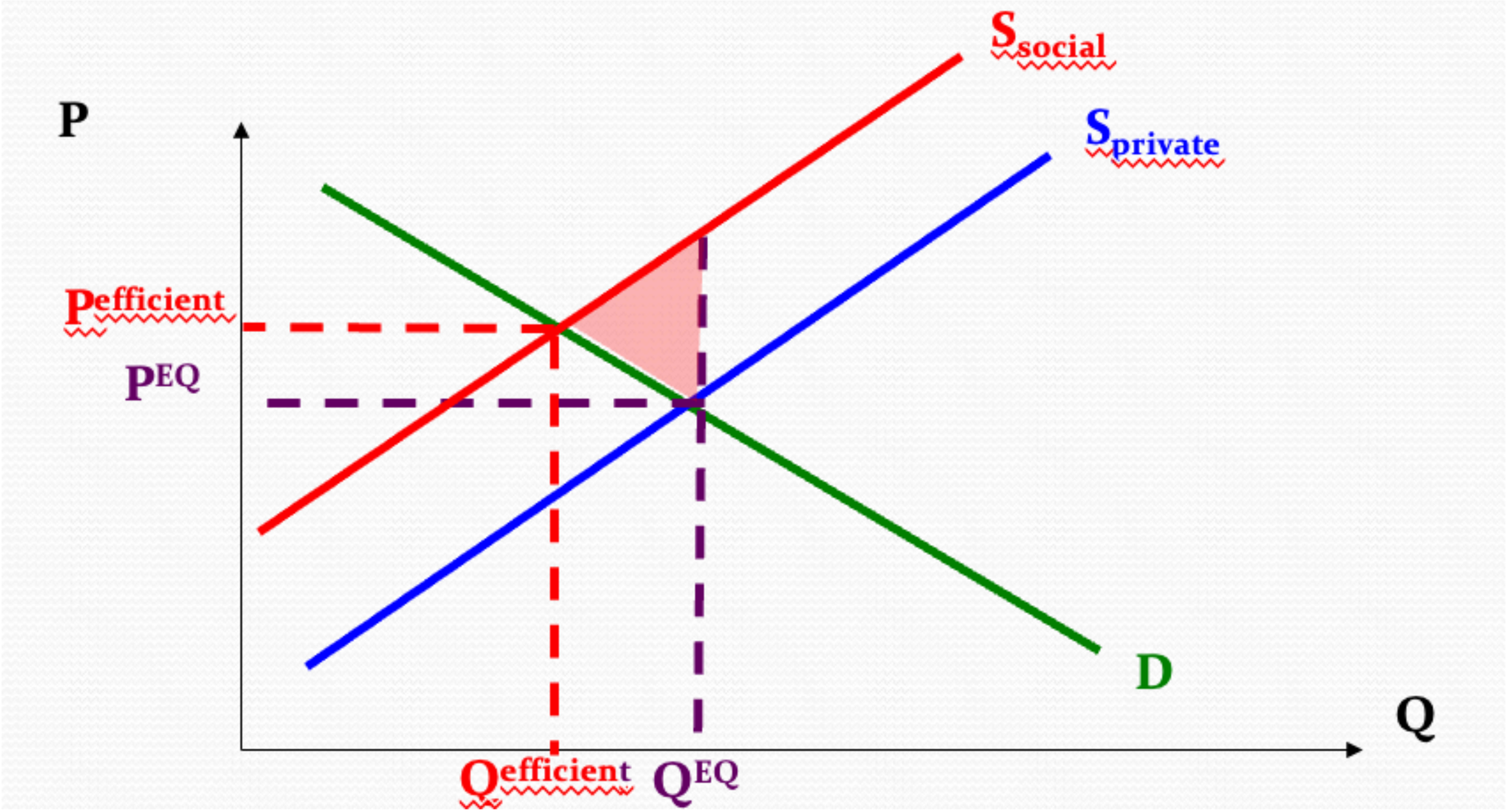
- Efficiency would involve a greater amount of the good produced and sold.
- The shaded amount represents additional surplus that is not created due to the positive externality.

Externalities

- or **negative externalities** (or **external costs**) ...
  - Example: external effects on the environment



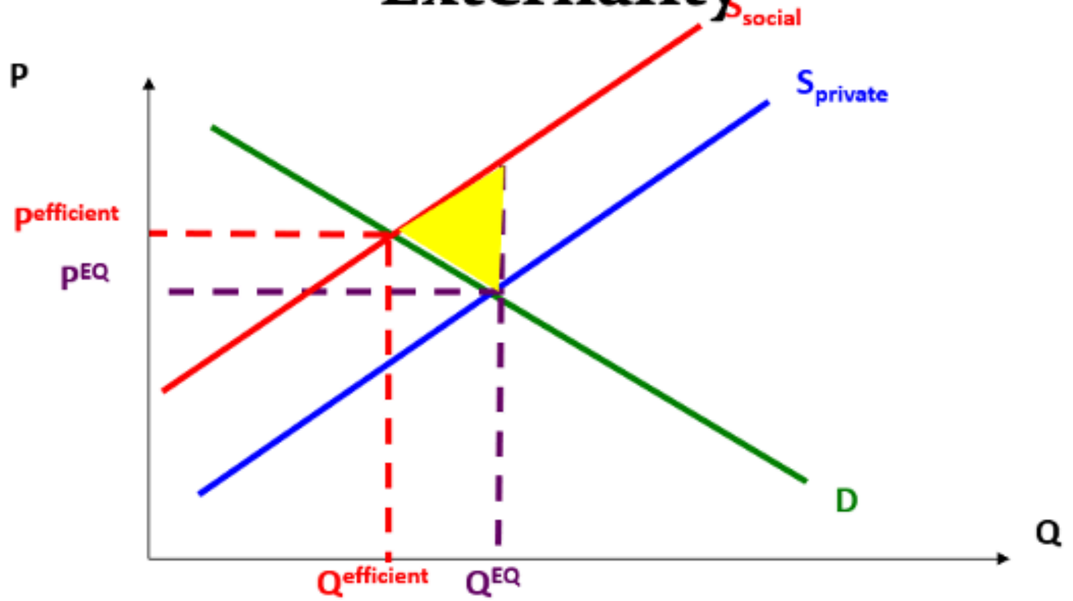
- Suppliers do not bear the (external) costs associated with bringing the good to market.
- (Social) supply if producers bore those costs would be lower than market (private) supply.

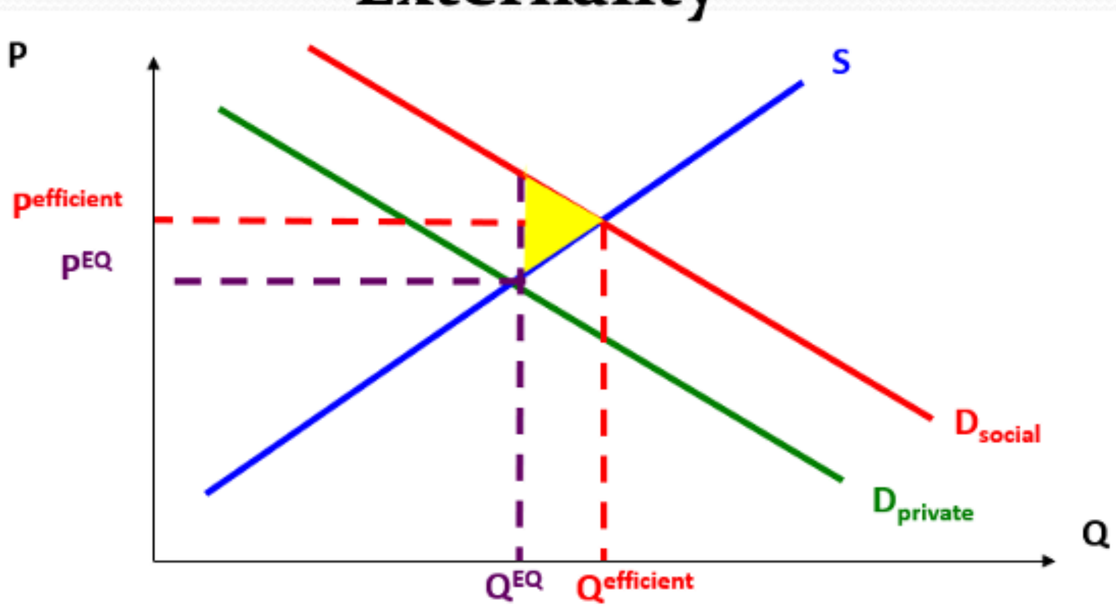


- Efficiency would involve a smaller amount of the good produced and sold.
- The shaded amount represents costs incurred above consumers willingness to pay associated overproduction.

- •Two Types of DWL:
  - 1.Transactions that are happening but shouldn’t be.
  - 2.Transactions that are not happening but should be.

The DWL triangle always points to where we want to be!!!





Markets generally lead to efficient outcomes.

- This assumes that when individuals exchange there are no *spillover effects* onto others not party to the exchange.
- It also assumes that individuals *can* costlessly identify mutually beneficial exchanges and cary them out.
- There are two key points:
  - *The absence of spillover effects.*
  - *The costs of identifying exchange partners and exchanging.*

How do hundreds of millions of people; billions of goods coordinate?

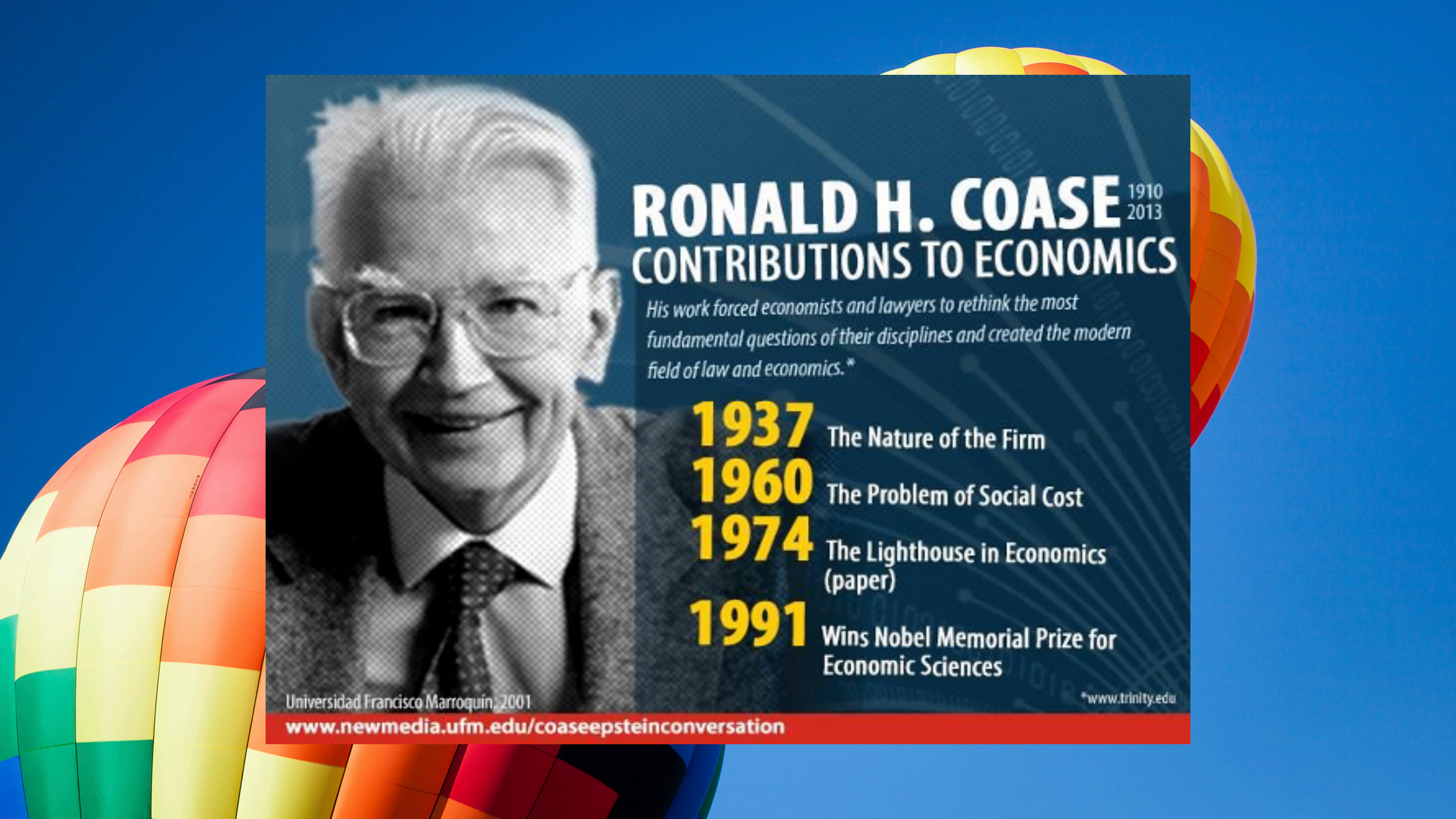
- Individuals have very limited information.
- Each has *knowledge of his or her particular circumstances* of time and place but often little else.
- But that’s not enough to make an economy work.
- Individuals need to effectively make use of others’ knowledge.

Hayek’s answer: the price system.

- “We must look at the price system as […] a mechanism for communicating information[.]”
- “The most significant fact about this system is the economy of knowledge with which it operates, or how little individual participants need to know in order to be able to take the right action.”

Why do firms exist?

- •The plans of firms & individual are are coordinated across the economy by the price system.
  - decentralized
  - communicates & economizes on dispersed knowledge
  - identifies mutually beneficial exchanges
- Firms are “islands of conscious power in an ocean of unconcious cooperation like lumps of butter coagulating in a pail of buttermilk.” — D. H. Robertson


RONALD H. COASE 1910 2013
CONTRIBUTIONS TO ECONOMICS
His work forced economists and lawyers to rethink the most fundamental questions of their disciplines and created the modern field of law and economics.*
1937 The Nature of the Firm
1960 The Problem of Social Cost
1974 The Lighthouse in Economics (paper)
1991 Wins Nobel Memorial Prize for Economic Sciences
*www.trinity.edu
Universidad Francisco Marroquin, 2001
www.newmedia.ufm.edu/coaseepsteinconversation

Why do firms exist? (Coase 1937)

- Within a firm, market transactions are replaced by a centralized “entrepreneur” who directs production.
- “The distinguishing mark of the firm is the supersession of the price mechanism.”
- Why the supersession of the price system in certain cases?

Why do firms exist? (Coase 1937)

- There are always costs associated with using the price system.
  - These costs are specific types of transaction costs.
- **Transaction costs:** the time, money, and other resources that are used to make exchanges occur.
  - associated with both market & non-market exchanges
  - (unrealistically) assumed to be zero in textbook supply & demand analysis

The real world is full of transaction costs.

- Shopping for the best goods at the best terms is costly.
- Negotiating and then contracting terms is costly.
- Enforcing the terms of contracts is costly.
- Monitoring/measuring the performance of services or provision of goods is costly.

Why do firms exist? (Coase 1937)

- Using the price system involves transaction costs of ...
  - discovering what the relevant prices are;
  - negotiating contracts;
  - specifying contingency plans for an uncertain future.
- Using non-market mechanisms involves them as well.
- Exchanges will be internal to a firm when the associated transaction costs are lower than they would be via markets.

How do we mitigate transaction costs?

- It is costly to identify and carry out mutually beneficial transactions.
- There are innumerable institutions that arise and/or are designed to mitigate transaction costs.
- Examples include …
  - markets
  - the price system;
  - firms;
  - regulations.

Institutions

- Douglass North: “humanly devised constraints that structure political, economic, and social interaction.”
- “The rules of the game in society”.
- (Other) examples of institutions include ...
  - legal codes;
  - regulations;
  - markets;
  - norms (of behavior);
  - constitutions (government or corporate);
  - religions.

Institutions can be formal.

- Douglass North: “humanly devised constraints that structure political, economic, and social interaction.”
- consciously established; explicitly stated/written down
- (Other) examples of institutions include ...
  - legal codes;
  - regulations;
  - markets;
  - norms (of behavior);
  - constitutions (government or corporate);
  - religions.

Institutions can be informal.

- Douglass North: “humanly devised constraints that structure political, economic, and social interaction.”
- unplanned; emergent; “spontaneous orders”
- (Other) examples of institutions include ...
  - legal codes;
  - regulations;
  - markets;
  - norms (of behavior);
  - constitutions (government or corporate);
  - religions.

Institutions can be both.

- Douglass North: “humanly devised constraints that structure political, economic, and social interaction.”
- unplanned; emergent; “spontaneous orders”
- (Other) examples of institutions include ...
  - legal codes;
  - regulations;
  - markets;
  - norms (of behavior);
  - constitutions (government or corporate);
  - religions.

Formal vs. Informal Institutions

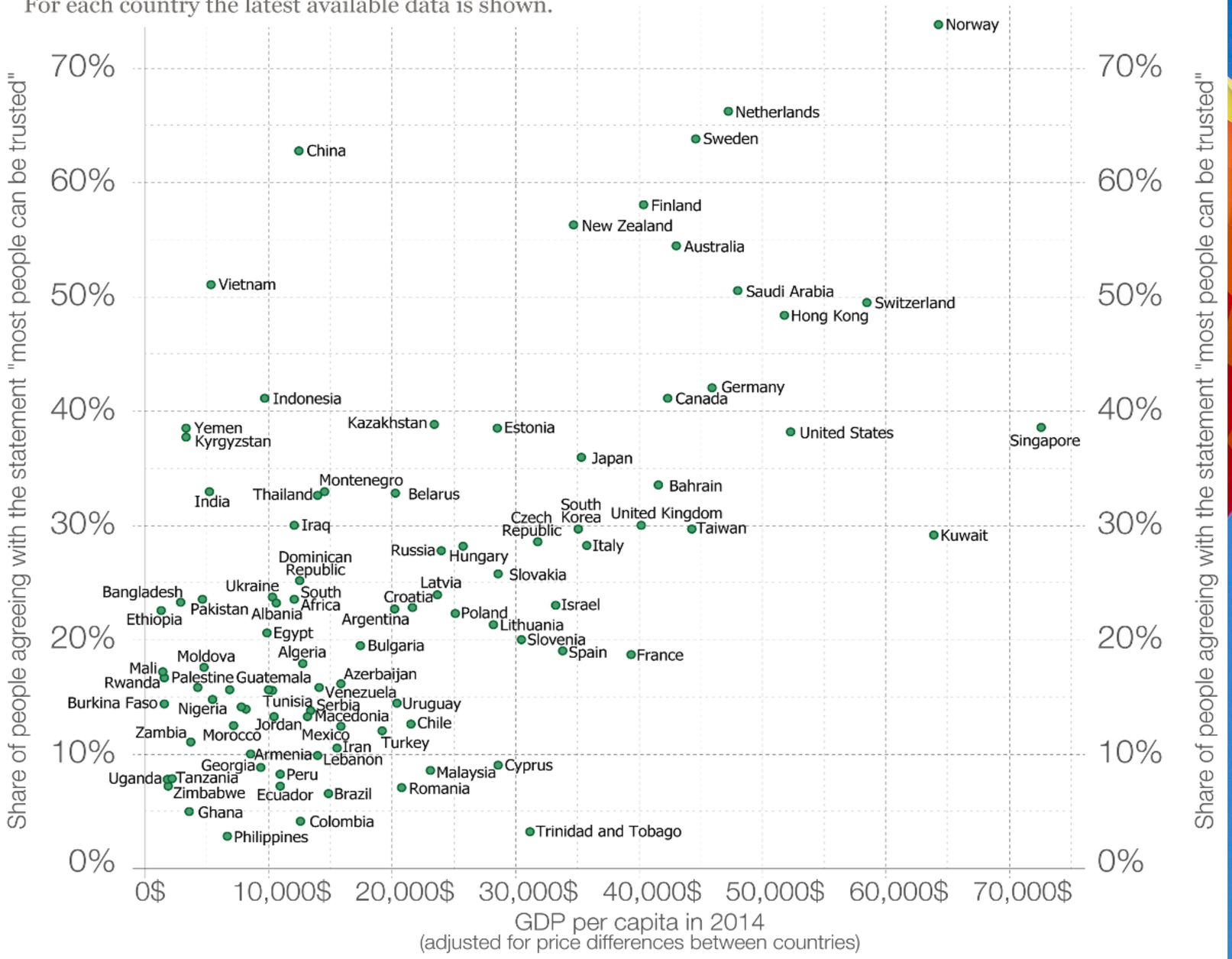
Many interactions are structured by informal rules (norms).

- Say “God bless you!” when someone sneezes.
- Walk on the right side of the sidewalk.
- Shake hands when you meet someone new.
- Say “please” and “thank you” when asking for something.
- “Corporate Culture”

Country by country: Trust vs. GDP per capita

Shown is the share of people agreeing with the statement "most people can be trusted".
For each country the latest available data is shown.

Our World in Data



Data source: World Value Survey for data on trust and Penn World Table for data on GDP per capita
This visualization is available at OurWorldinData.org. There you find the raw data and more visualizations on this topic.

Formal institutions matter too!

- Days needed to complete procedures to legally operate a business (source: World Bank “Doing Business” project).

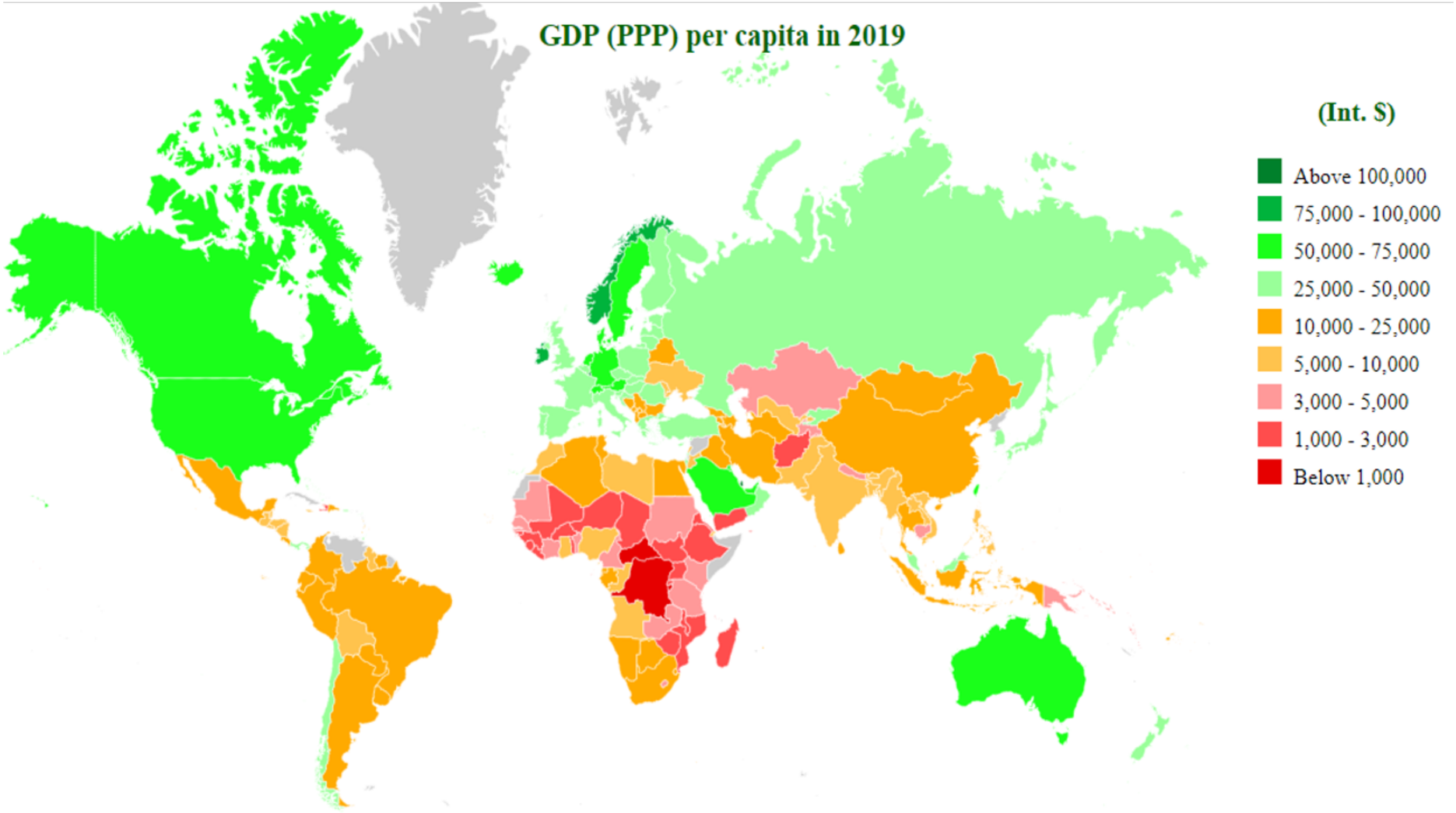
• Brazil ($8.7k)	79.5	• Australia ($55.1k)	2.5
• Cambodia ($1.6k)	99	• Belgium ($46.4k)	4
• Chad ($709)	60	• Canada ($46.2k)	1.5
• Congo (Rep. of) ($581)	50	• Denmark ($60.2k)	3
• Gabon ($7.8k)	50	• Hong Kong ($48.7k)	1.5
• Haiti ($1.3)	97	• Korea (Rep. of) ($31.8k)	4
• Suriname ($6.4k)	84	• New Zealand ($42.1k)	0.5
• Venezuela ($16.1k)	230	• United States ($65.3k)	5.6

Fraser Institute's "Economic Freedom of the World" Scores

- Countries scored according to five areas:
  - size of government;
  - legal system and property rights;
  - soundness of money;
  - regulation of business, credit, and labor markets;
  - freedom to trade internationally.

Fraser Institute's "Economic Freedom of the World" Scores

Fraser Institute's "Economic Freedom of the World" Scores




GDP (PPP) per capita in 2019
(Int. $)
Above 100,000
75,000 - 100,000
50,000 - 75,000
25,000 - 50,000
10,000 - 25,000
5,000 - 10,000
3,000 - 5,000
1,000 - 3,000
Below 1,000
MOST FREE
2ND QUARTILE
3RD QUARTILE
LEAST FREE

Thanks for your attention!
End of class.