NYU SHANGHAI 上海 纽约大学

International Political Economy (SOCS-SHU 222)

THE POLITICAL ECONOMY OF

INTERNATIONAL TRADE COOPERATION

Instructor: JING QIAN

Logistics

NYU SHANGHAI 上海 纽约大学

News Report Analyses – Assignment

jingqian.org/IPEclass/schedule

	Presentation 1	Presentation 2	Memo 1	Memo 2
Feb 18 – A Society-Centered Approach to Trade Politics	Yi Chen	Anna Perlak		
Feb 20 – Who is Against Immigration	Owen Ji		Paula Castillo	
Feb 25 – A State-Centered Approach to Trade Politics	Lily Blair			
Mar 6 – Trade and Development I: Import Substitution Industrialization	Angel Lu	Yufei Liu		
Mar 11 – Trade and Development II: Neoliberalism and Institutionalism	Nicole Chen	Aazam Razaali	Aidan Nagle	
Mar 18 – Multinational Corporations in the Global Economy	Trinity Kitchen		Chole Nguyen	
Mar 20 – The Politics of Multinational Corporations	Grace Luo			
Apr 8 – The International Monetary System			Grace Luo	Anna Perlak
Apr 13 – Cooperation, Conflict, and Crisis in the Contemporary International Monetary System			Yi Chen	
Apr 15 – A Society-Centered Approach to Monetary and Exchange-Rate Policies			Nicole Chen	
Apr 17 – A State-Centered Approach to Monetary and Exchange-Rate Policies	Lily Blair			
Apr 22 – Developing Countries and International Finance I: The Latin American Debt Crisis	Angel Lu	Paula Castillo		
Apr 24 – The IPE of Remittances	Chole Nguyen	Owen Ji	Yufei Lu	
Apr 29 – Developing Countries and International Finance II: The Global Capital Flow Cycle	Aiden Nagle			
May 6 – The European Monetary Union	Aazam Razaali		Trinity Kitchen	
May 8 – Regional Economic Integration				

If switch, email me three days in advance

News Report Analyses

- Choose a report from a credible source
- Topic does not have to be the same as class topic (but must be about IPE)
- Key: Explaining the issue to a general audience (no jargons, easy & clear)

Presentation:

- 5-minute MAX (do not go over)
- Submit materials (sides and/or handouts, ***if any***) by 11:59pm the day before class

Memo:

- 2-page MAX (do not go over)
- Submit memo by 11:59pm the day before class (and a copy in discussion forum)

Let’s continue

NYU SHANGHAI 上海 纽约大学

The Political Economy of International Trade Cooperation

READING ASSIGNMENT:

Oatley Chapter 3

NYU SHANGHAI 上海纽约大学

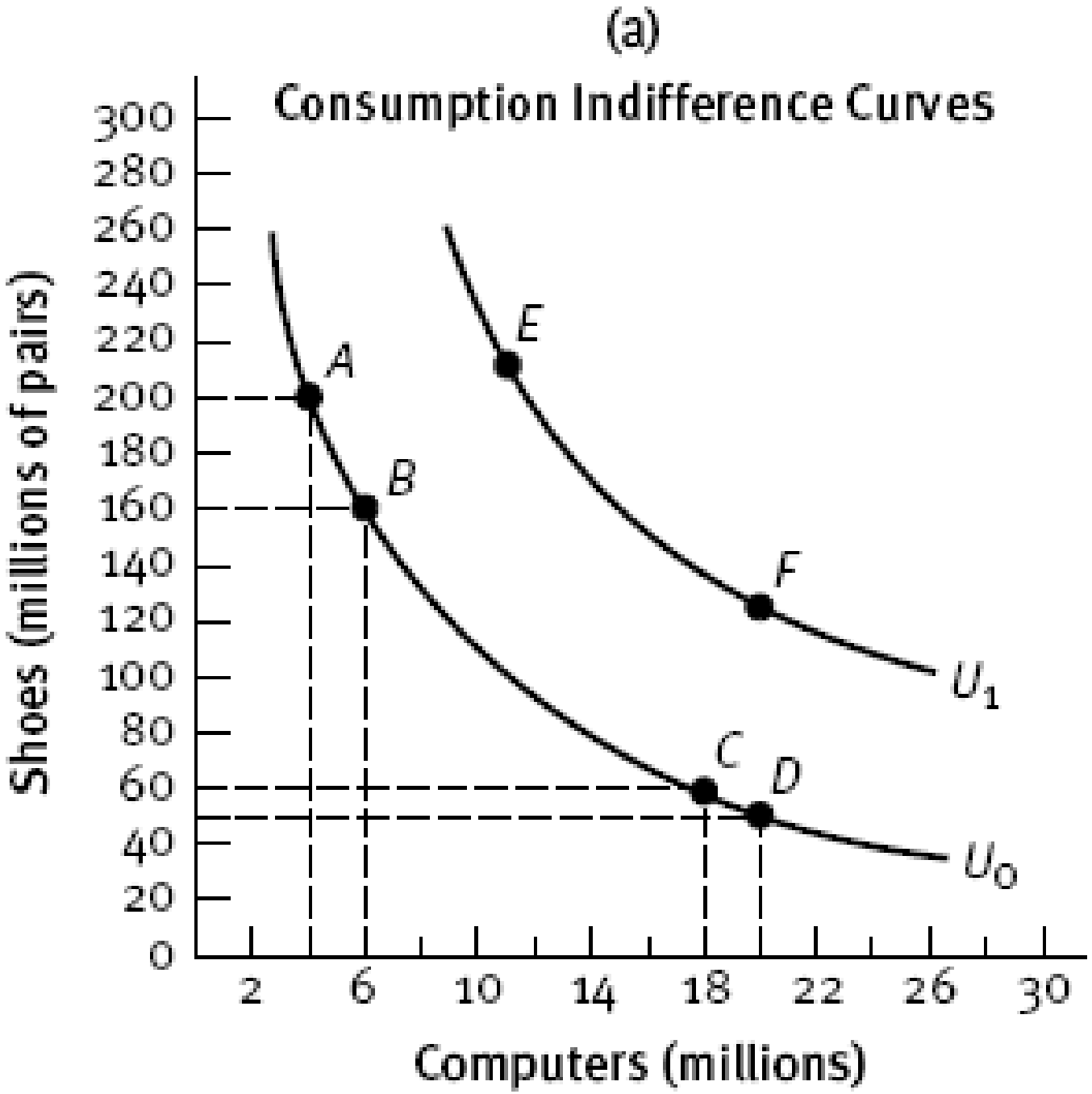
Building Blocks

- Consumption indifference curves
- Production possibility frontiers
- Analysis of optimized production-consumption equilibrium (without trade)

Consumption Indifference Curves

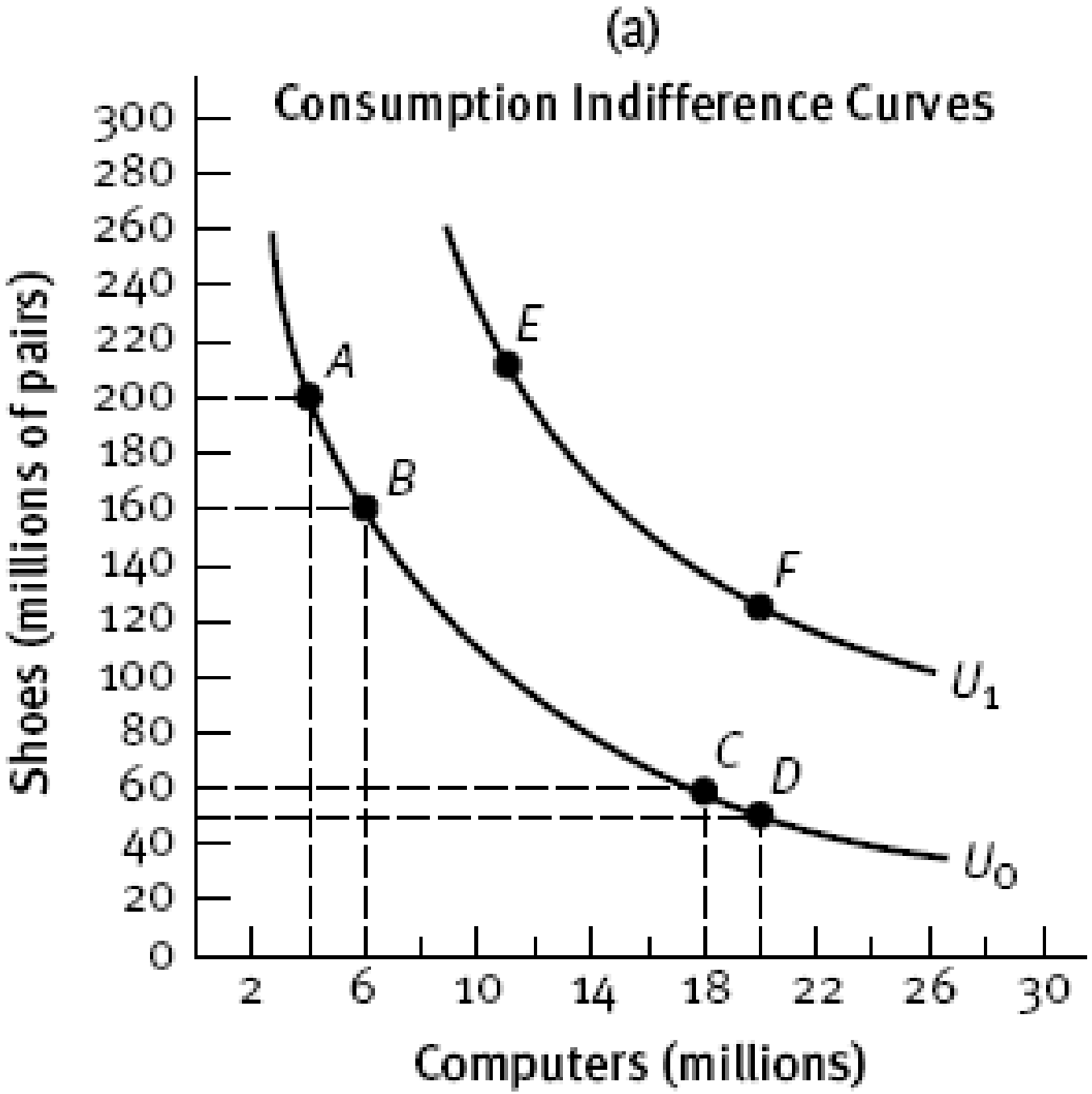
- Consumption ➔ happiness ☺ (UTILITY)
- More is better!
- But indifferent between some baskets
- For example,
  - Utility (2 pairs of shoes & 2 MacBooks)

    =
  - Utility (6 pairs of shoes & 1 MacBook)



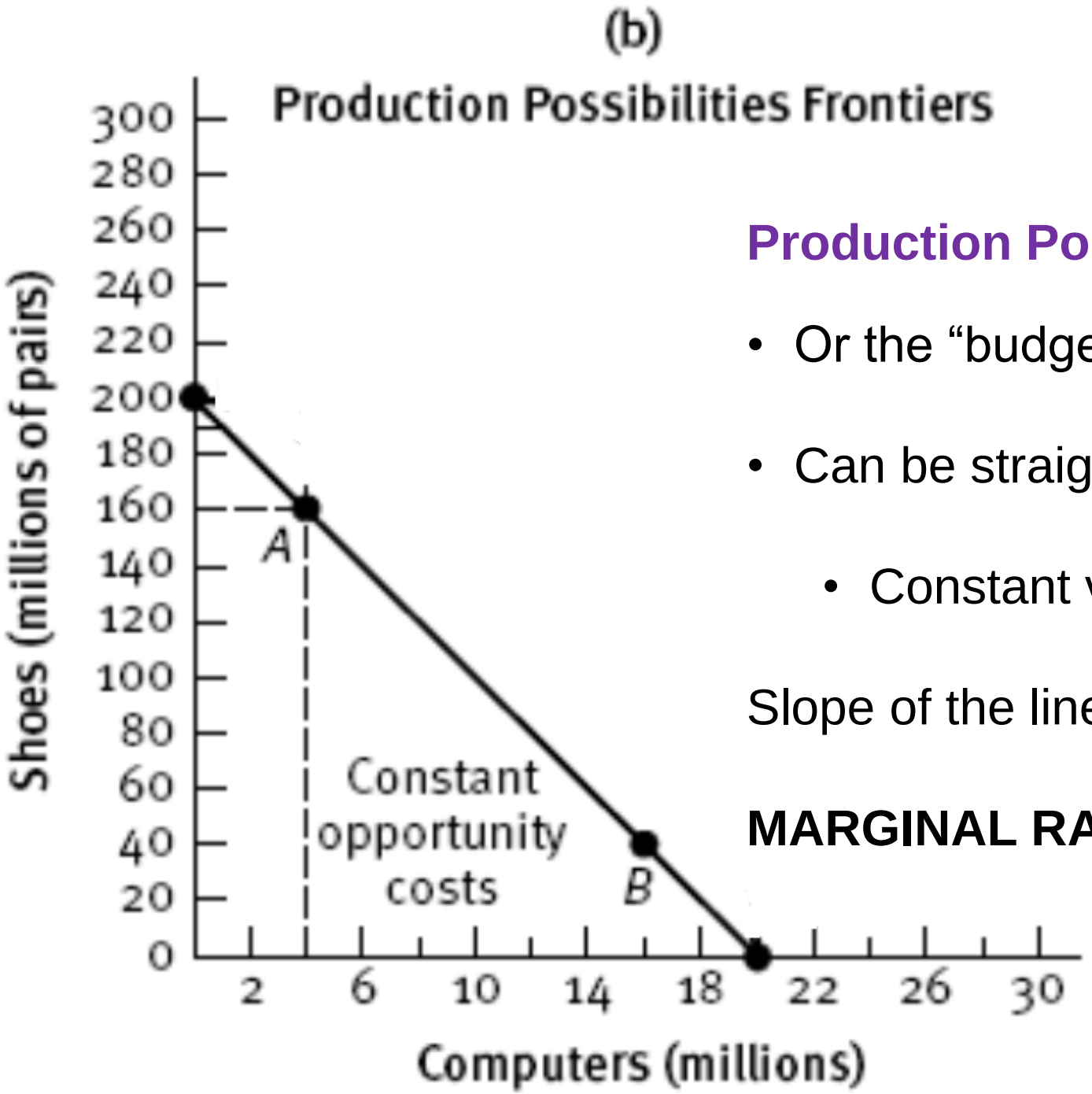
Properties

- Never cross with each other
- Farther Out = Higher Utility
- Negatively sloped
- Convex (to the origin)



Convex (to the origin)

- *Declining marginal utility from consumption*
- From D to C
  - Computers: ↓ 2 million
  - Shoes: ↑**10** million
- From B to A
  - Computers: ↓ 2 million
  - Shoes: ↑**40** million
- Why?
- **DECLINING <u>MARGINAL RATE OF SUBSTITUTION</u> (MRS)**

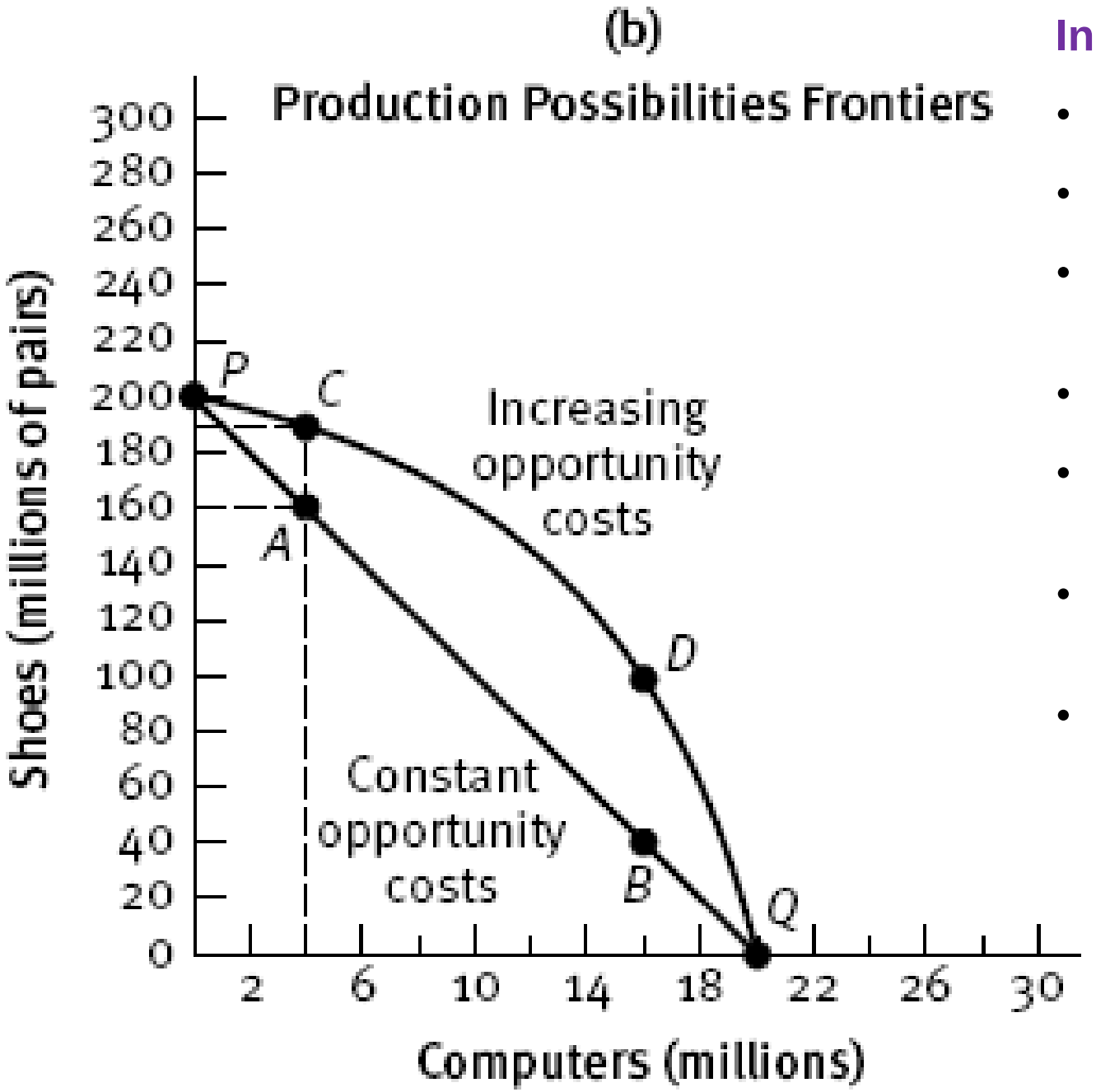


Production Possibilities Frontiers

- Or the “budget constraint”***
- Can be straight line or bowed outward
  - Constant vs. Increasing opportunity costs

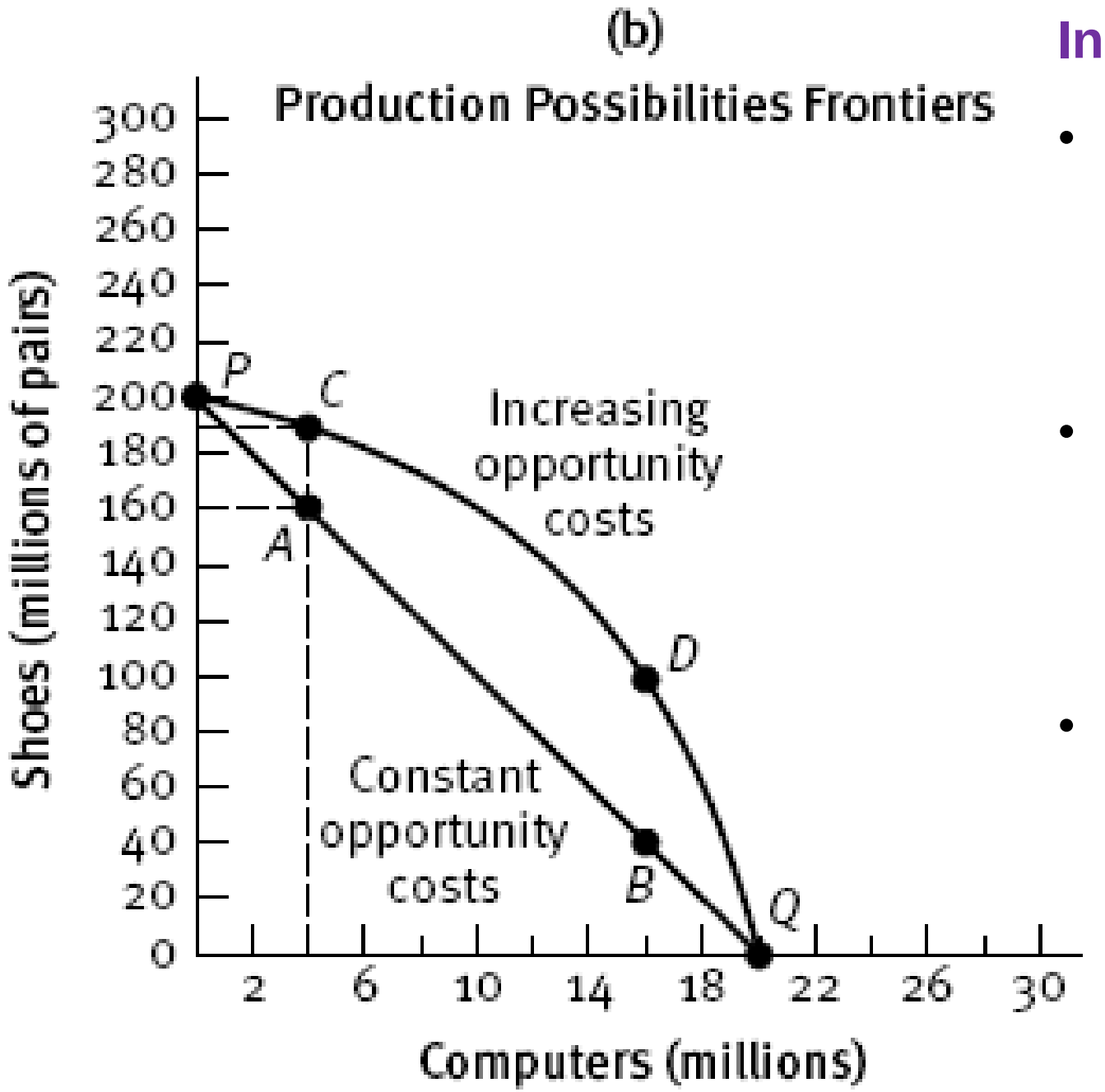
Slope of the line is the

MARGINAL RATE OF TRANSFORMATION (MRT)



Increasing opportunity costs?

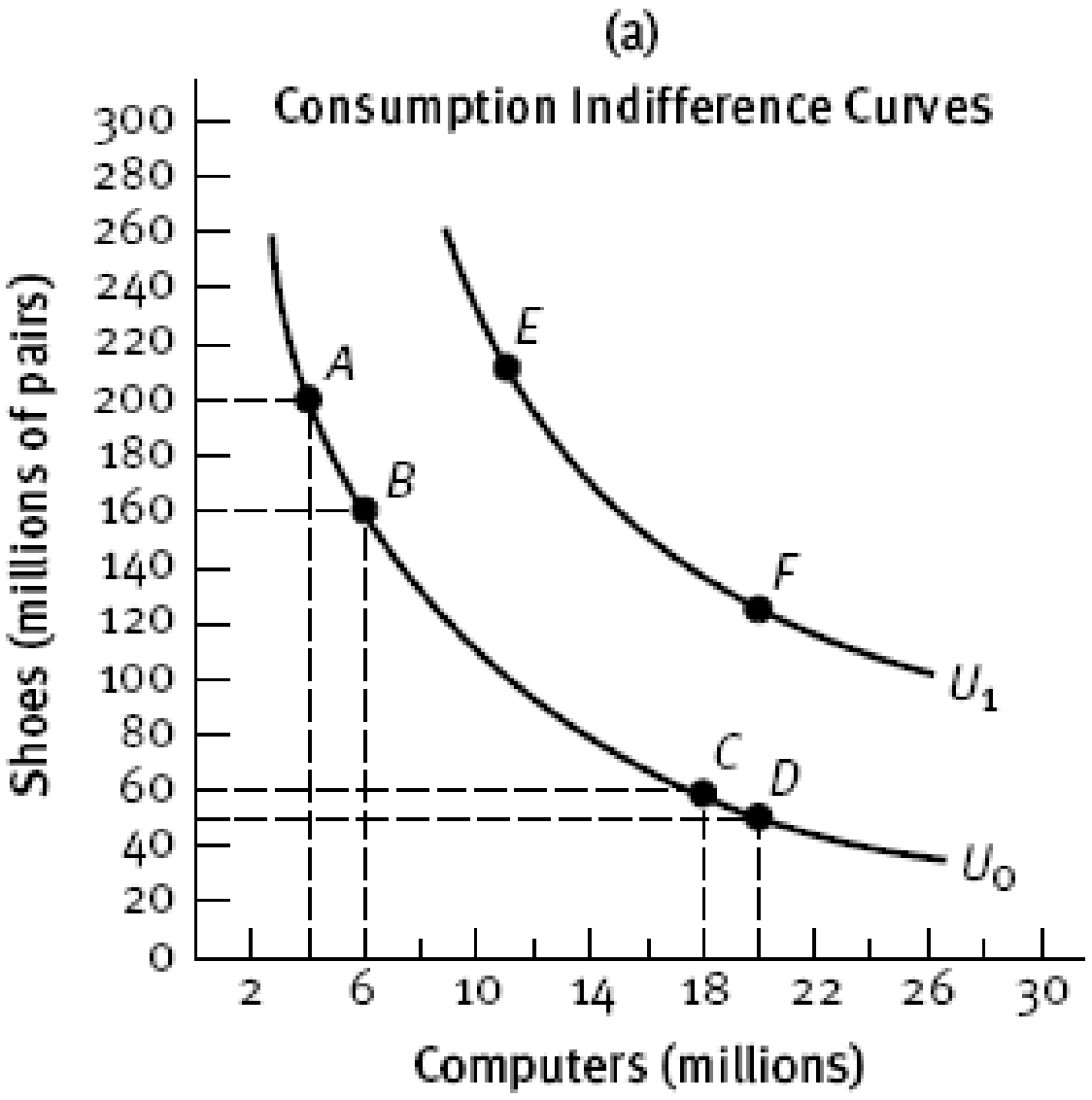
- ***Arise under decreasing returns to scale***
- Suppose a trade-off between rice and grapes
- Some land more suitable for rice than grapes and vice versa
- Suppose you start out with all grapes
- If you want to switch to rice, you begin with the best land for rice/worse land for grapes
- Eventually, you will run out of good-rice-land, and start taking good-grape-land
- The opportunity cost of switching to rice increases and increases

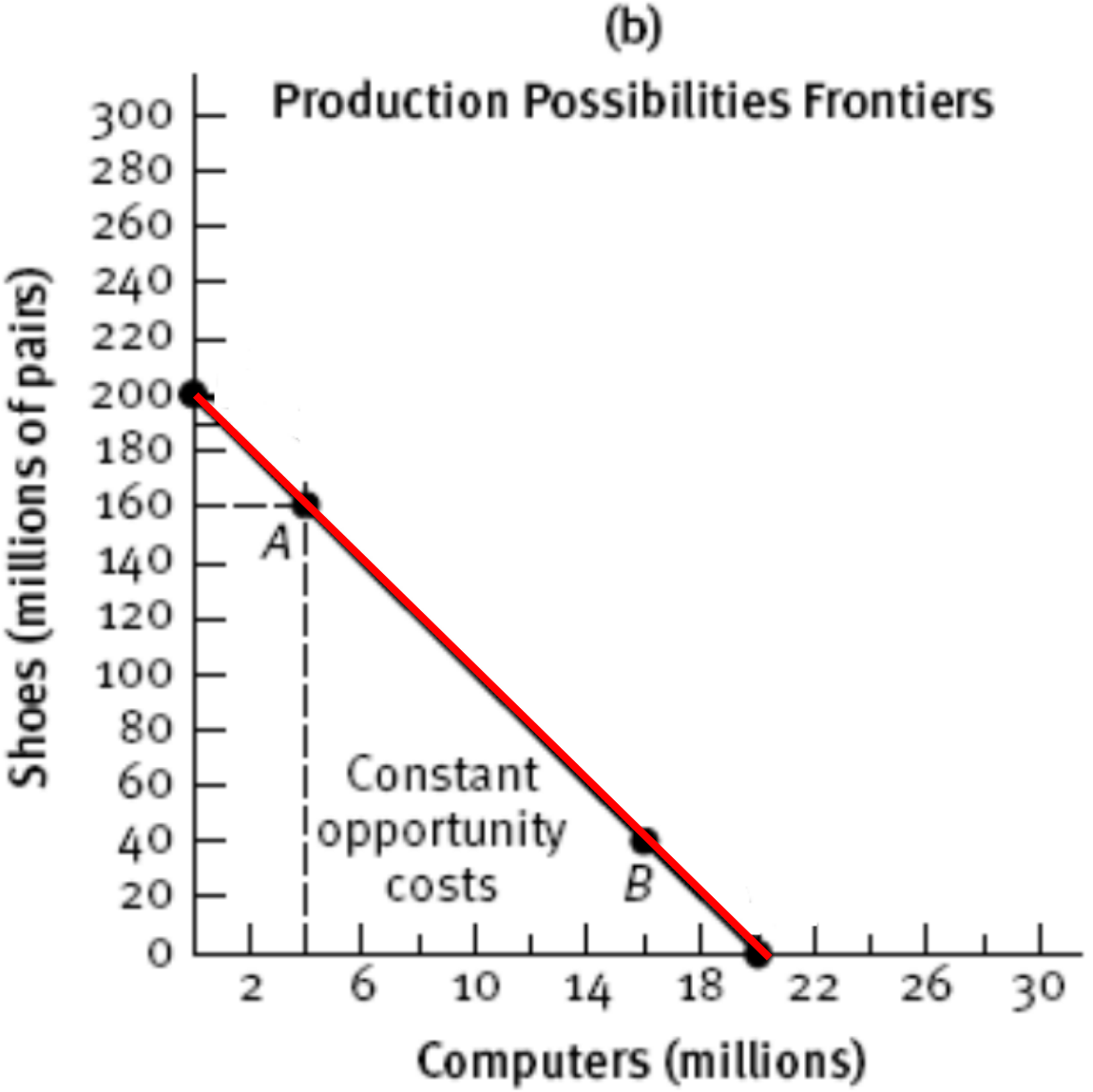


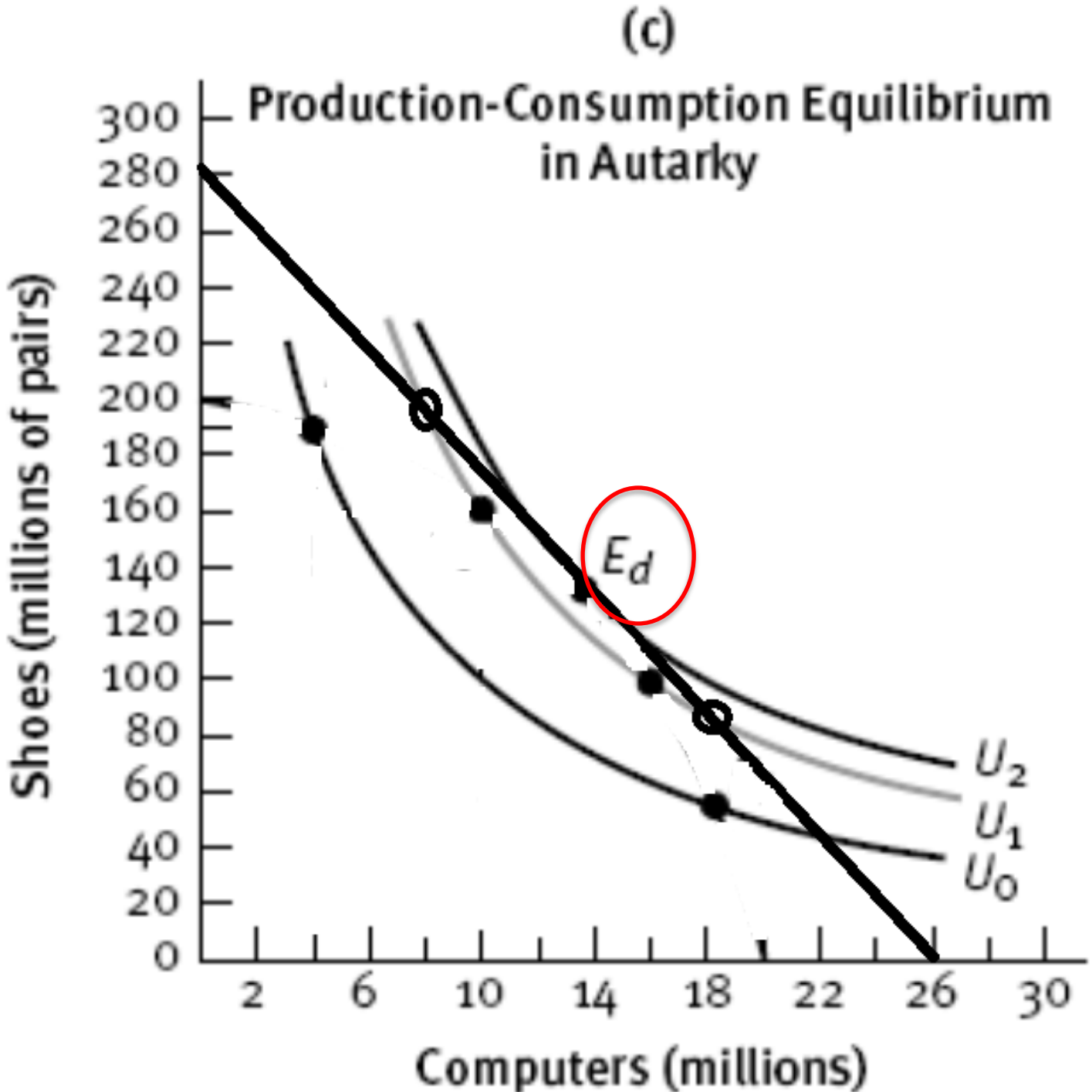
Increasing opportunity costs?

- From P to C
  - Computer ↑ 4 million
  - Shoes ↓ 10 million
- From D to Q
  - Computer ↑ 4 million
  - Shoes ↓ 100 million
- **INCREASING MARGINAL RATE OF PRODUCT TRANSFORMATION**

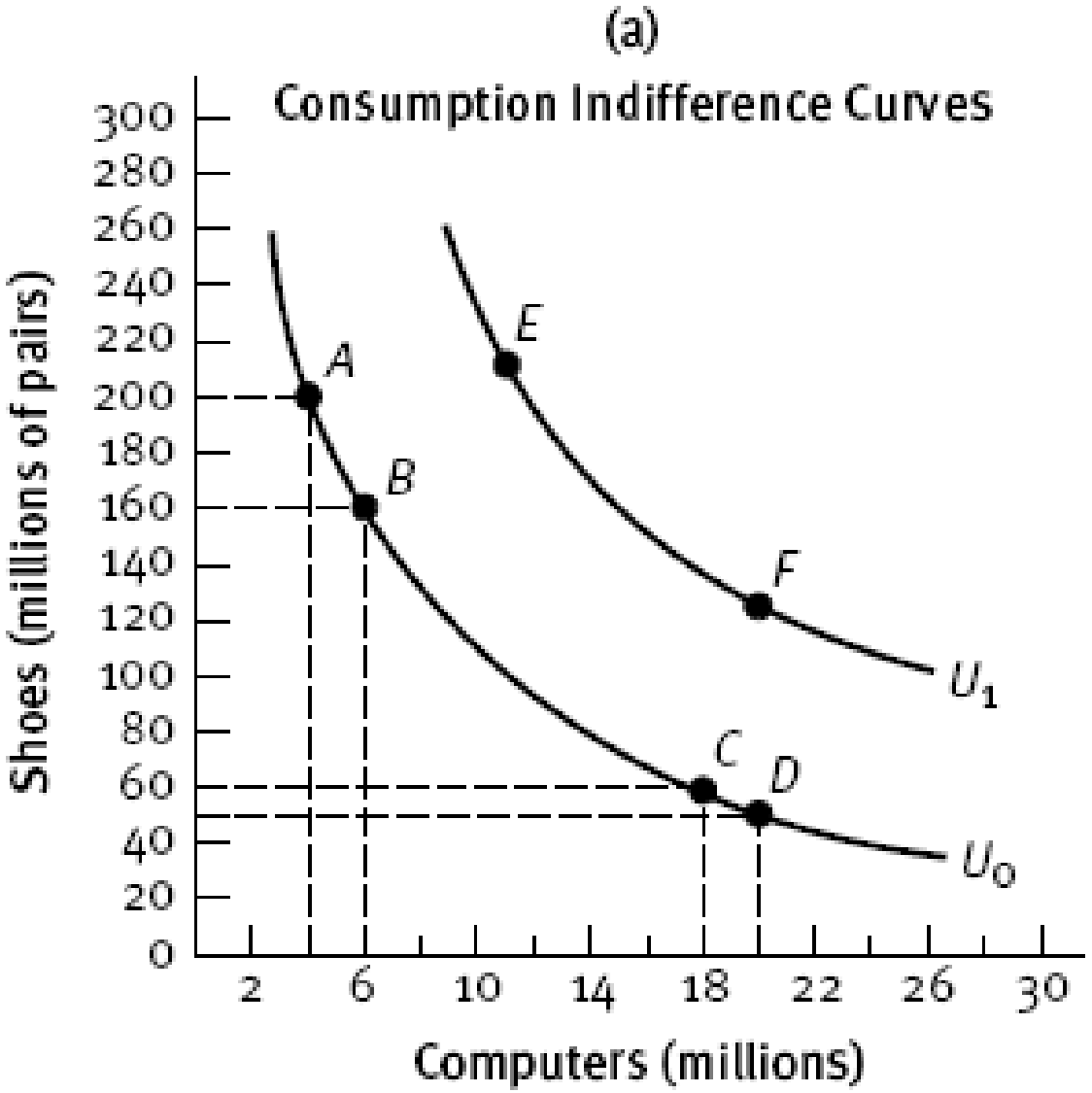
Optimizing Under Autarky (No Trade)

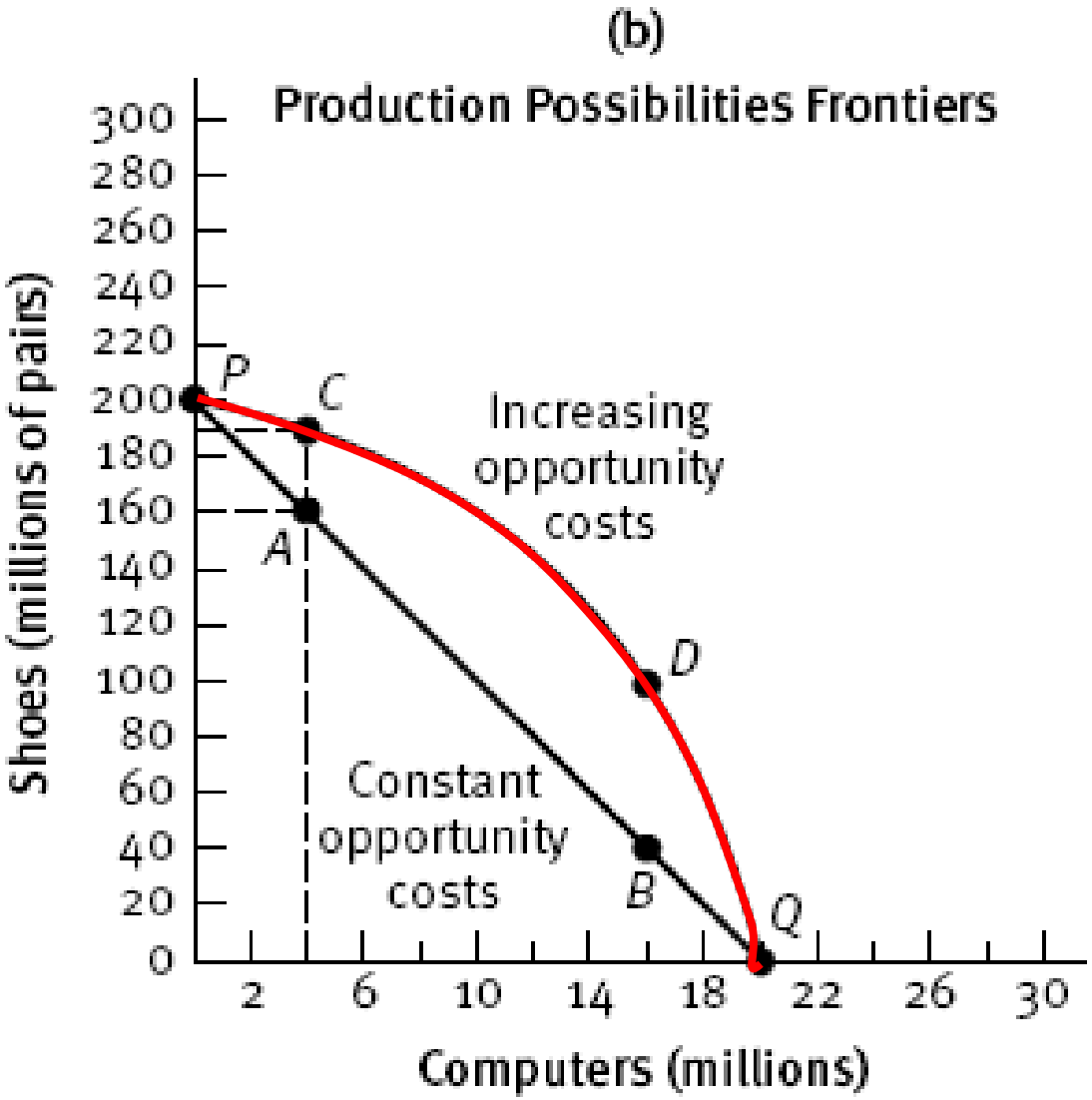


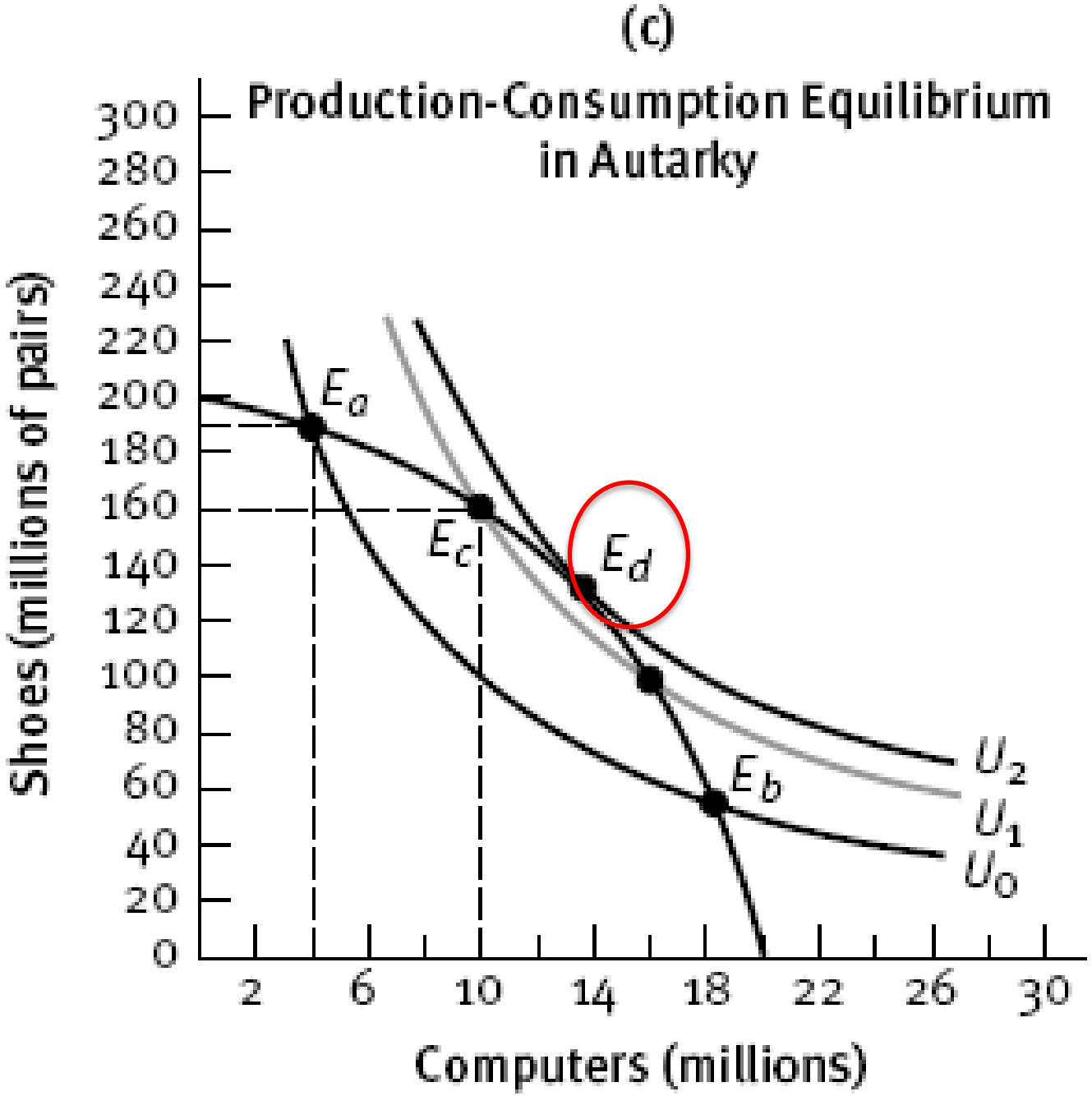



(c)
Production-Consumption Equilibrium
in Autarky
Shoes (millions of pairs)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2
6
10
14
18
22
26
30
Computers (millions)
E_d
U_2
U_1
U_0

Optimizing Under Autarky (No Trade)






(c)
Production-Consumption Equilibrium
in Autarky
Shoes (millions of pairs)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
2
6
10
14
18
22
26
30
Computers (millions)
E_a
E_c
E_d
E_b
U_2
U_1
U_0

Answer

MARGINAL RATE OF SUBSTITUTION (MRS)

=

MARGINAL RATE OF PRODUCT TRANSFORMATION (MRT)

Why is trade a good thing?

Comparative Advantage

Hypothetical Output Levels, United States and China

	OUTPUT PER WORKER PER YEAR	
	Computers	**Shirts**
United States	100	300
China	10	200

Comparative Advantage

Hypothetical Output Levels, United States and China

	OUTPUT PER WORKER PER YEAR		OPPORTUNITY COST	
	Computers	**Shirts**	**1 computer**	**1 shirt**
United States	100	300		
China	10	200		

Comparative Advantage

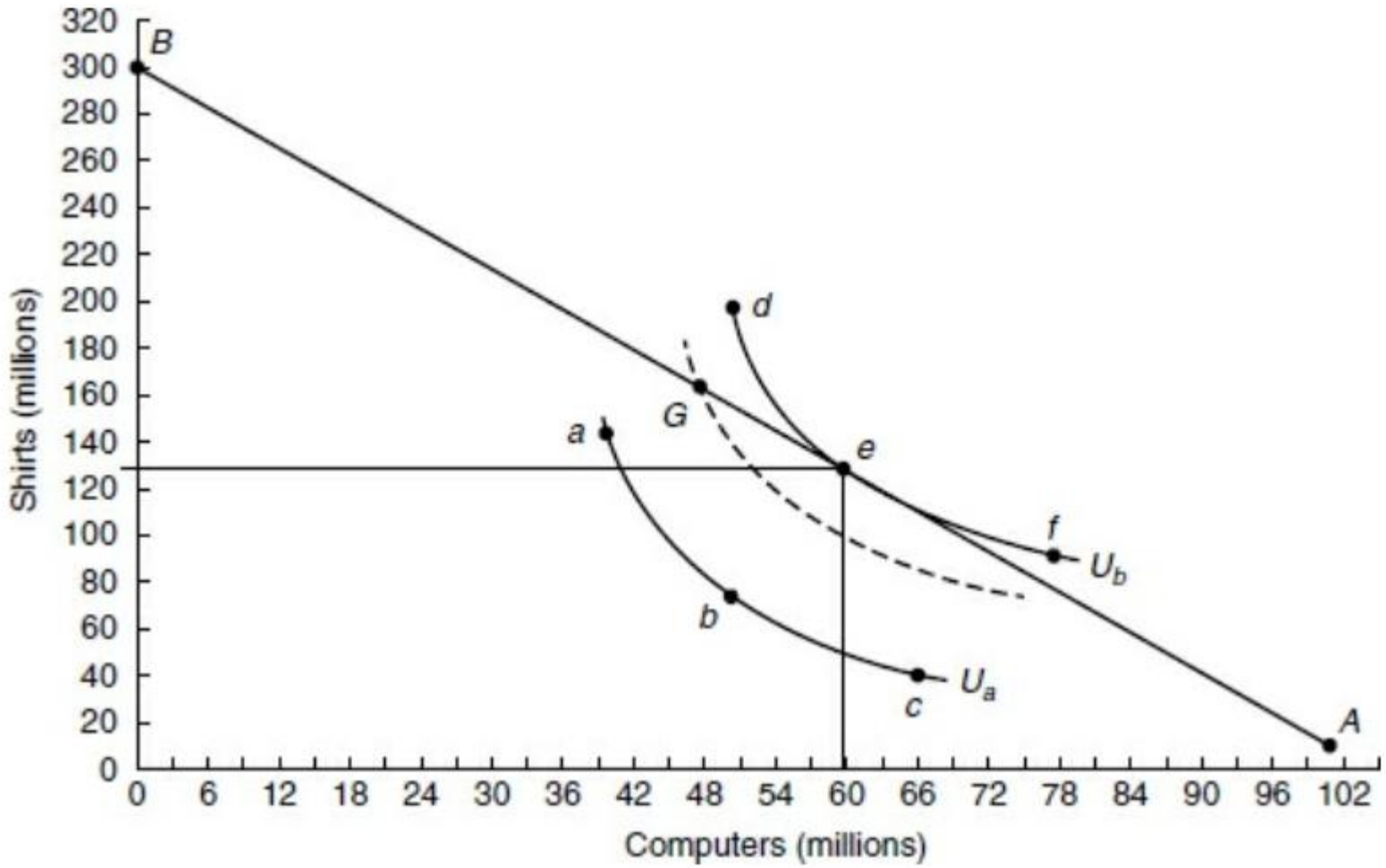
Hypothetical Output Levels, United States and China

	OUTPUT PER WORKER PER YEAR		OPPORTUNITY COST	
	Computers	**Shirts**	**1 computer**	**1 shirt**
United States	100	300	3 shirts	0.33 computer
China	10	200	20 shirts	0.05 computer

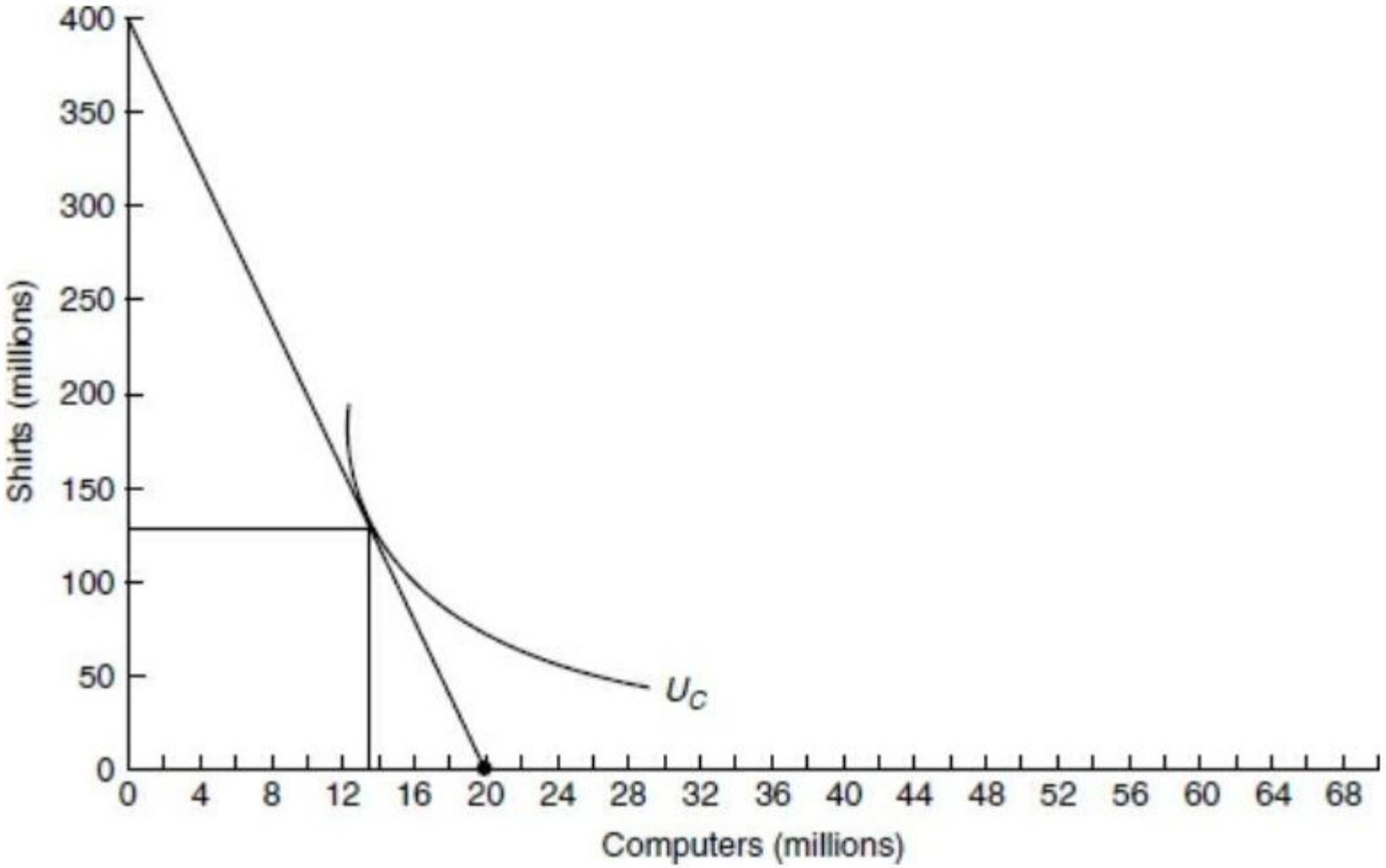
- One American worker can produce more computers or more shoes than one Chinese worker
- US has an ABSOLUTE ADVANTAGE in both computers and shoes
- So why trade?

COMPARATIVE ADVANTAGE

- Lower opportunity cost



United States Production Possibility Frontier



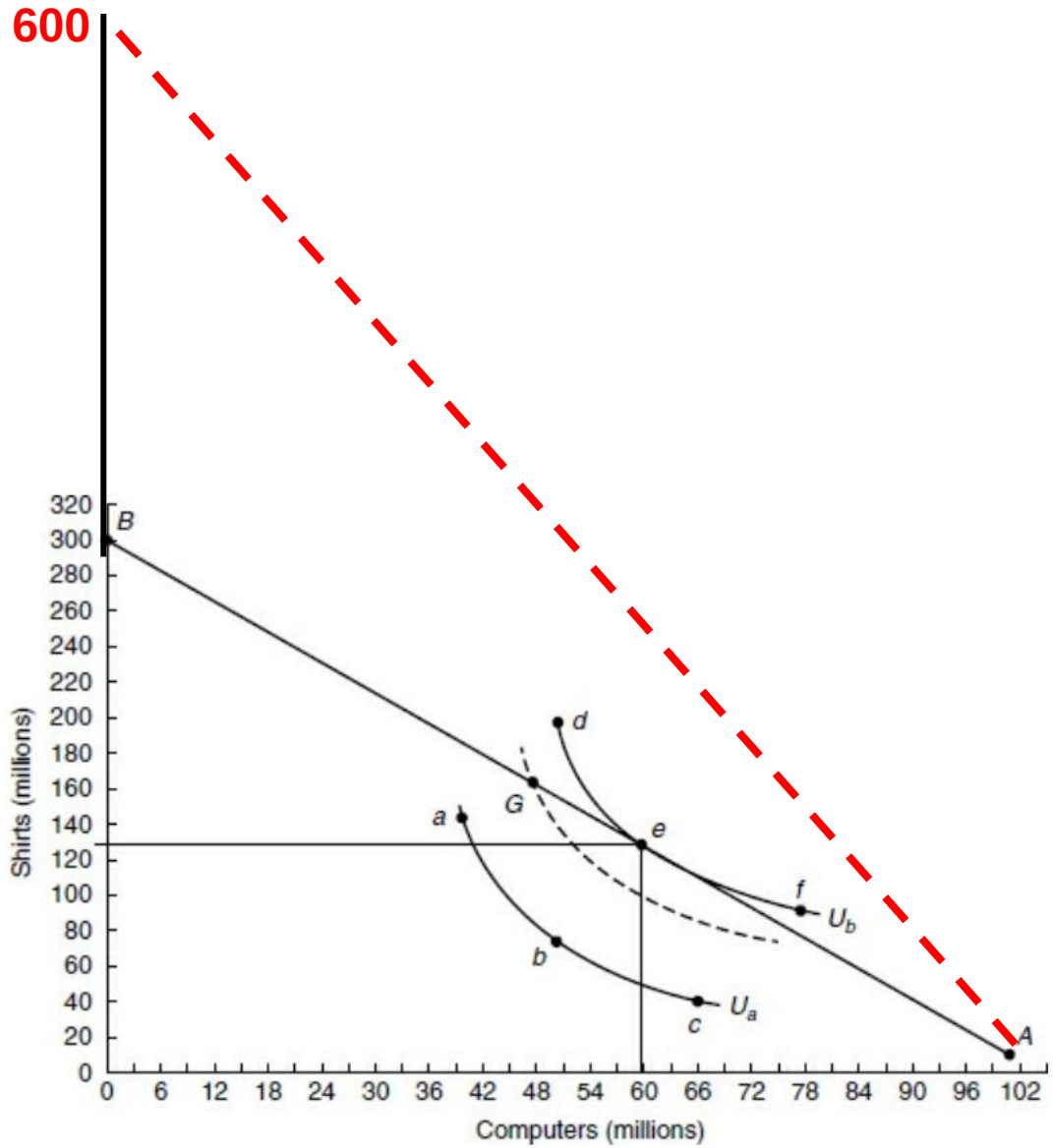
China's Production Possibility Frontier

Comparative Advantage

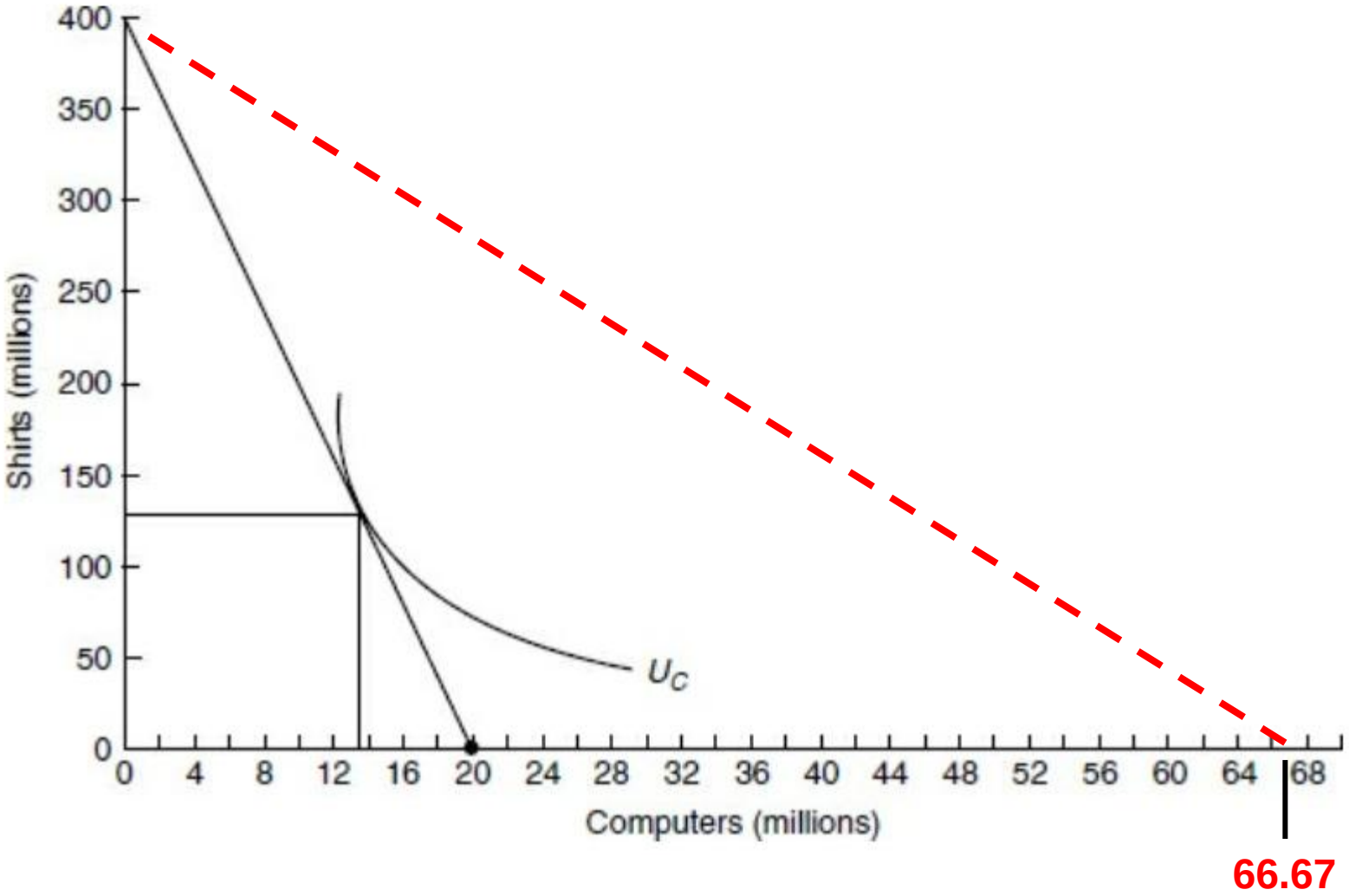
Hypothetical Output Levels, United States and China

	OUTPUT PER WORKER PER YEAR		OPPORTUNITY COST	
	Computers	**Shirts**	**1 computer**	**1 shirt**
United States	100	300	**3 shirts**	0.33 computer
China	10	200	20 shirts	**0.05 computer**

- United States is willing to trade one computer for >3 shirts
- China is willing to trade one computer with <20 shirts
- Let's assume they trade at 1 computer = 6 shirts
- And both countries **FULLY SPECIALIZE***



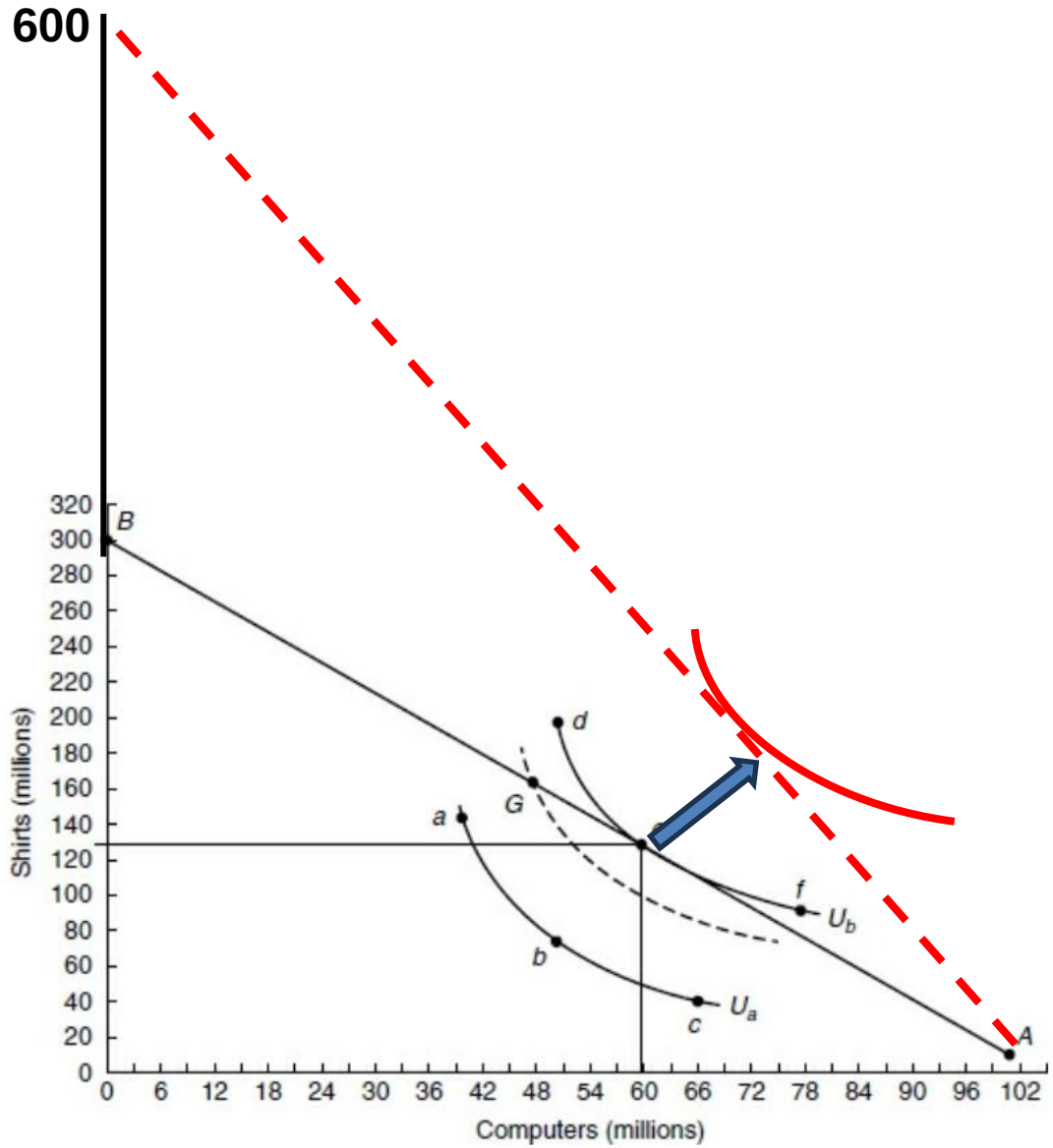
United States Production Possibility Frontier



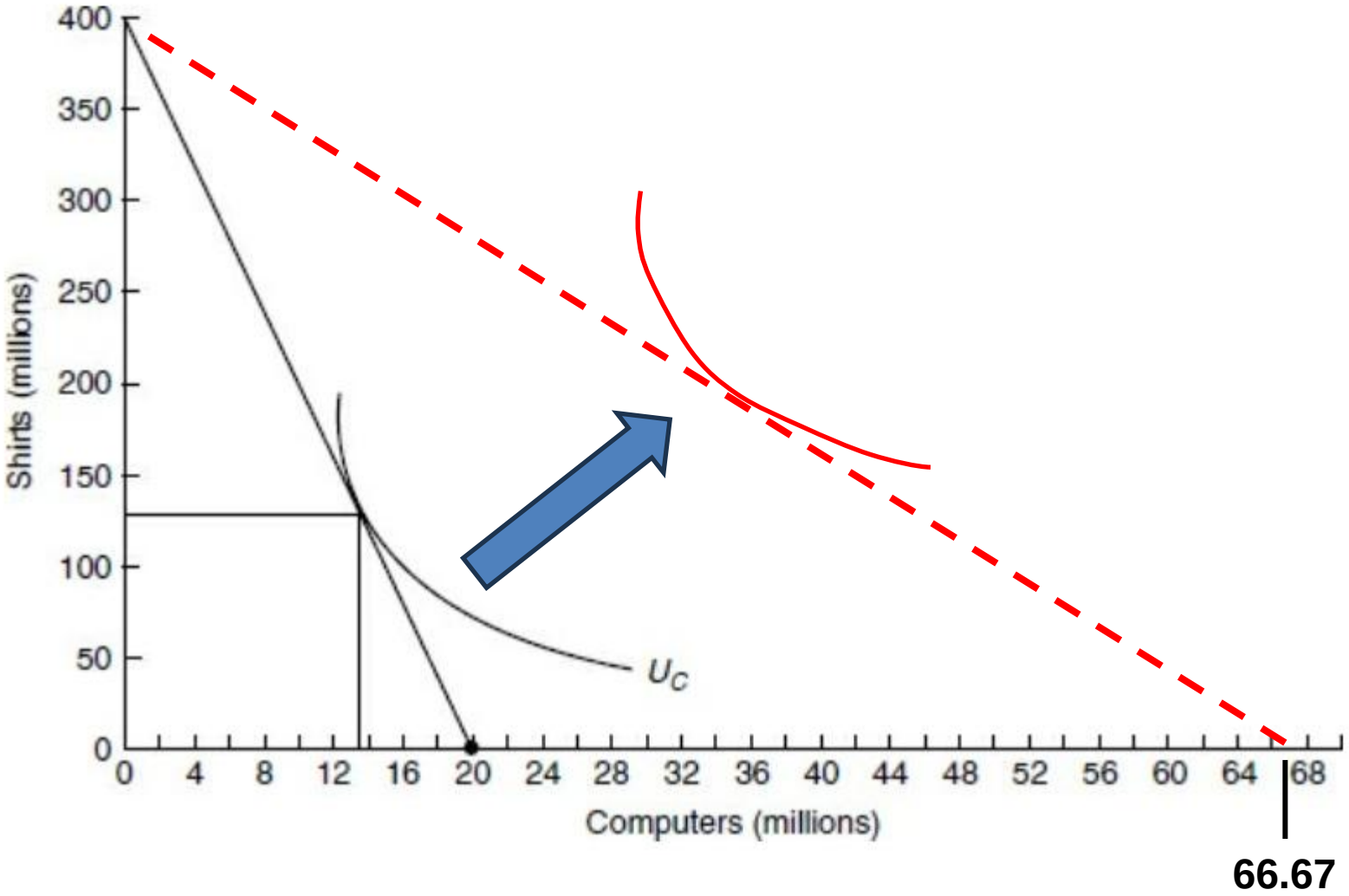
China's Production Possibility Frontier

So both countries would have more stuff

And higher utility

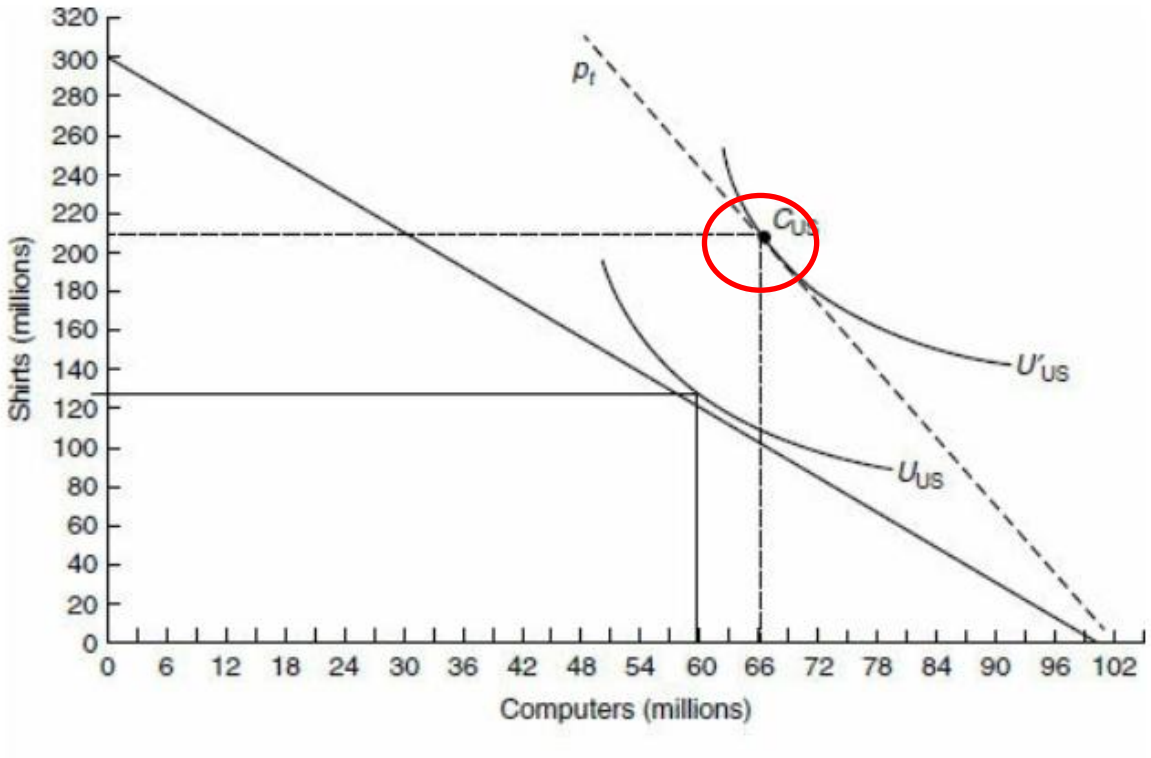


United States Production Possibility Frontier

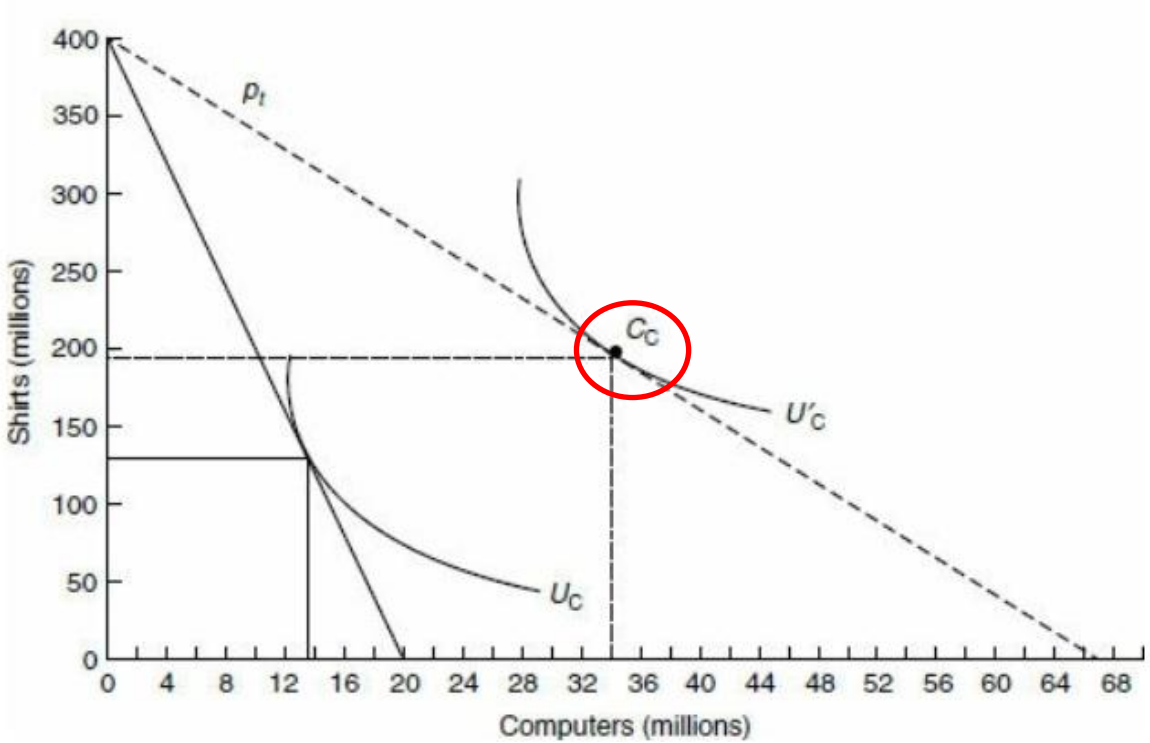


China's Production Possibility Frontier

United States



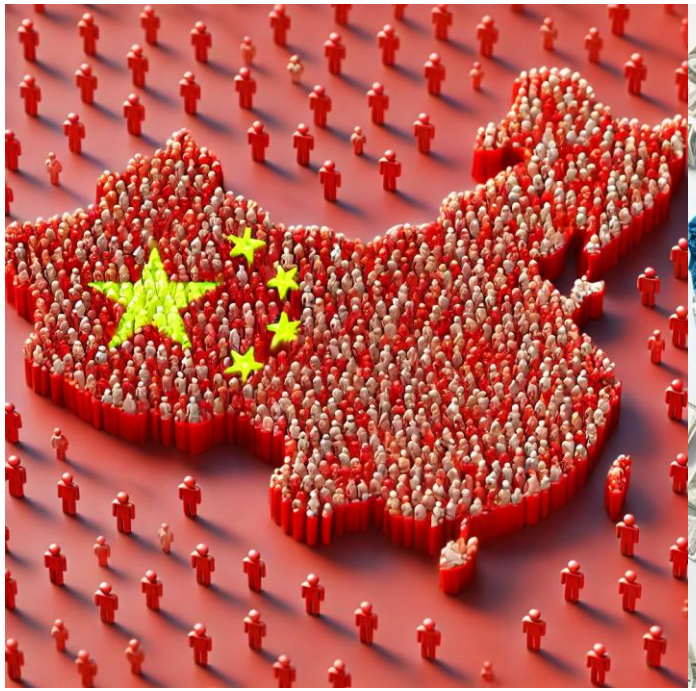
China



WHY does one country have a comparative advantage in one area?

Heckscher-Ohlin:

Two basic kinds of countries



Figures generated by ChatGPT

WHY does one country have a comparative advantage in one area?

- **Two factors:** Labor vs. Capital
- **Two products:** Labor-intensive vs. Capital-intensive
- **Factor endowment**
  - A country is relatively abundant/scarce in one of the factors
- Abundance means cheaper to use
- Factor abundance ≈ Comparative advantage
- Capital-abundant country → Export capital-intensive goods
- Labor-abundant country → Export labor-intensive goods

Figures generated by ChatGPT

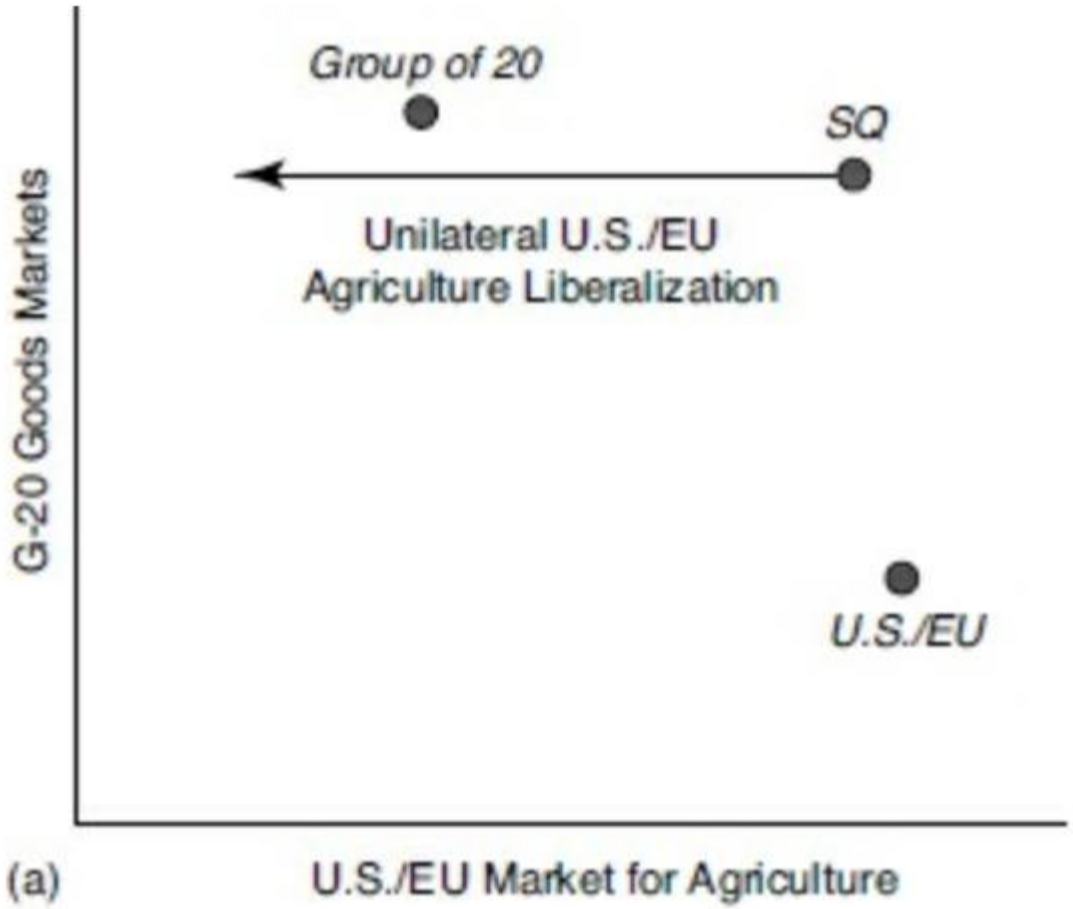
Why not free trade?

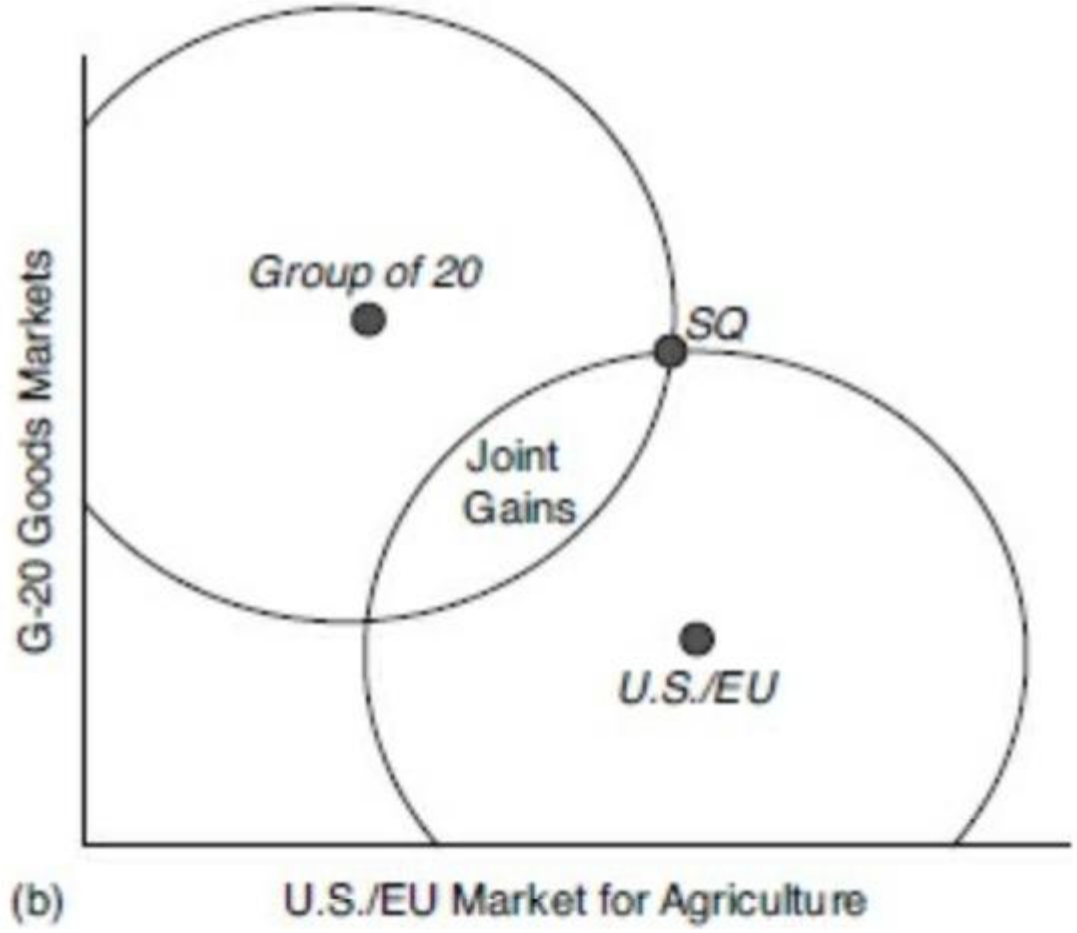
Next class: Stolper-Samuelson Theorem and LOSERS from trade

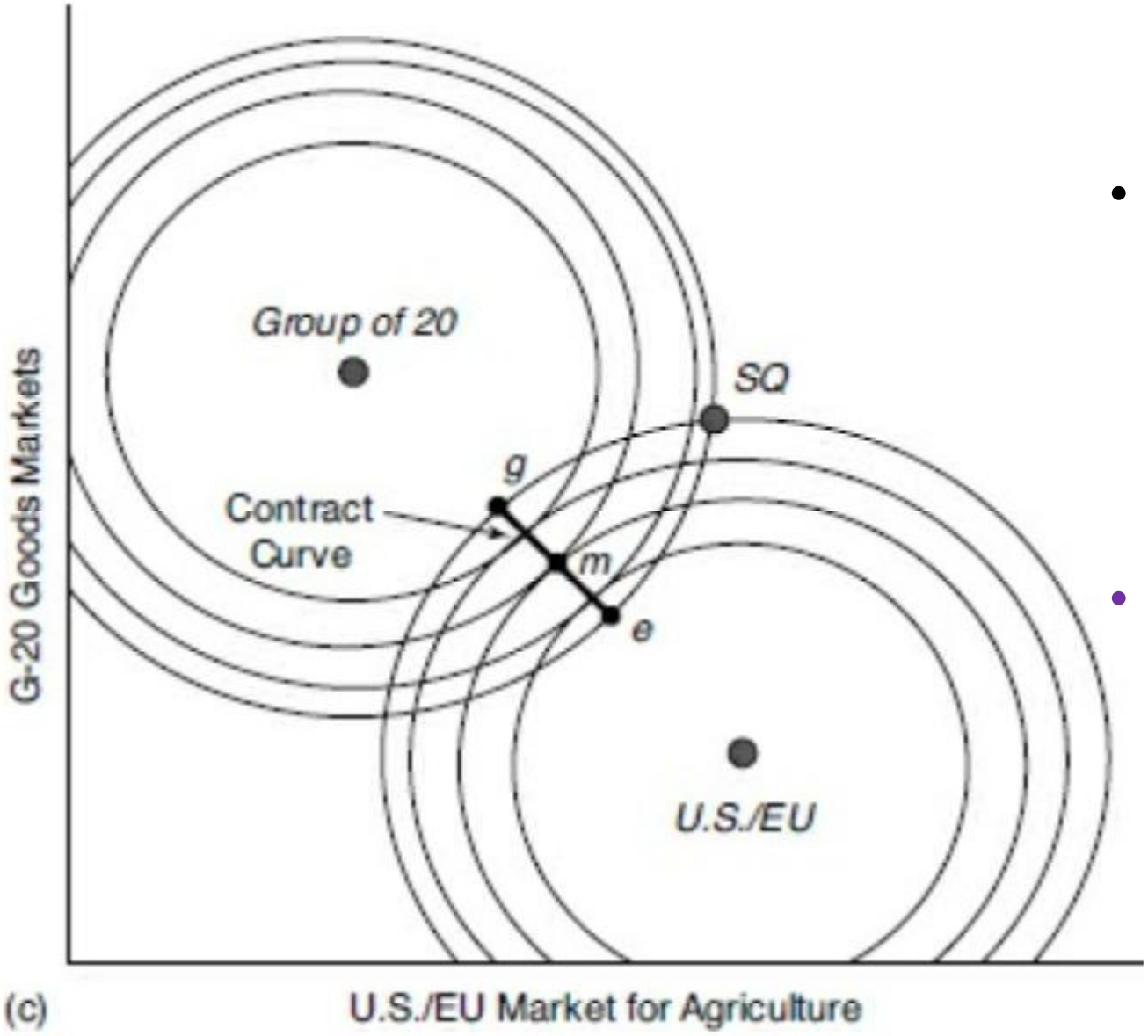
For now…

- Countries prefer open foreign markets to export to
- But prefer to protect its less competitive industries from imports

How does trade bargaining work?

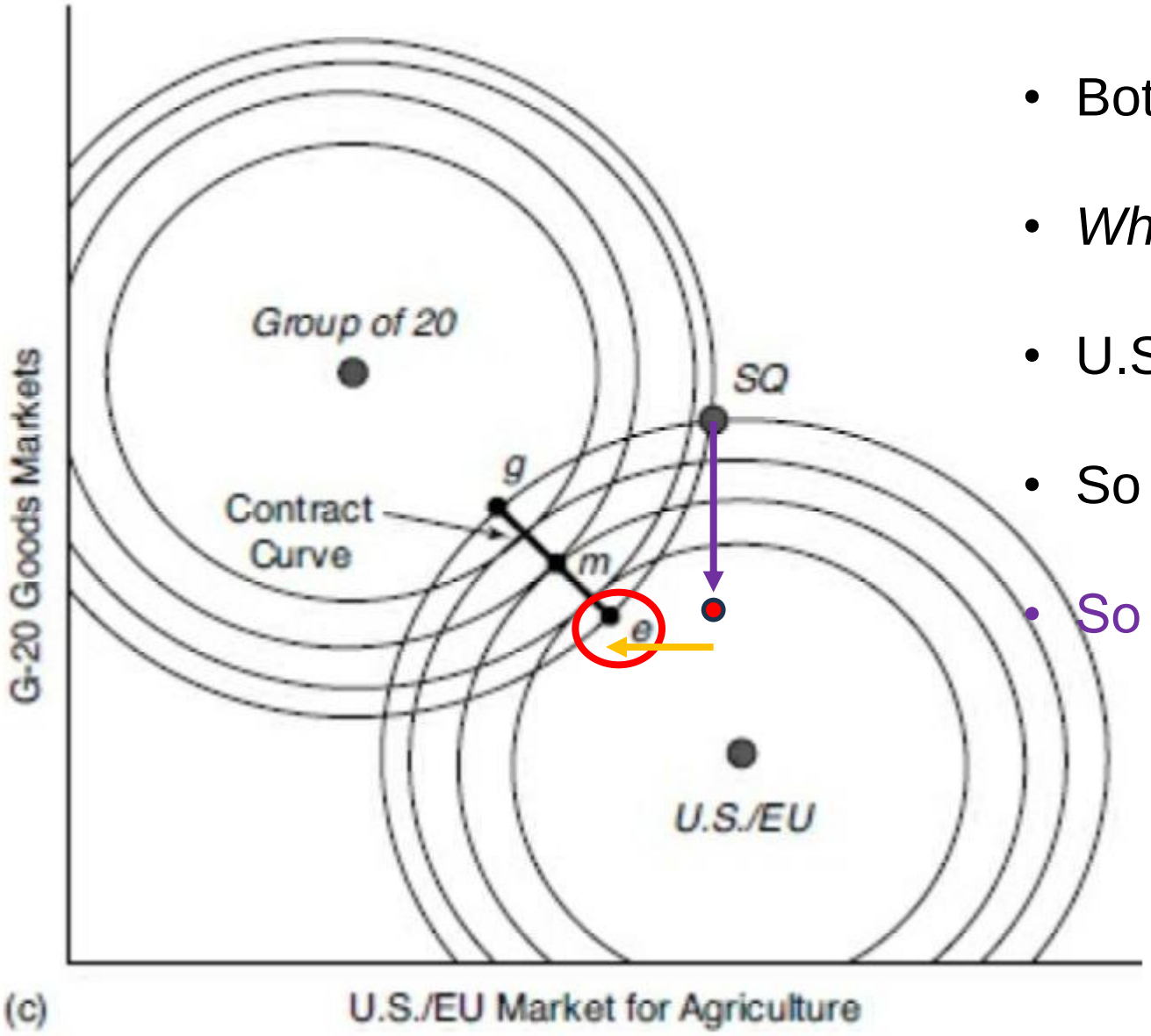

Group of 20
SQ
Unilateral U.S./EU
Agriculture Liberalization
U.S./EU
G-20 Goods Markets
U.S./EU Market for Agriculture
(a)


Group of 20
SQ
Joint
Gains
U.S./EU
G-20 Goods Markets
U.S./EU Market for Agriculture
(b)



- What decides the bargaining outcome?
  - Closer to g (G20 wins more) or
  - Closer to e (U.S./EU wins more)?
- **Bargaining Power**
  - Patience
  - Outside Options

How to enforce the deal?



- Suppose the deal is point e
- Both sides need to liberalize
- *What if G20 liberalized, but U.S./EU did not?*
- U.S./EU is **better off** by not liberalizing
- So they **have incentive to defect**
- So does the G20…

Prisoner's Dilemma

- A non-cooperative, non-zero-sum game. (Mixed game of cooperation and conflict.)
- ***Individual rationality brings about collective irrationality.***

Example…

- **You're reading Tchaikovsky's music on a train back in the USSR.**
- **KGB agents suspect it's secret code.**
- **They arrest you & a "friend" they claim is Tchaikovsky.**
- **"You better tell us everything. We caught Tchaikovsky, and he's already talking…"**

- **You know that this is ridiculous – they have no case.**
- **But they may be able to build a case using your testimony and "Tchaikovsky's."**
- **If you "rat" out your "friend" – they will reduce your sentence.**
- **If not, they will throw the book at you.**

	Player 2	
Player 1	Cooperate w/friend	Defect (rat)
Cooperate w/friend	**-3, -3**	**-25, -1**
Defect (rat)	**-1, -25**	**-10, -10**

Dominant Strategy

	Player 2	
Player 1	Cooperate w/friend	Defect (rat)
Cooperate w/friend	**-3, -3**	**-25, -1**
Defect (rat)	**-1, -25**	**-10, -10**

Player 2's "sucker's payoff"

Pareto optimal

Player 1's "sucker's payoff"

Nash equilibrium

(Pareto sub-optimal)

Pareto optimality:

- No one can be made better off without someone being made worse off
- Any change to make any person better off would make someone else worse off

Nash equilibrium:

- Every individual pursues his best strategy set, given the strategies of all other players
- No one would unilaterally defect
- If each player has chosen a strategy and no player can benefit by changing his or her strategy while the other players keep theirs unchanged, then the current set of strategy choices and the corresponding payoffs constitute a Nash equilibrium

Individual rationality → collective sub-optimality

- The same situation can occur whenever "**collective action**" is required
- The collective action problem is also called the "**n-person prisoner's dilemma**"
- Also called the "**free rider problem**"
- "**Tragedy of the commons**"
- All have similar logics and a similar result:

Individually rational action leads to collectively suboptimal results

Is cooperation ever possible in Prisoner's Dilemma?

- **Yes ☺**
- **In repeated settings**
- **Axelrod, Robert M. 1984. *The Evolution of Cooperation*. New York: Basic Books.**
- **Example set of strategies?**
- Tit-for-tat

PD Example from the book

- Trade Liberalization between the European Union and G-20

		European Union: Liberalize	European Union: Protect
G-20	Liberalize	***L,L*** ***I***	***L,P*** ***II***
	Protect	***P,L*** ***IV***	***P,P*** ***III***

Preference Orders:
G-20: ***P,L*** > ***L,L*** > ***P,P*** > ***L,P***
European Union: ***L,P*** > ***L,L*** > ***P,P*** > ***P,L***

Thank You!

NYU SHANGHAI
上海 纽约大学

Take-away

- Building blocks
- Consumption indifference curves
- Production possibility frontiers
- (Declining) Marginal Rate of Substitution
- (Constant or Increasing) Marginal Rate of Product Transformation
- Comparative advantage
- Opportunity costs
- Factor endowments
- Hecksher-Ohlin Model
- Prisoner’s dilemma
- Sucker’s payoff
- Tit-for-tat (cooperation possible in repeated PDs)
- Nash equilibrium
- Pareto sub-optimality