

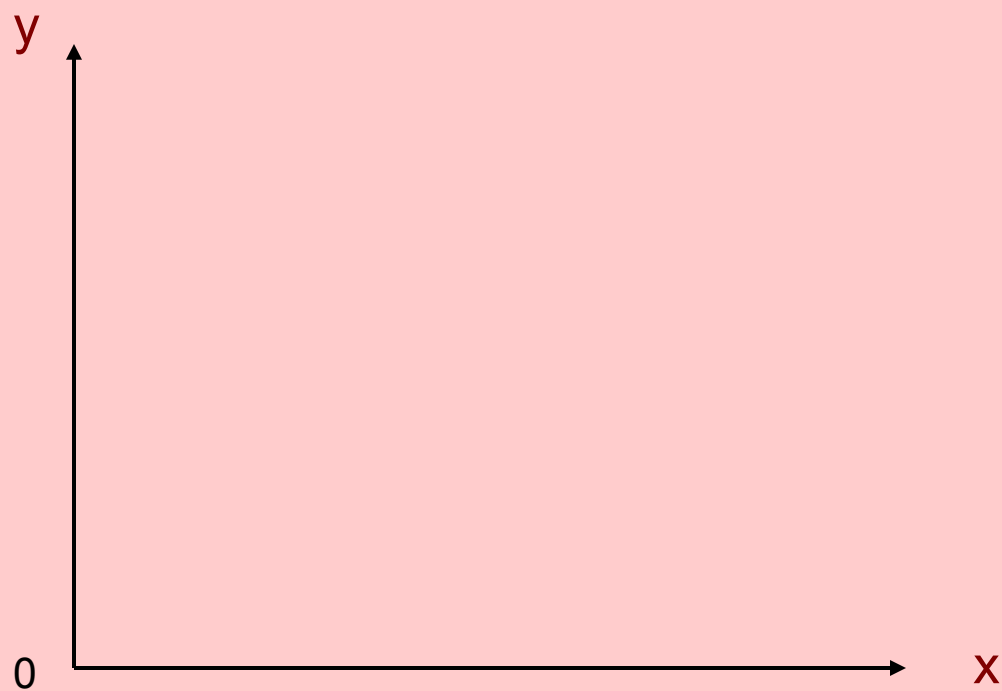
neoclassical

- Main principle: resource scarcity
- Not absolute scarcity, relative scarcity
- Scarcity relative to “unlimited human wants”
- Opportunity cost – “the value of what could have been produced if resources were used in the best alternative way”

Production Possibilities

- Two goods: guns and butter
- Given (constant) amounts of resources of land (T), labor (L) and capital (K), and given (constant) technology
- Time period is given—one year
- Neoclassical goal— efficiently allocating given T, L, and K among competing industries to maximize consumer satisfaction per time period.

Graphing



Production Possibilities Schedule

Guns	Butter

Production Possibilities Schedule

Guns	Butter
	80

Production Possibilities Schedule

Guns	Butter
0	80

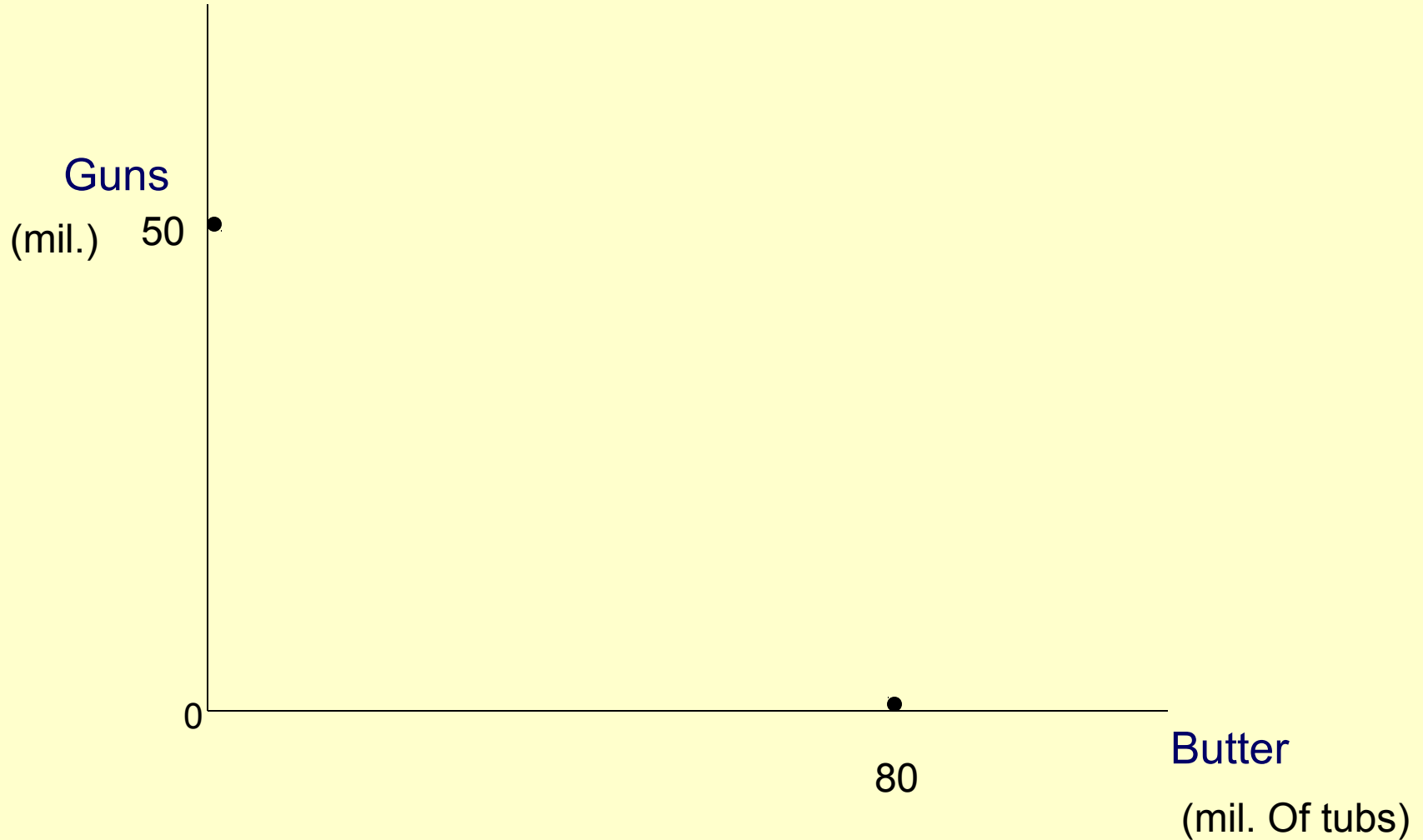
Production Possibilities Schedule

Guns	Butter
0	80
50	

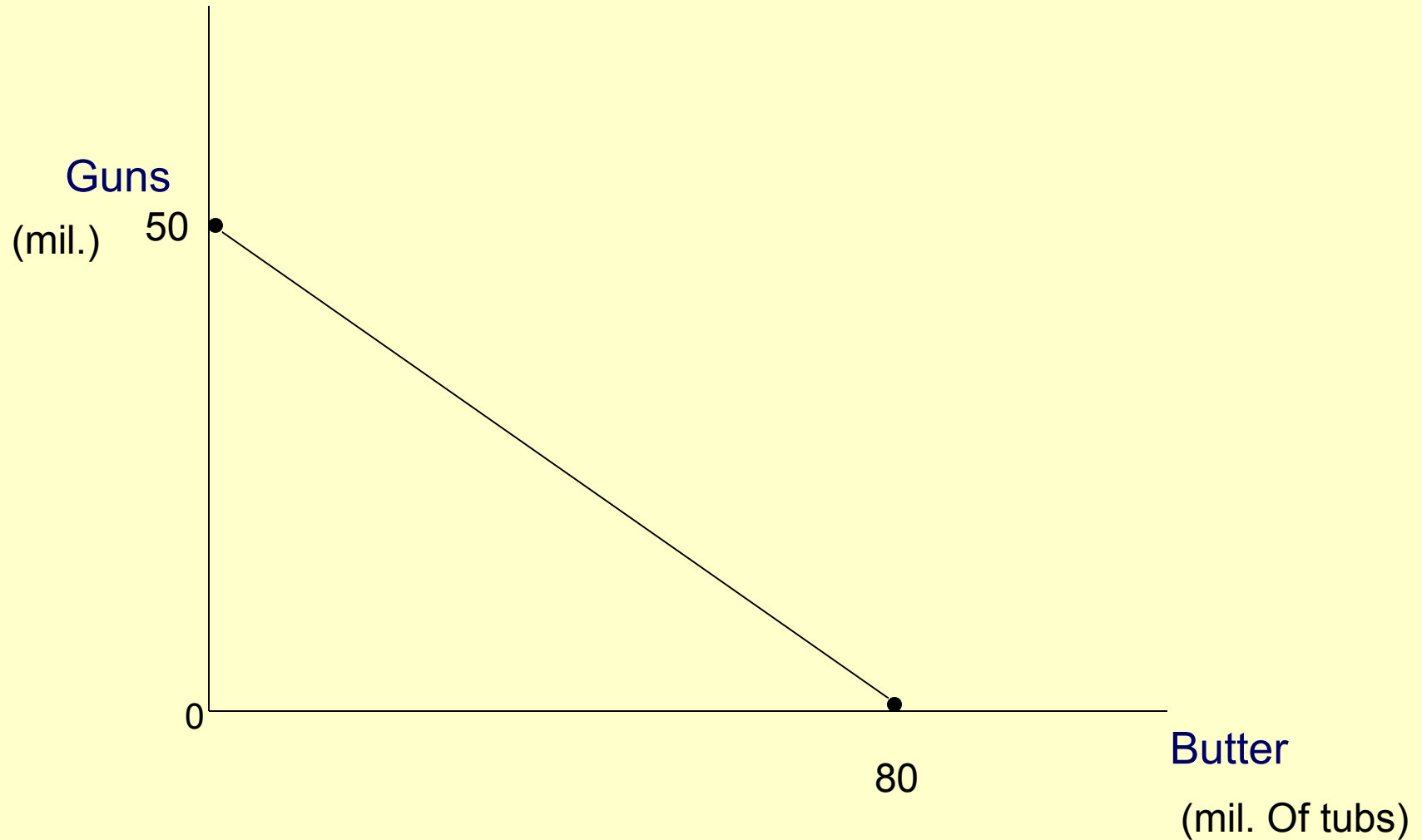
Production Possibilities Schedule

Guns	Butter
0	80
50	0

Production Possibilities



PPC Constant Trade-off



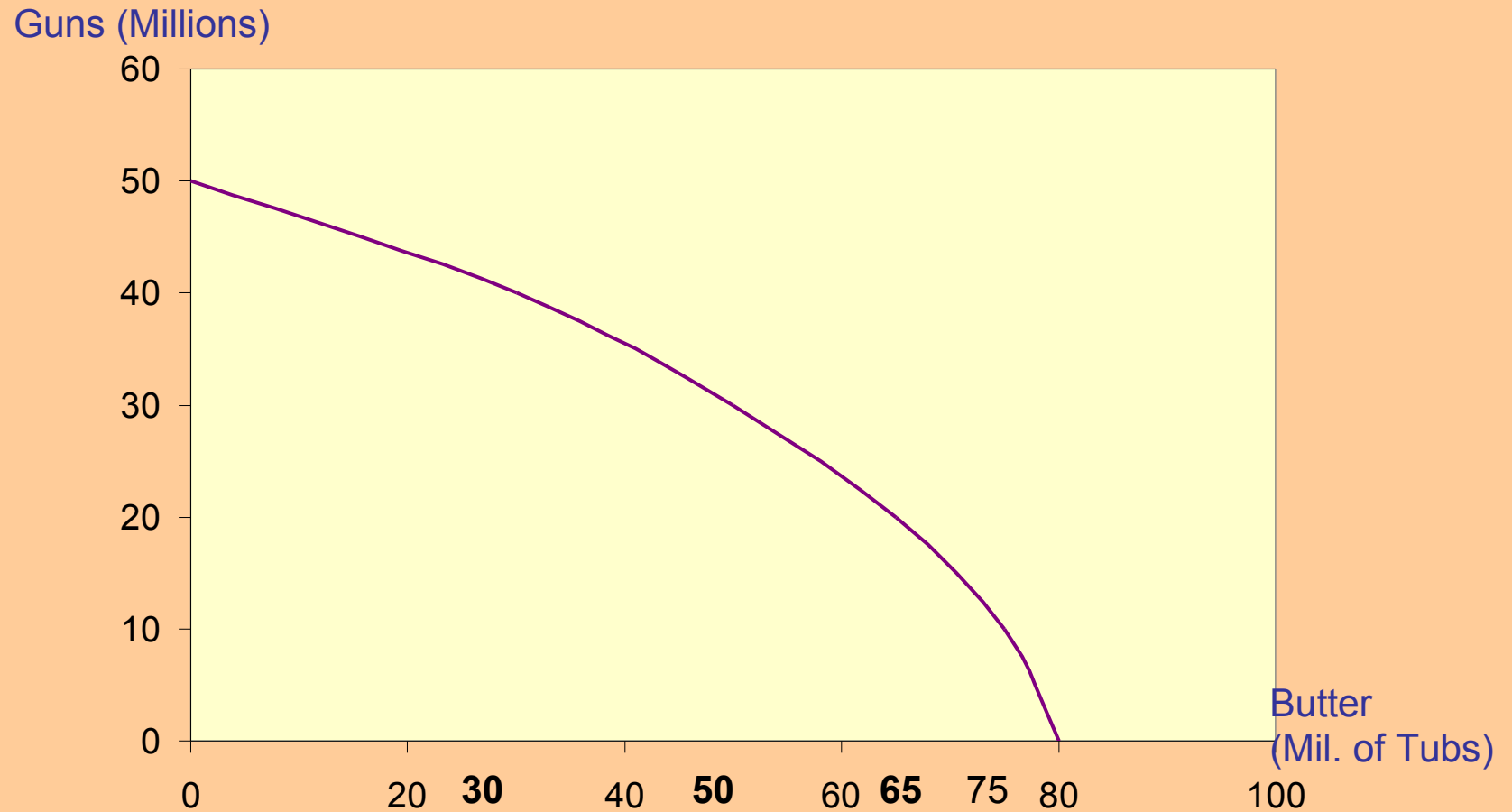
PPC

- Straight-line production possibility curve indicates constant returns and constant opportunity costs
- Such a relation implies that resources are perfectly suitable for both industries (cows just as good for guns as butter; machine tools just as good for butter as guns).
- Not the normal PPC between two industries

Production Possibilities Schedule

Guns	Butter
0	80
10	75
20	65
30	50
40	30
50	0

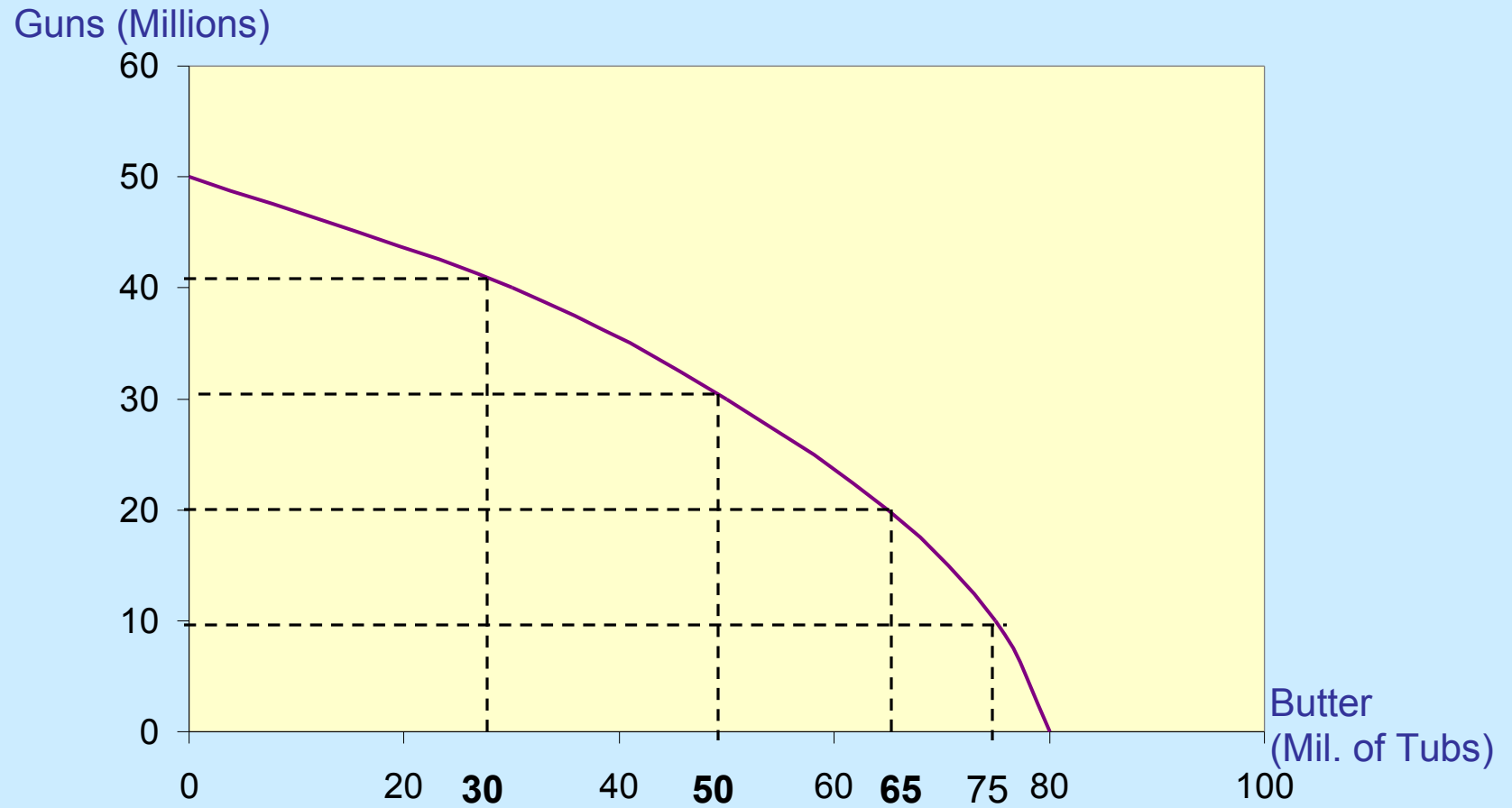
Production Possibilities Schedule



PPC

- Normal PPC is “bowed out” from origin
- Indicates diminishing returns and increasing opportunity costs
- Law of increasing opportunity costs states that in order to get more of any good in a given time period, society must sacrifice ever-increasing amounts of other goods, *ceteris paribus*.

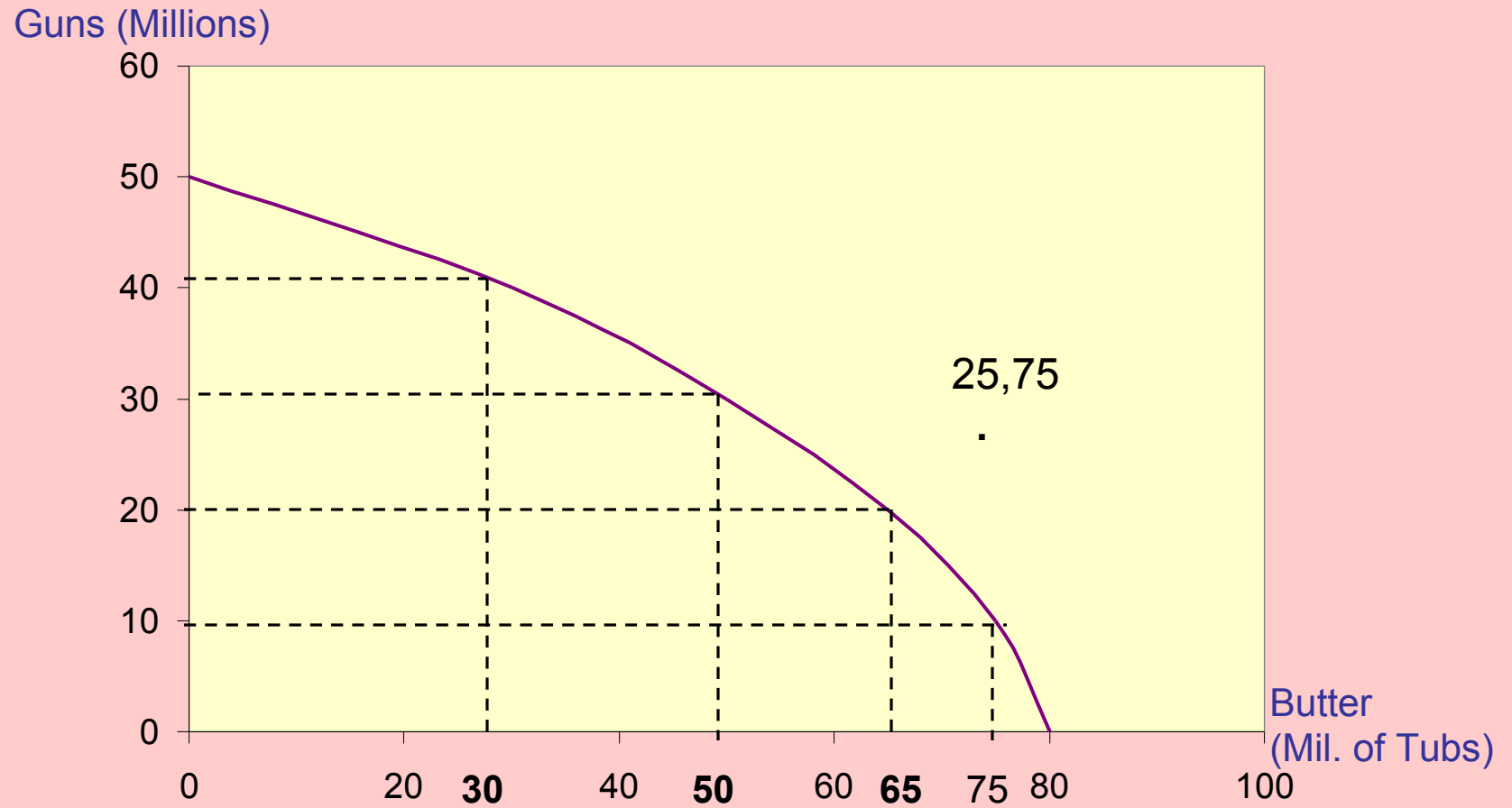
Production Possibilities Schedule



Prod. Poss. Schedule

- Let's add two additional points to our schedule:
- Guns Butter
25 75
15 40

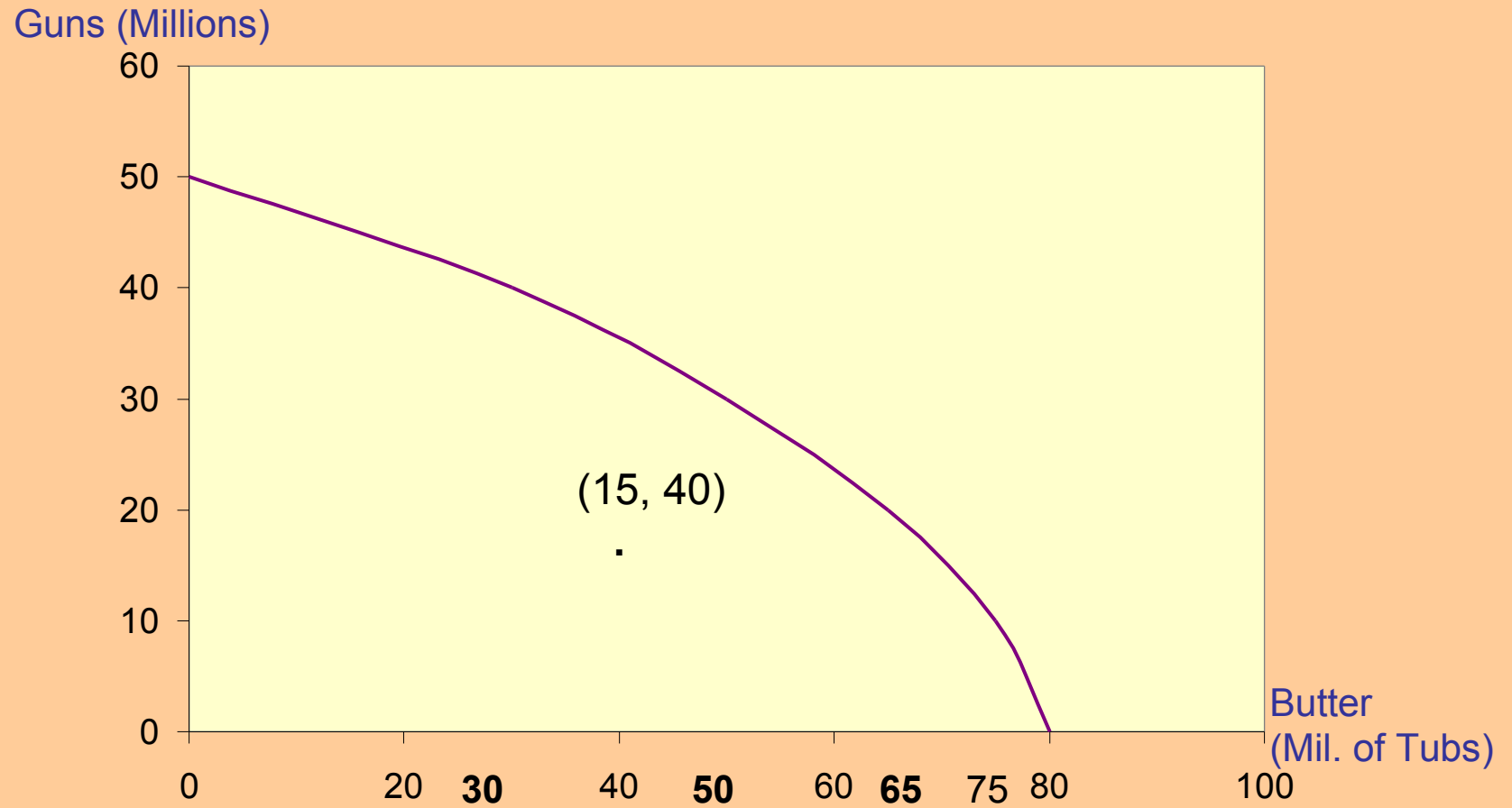
Production Possibilities Schedule



Point outside the curve

- Measuring in physical terms (#s of guns, tubs of butter), given resources and technology, a point outside is physically impossible, unattainable
- If we were measuring in \$ (monetary) terms (\$ worth of guns, \$ worth of butter), then a point outside would be possible: physical output cannot increase, but prices can—inflation

Production Possibilities Schedule



Point inside the curve

- Point inside the curve is possible, but undesirable—society can produce these combinations, but it is producing below full potential—there is unemployment and excess capacity; resources are being left unused and underutilized; this is inefficient and wasteful.

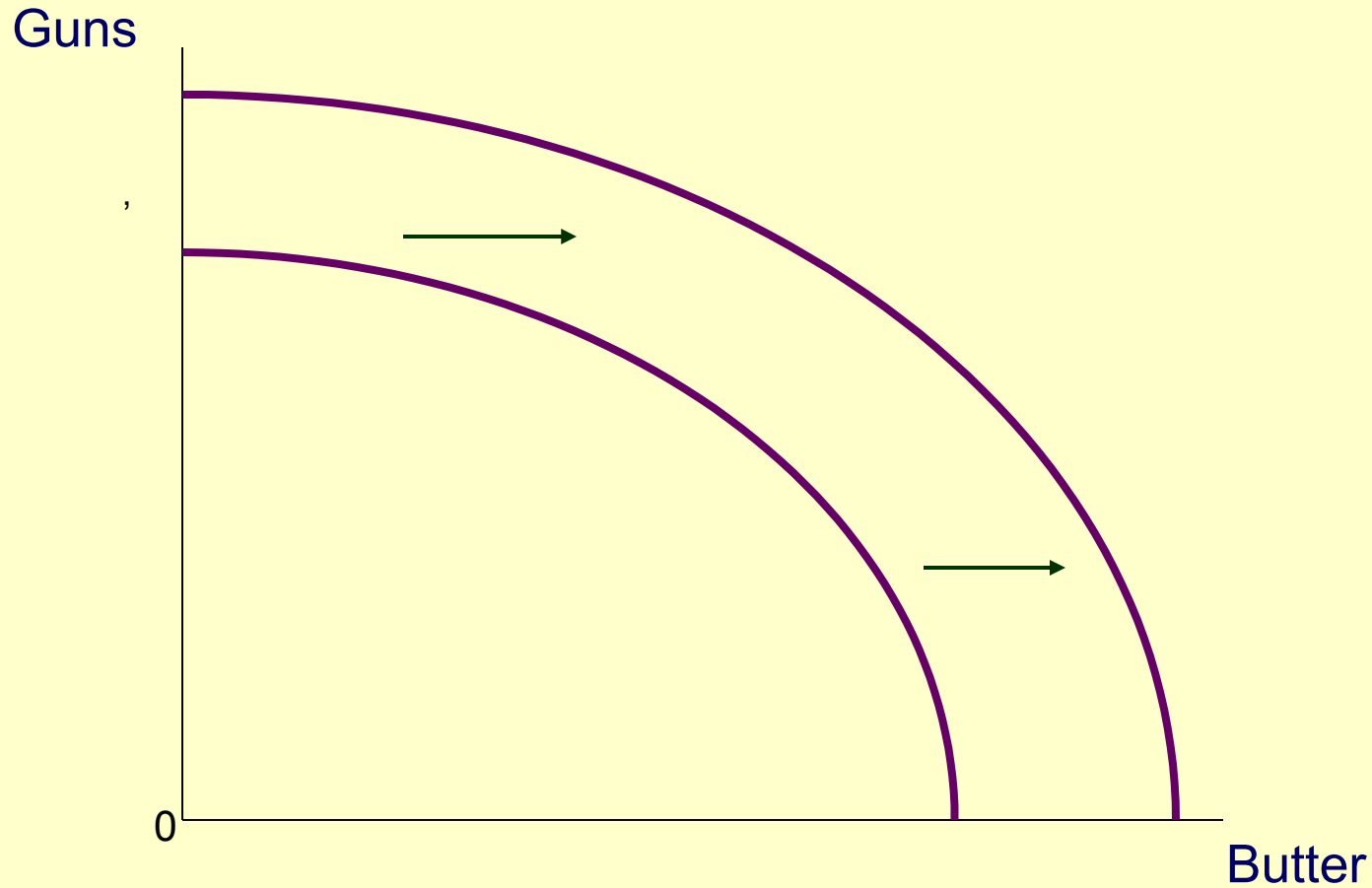
Point on the curve

- Operating anywhere on the curve is efficient, the economy is operating at full employment and full productive capacity.
- Operating on the curve, resources are scarce (because full employed) and opportunity cost is in effect (cannot increase production of one good without decreasing production of the other)

PPC

- What determines where the curve is?
 - technology, resources
- What happens if there is an increase of resources and/or technological advance?
 - The curve shifts out (more of both goods can be produced)
- What is the economic meaning of a shift out?
 - Economic growth

Shift of Production Possibilities Curve



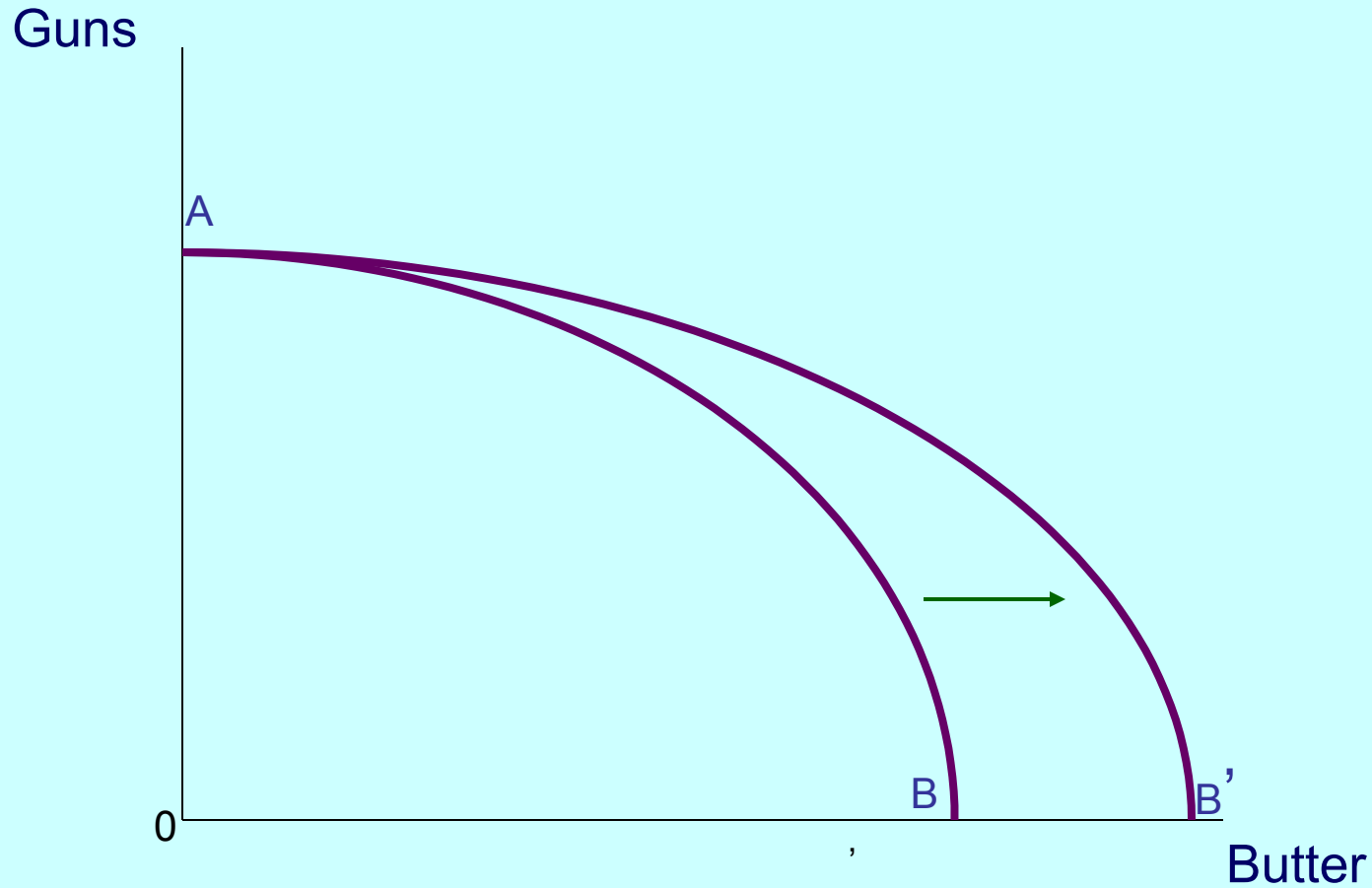
Economic Growth

- What is the source of economic growth?
- Increased resources and technological advance
- Parallel shift out, additional resources apply to both industries; technological advance is universal (applies to both)

Economic Growth

- What if the additional resources only applies to butter (or gun) production, or the technology only applies to one or the other?
- Sector-specific technical advance (or sector-specific resource expansion)

Production Possibilities Curve



Sector-specific growth (in butter sector)

- More butter can be produced, but if all resources were applied to gun production, gun output would remain the same—technology doesn't apply to guns)
- More of both can be produced, because increased productivity in the butter sector allows some resources to be shifted to gun sector.

Shift-in of curve

- Shift in means economic decline—could be universal or sector-specific. Results from a decline in resources and/or technological decline.
- Don't get mixed up between a shift out of the curve and a point outside the curve; or a shift in of the curve versus a point inside the curve.

Economic Growth: Increased Resources: Land

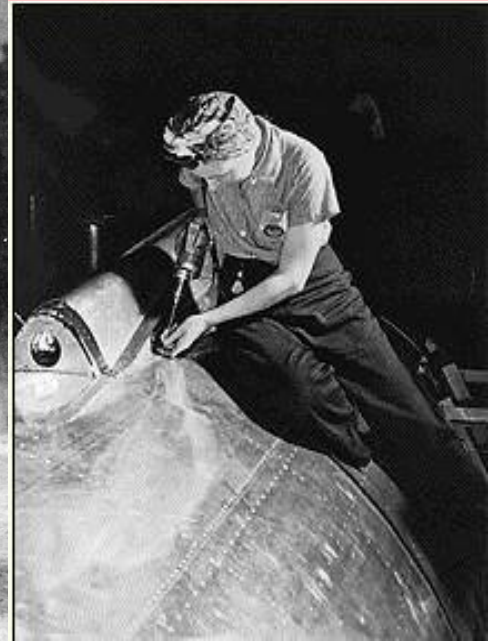
- New land may be brought into cultivation, discoveries of new deposits of natural resources, increased stock of stock renewable resources (also, for a given country, conquering another country).



Economic Growth:

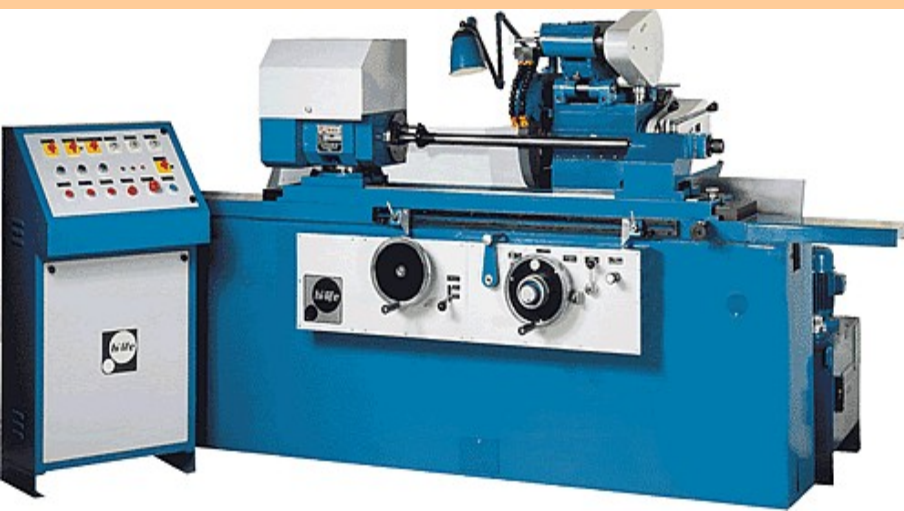
Increased resources: Labor

- Population growth
- New sectors of the population enter the workforce (e.g., women during WWII, subsistence workers in Third World)
- For one country, Immigration.



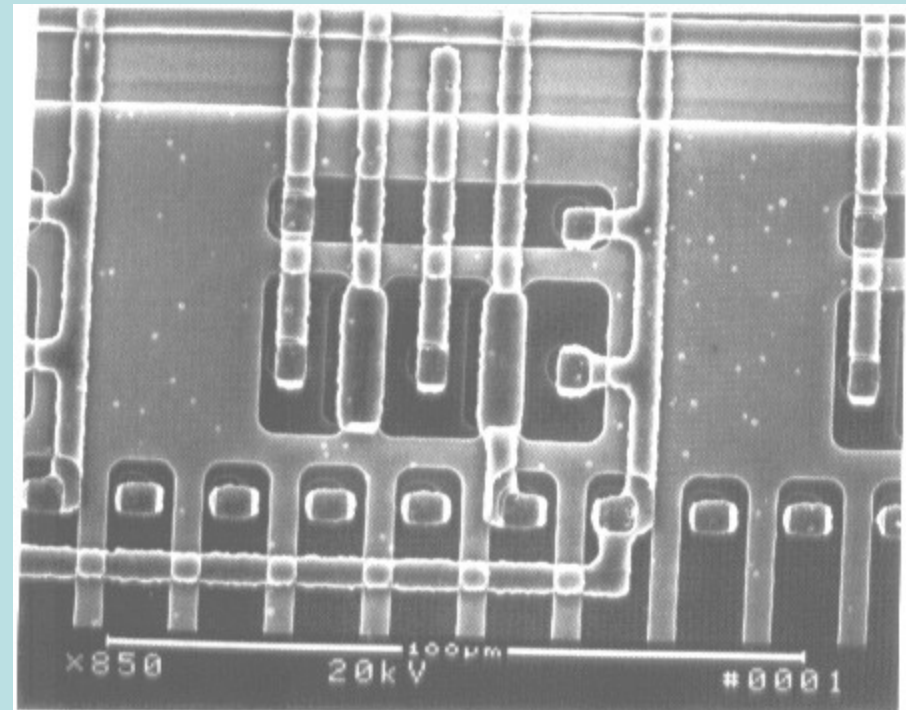
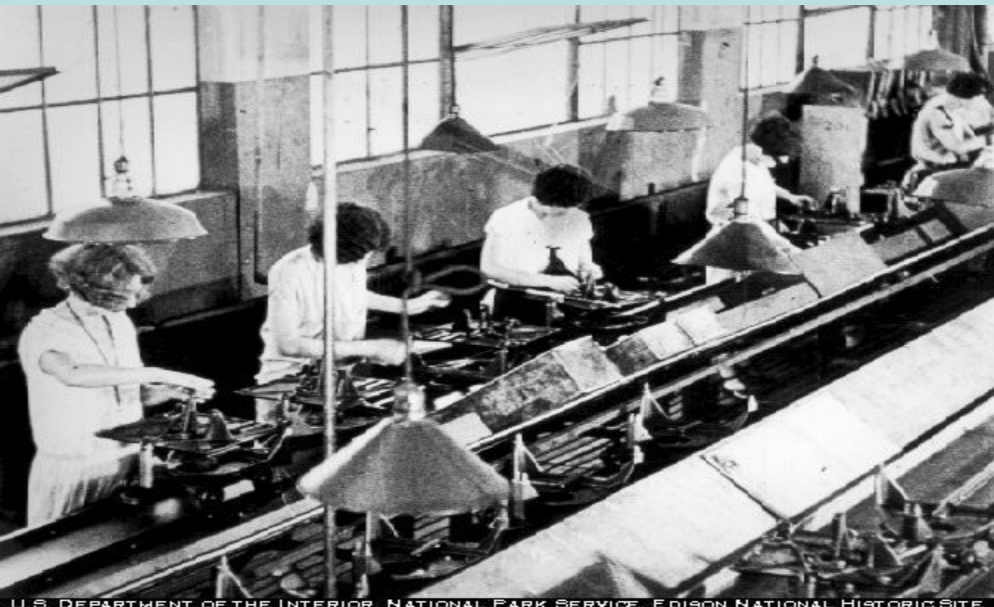
Economic Growth: Increased Resources: Capital

- Machine tools industries
- Capital goods production



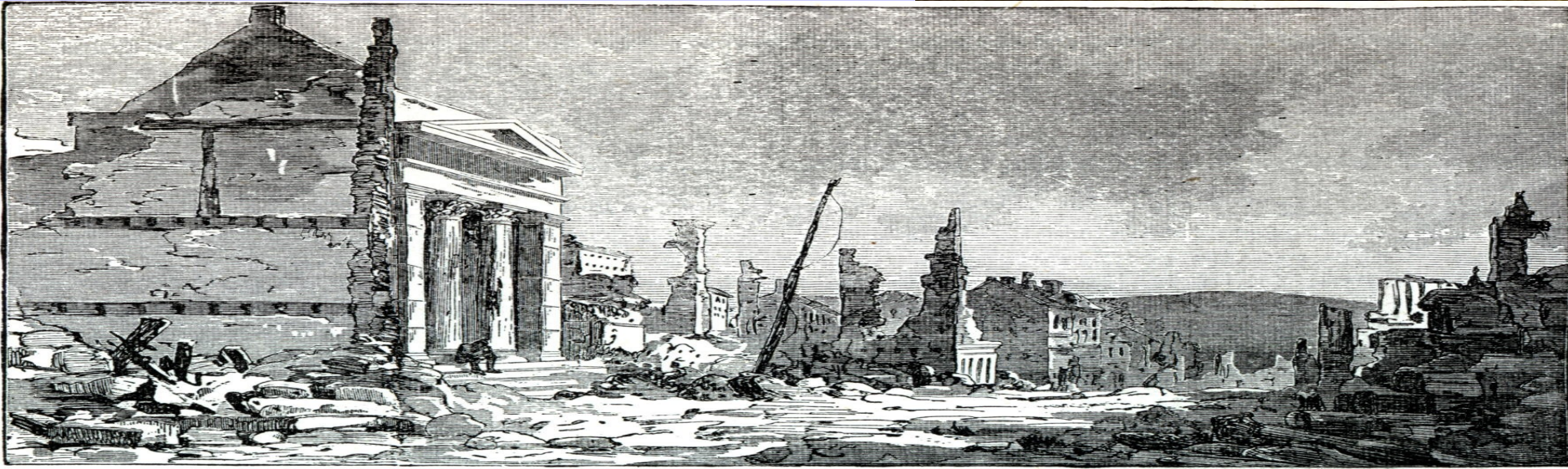
Growth: Technological advance

- Microelectronics Revolution
- Technological innovations
- Organizational innovations



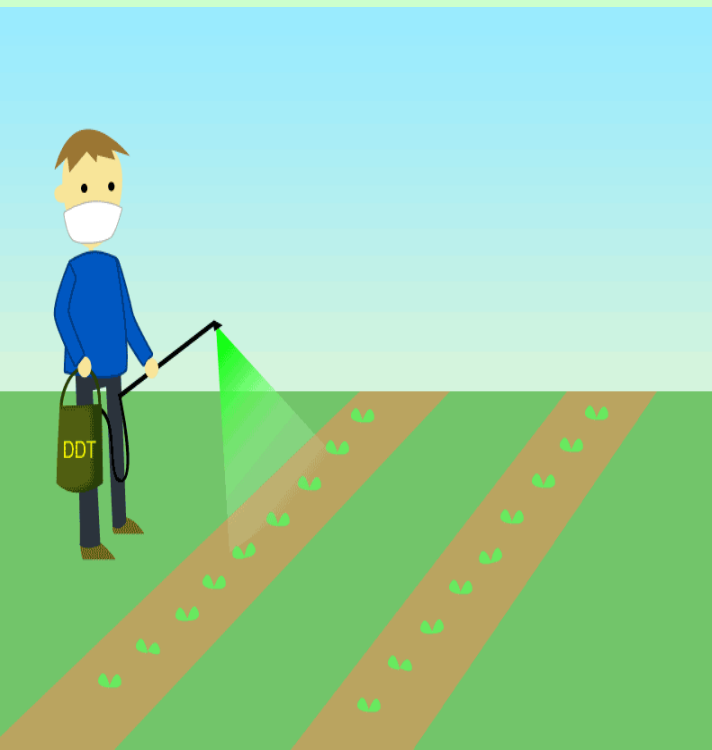
Economic Decline: Decreased Resources

- War
- Natural disaster
- Population decline
- Emigration



Economic Decline: Technological Decline

- Outlawing technologies (or their use at certain times or places) for environmental or health reasons



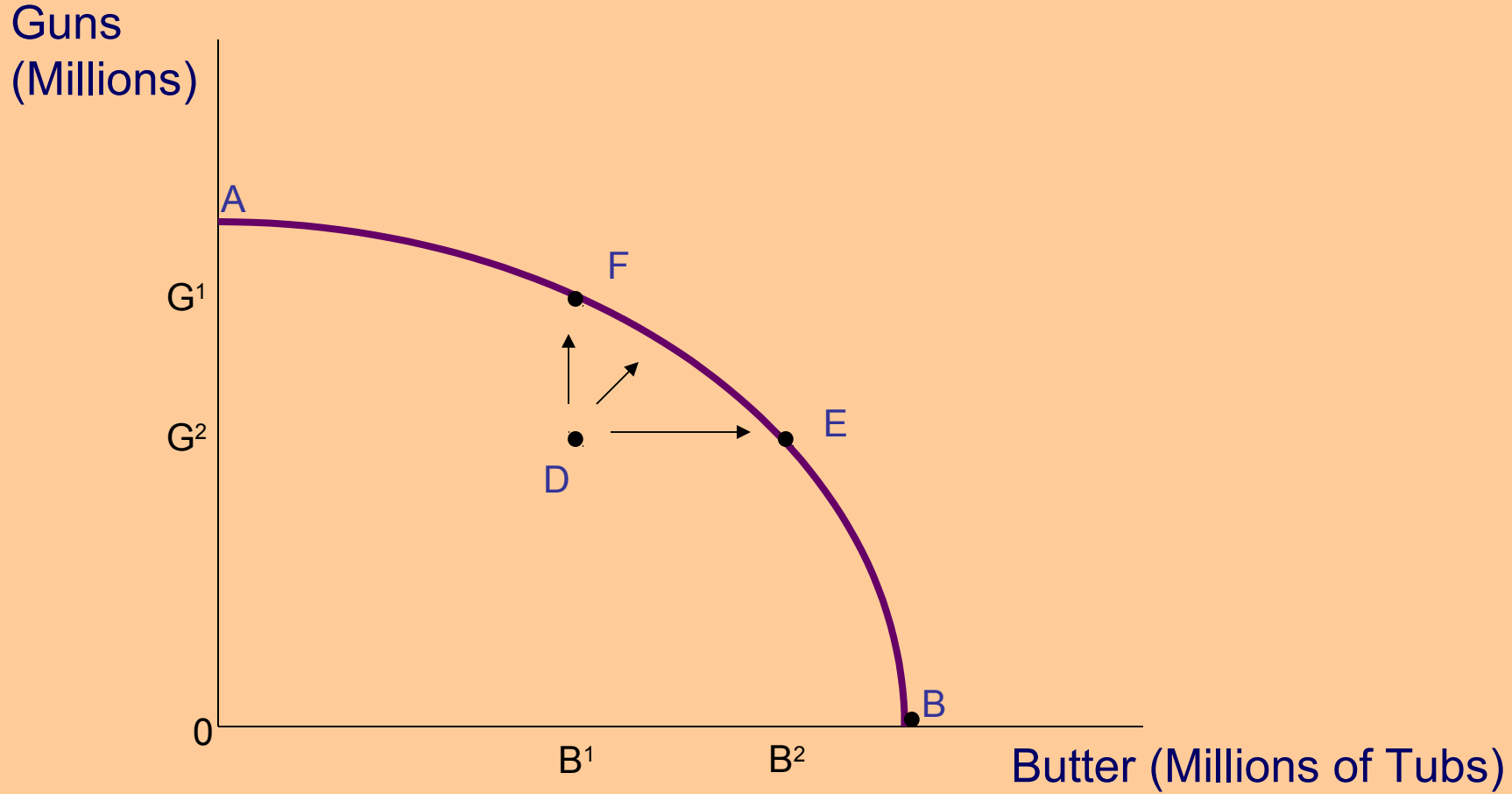
Unemployment & underemployment



Unemployment and excess capacity

- When resources are unemployed, they are not scarce
- There is no opportunity cost to employing unemployed resources
- When resources are unemployed, more of any good can be produced without decreasing production of other goods; more of both goods can be produced.

PPC (Unemployment)



Different theories describe different economic scenarios

- Neoclassical theory applies when the economy is on the curve (at full employment)—then scarcity and opportunity cost are in effect
- Keynesian theory applies when the economy is inside the curve (unemployment and excess capacity)—no scarcity (resources are available) and no opportunity cost to employing them.