

Specific Factors and Income Distribution

Krugman Ch.4

Topics

- The Specific Factors Model
- International Trade in the Specific Factors Model
- Income Distribution and the Gains from Trade
- The Political Economy of Trade
- International Labor Mobility

Preliminary Remarks

- If you have difficulty in understanding concepts such as:
 - Production Function,
 - Marginal Product of Labor (MPL), VMPL,
 - Labor Demand... etc.
- You can refer to my other basic courses (principle of economics I)
 - Slide: <https://github.com/z0nam/economics1note>
 - Lecture 009, 010, 011.
 - Lecture Video Link (Language: Korean)

The Specific Factors Model

The Specific Factors Model: Overview

- Samuelson (1971), Jones (1971)
- Two goods (sectors)
- Decision: Allocation of labor supply
- Production Factors: labor + α
 - labor: mobile factors: can move between sectors
 - α : **specific factors**
 - can be used ONLY ONE sector

Assumptions

- Two goods: [cloth] and [food]
 - Q_C : quantity of cloth
 - Q_F : quantity of food
- Factors of production:
 - Labor (L)
 - Capital (K; Kapital)
 - Land (T; Terrain)

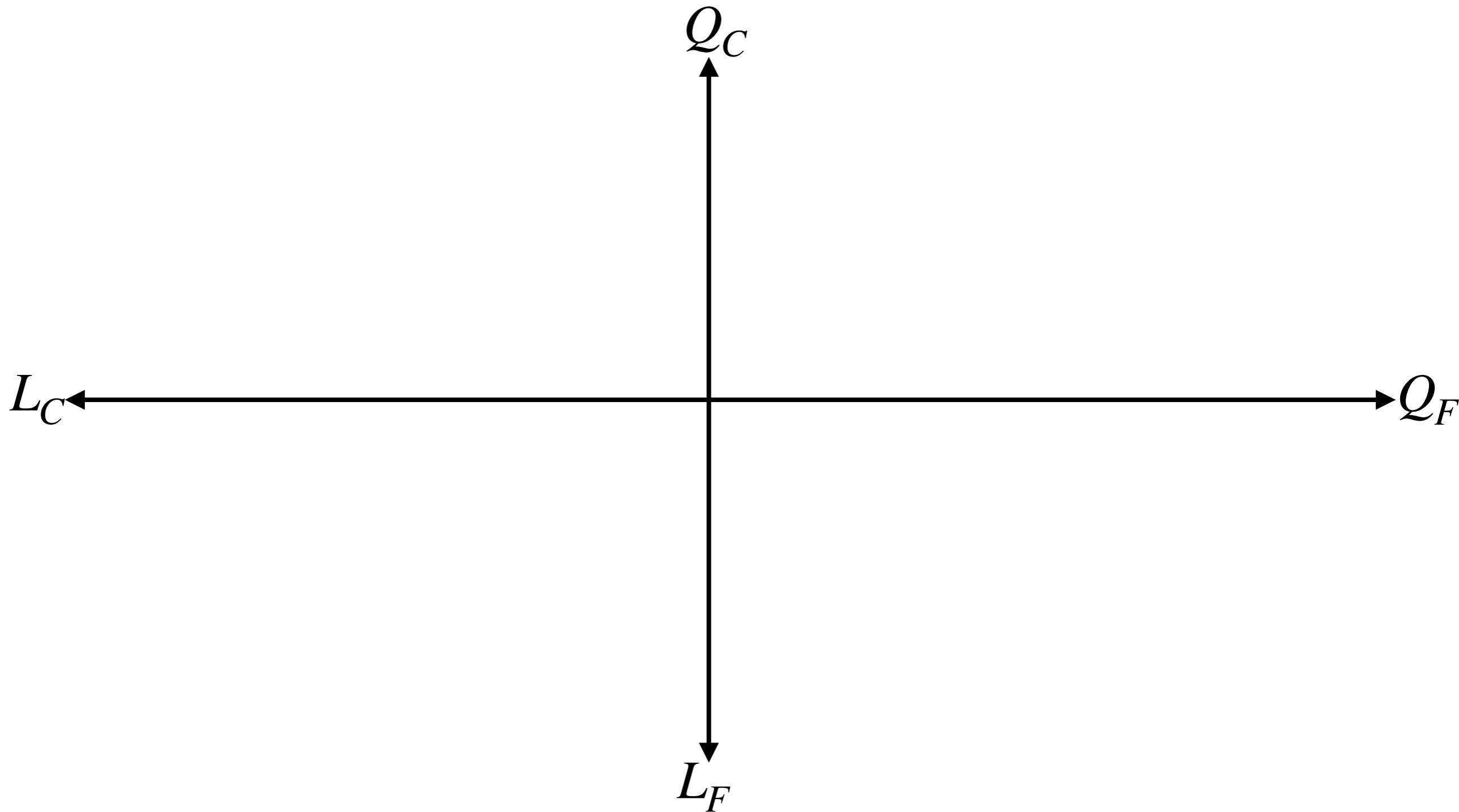
Production Functions

- $K + L \rightarrow \text{Cloth}$
 - $Q_C = Q_C(K, L_C)$, <eq4.1>
- $T + L \rightarrow \text{Food}$
 - $Q_F = Q_F(T, L_F)$. <eq4.2>
- K, T is specific factors
- Total Labor Supply $L = L_C + L_F$ <eq4.3>

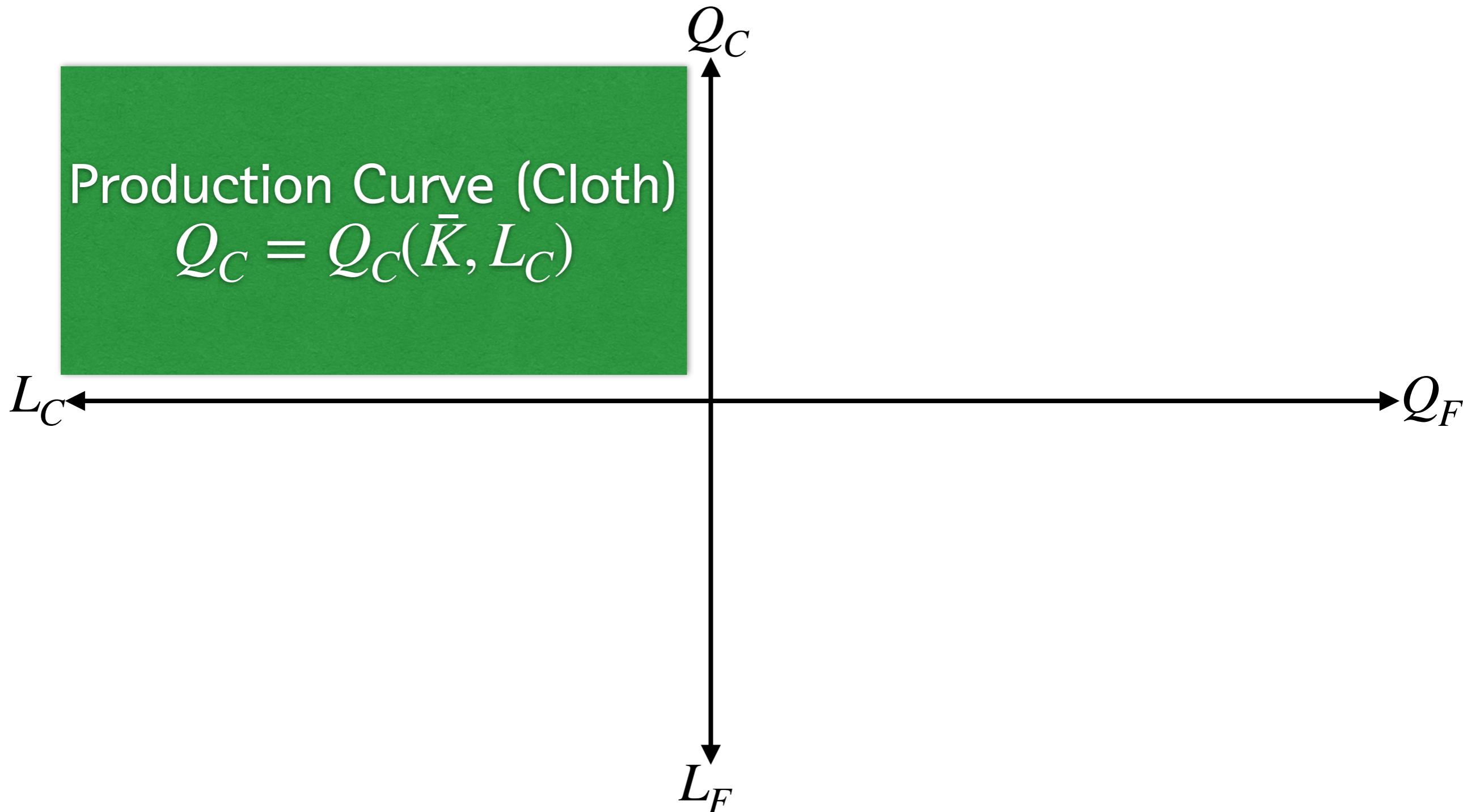
Production Possibility Frontier (PPF)

- Horizontal axis: Q_C
- Vertical axis: Q_F
- Big Picture
 - STEP1: Production function
 - on $Q_C - L_C$ plain (given K)
 - on $Q_F - L_F$ plain (given T)
 - STEP2: $L = L_C + L_F \Rightarrow \text{PPF}$
- Sometimes it is called **Production Possibility Curve (PPC)**

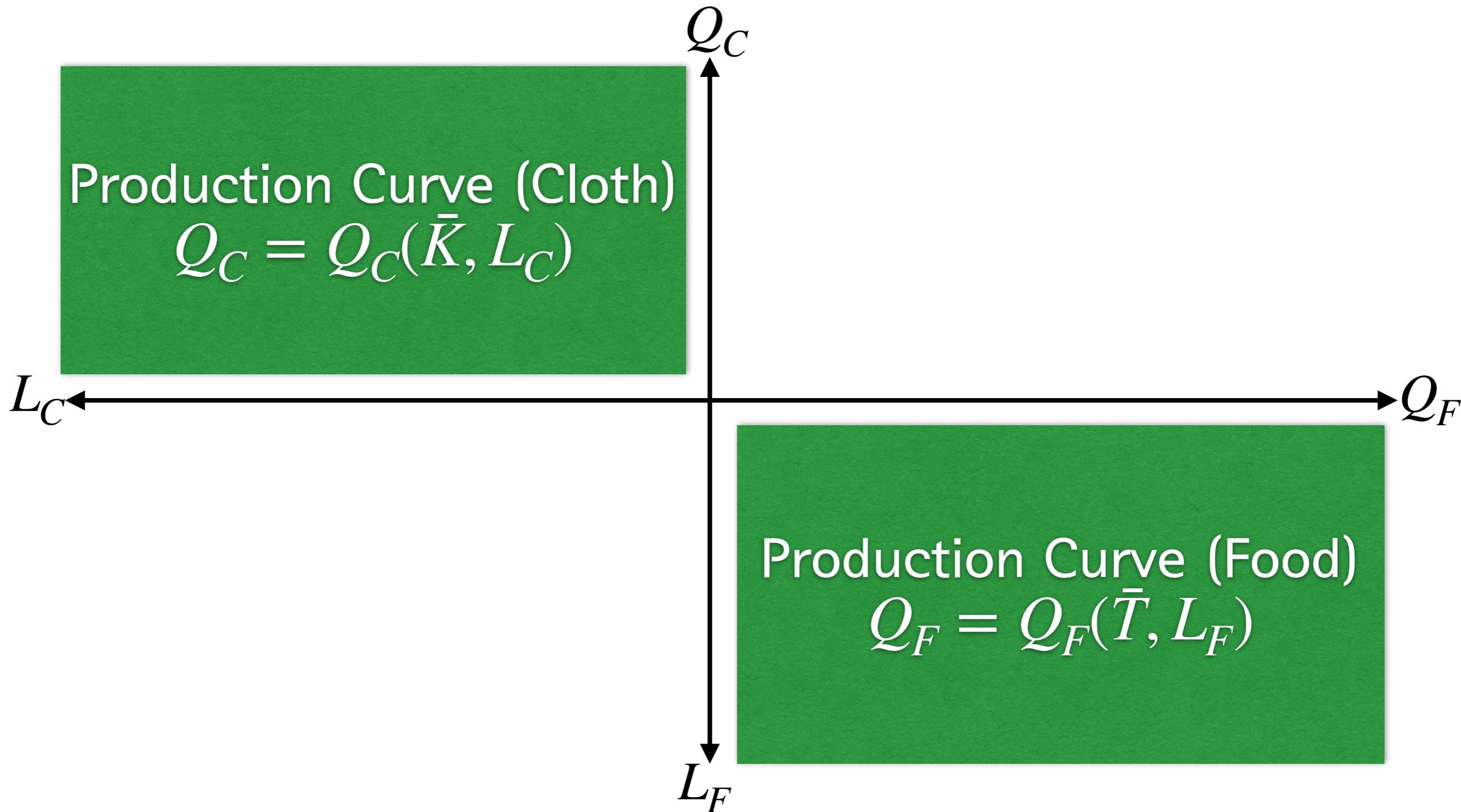
Quadrant: Big Picture



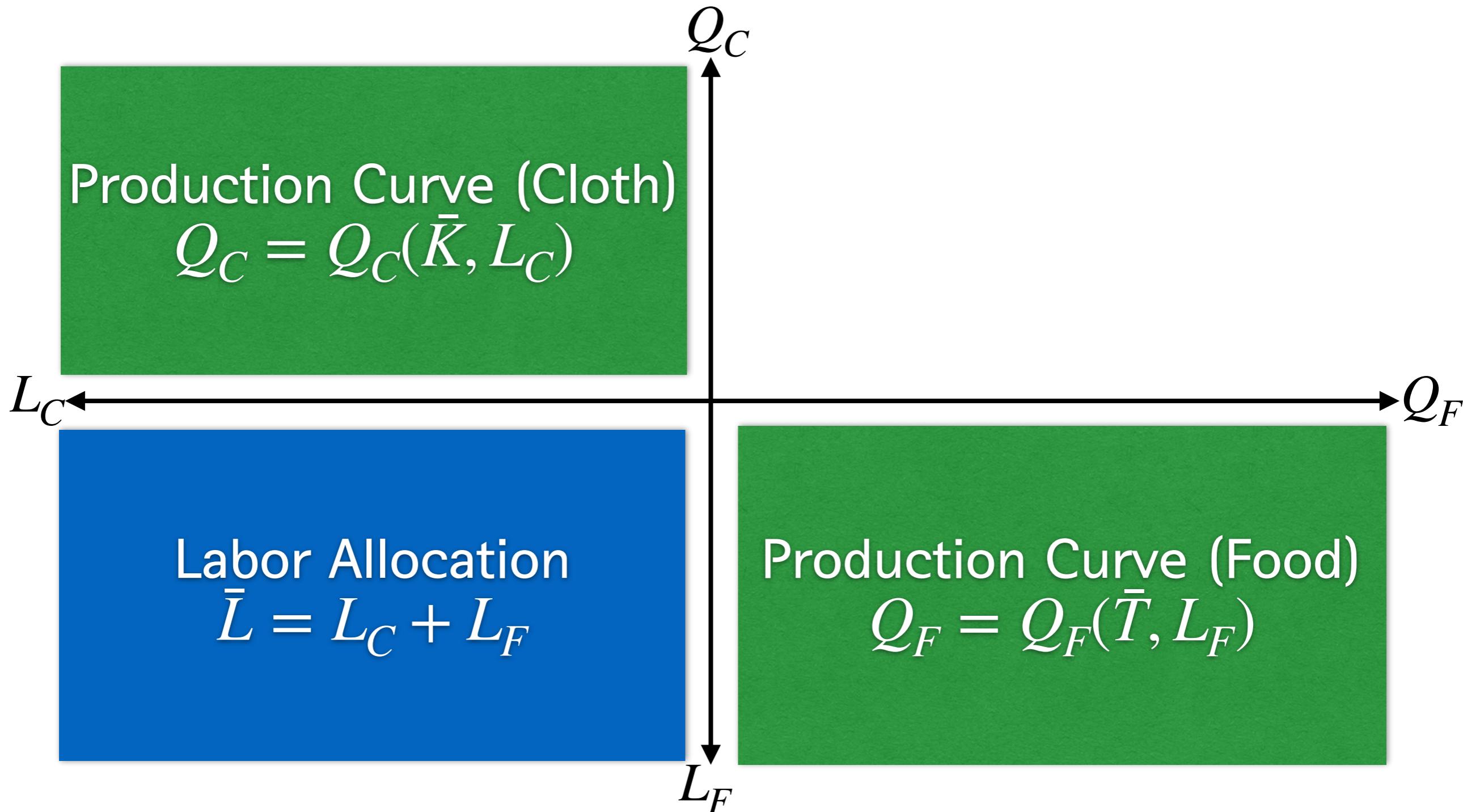
Quadrant: Big Picture



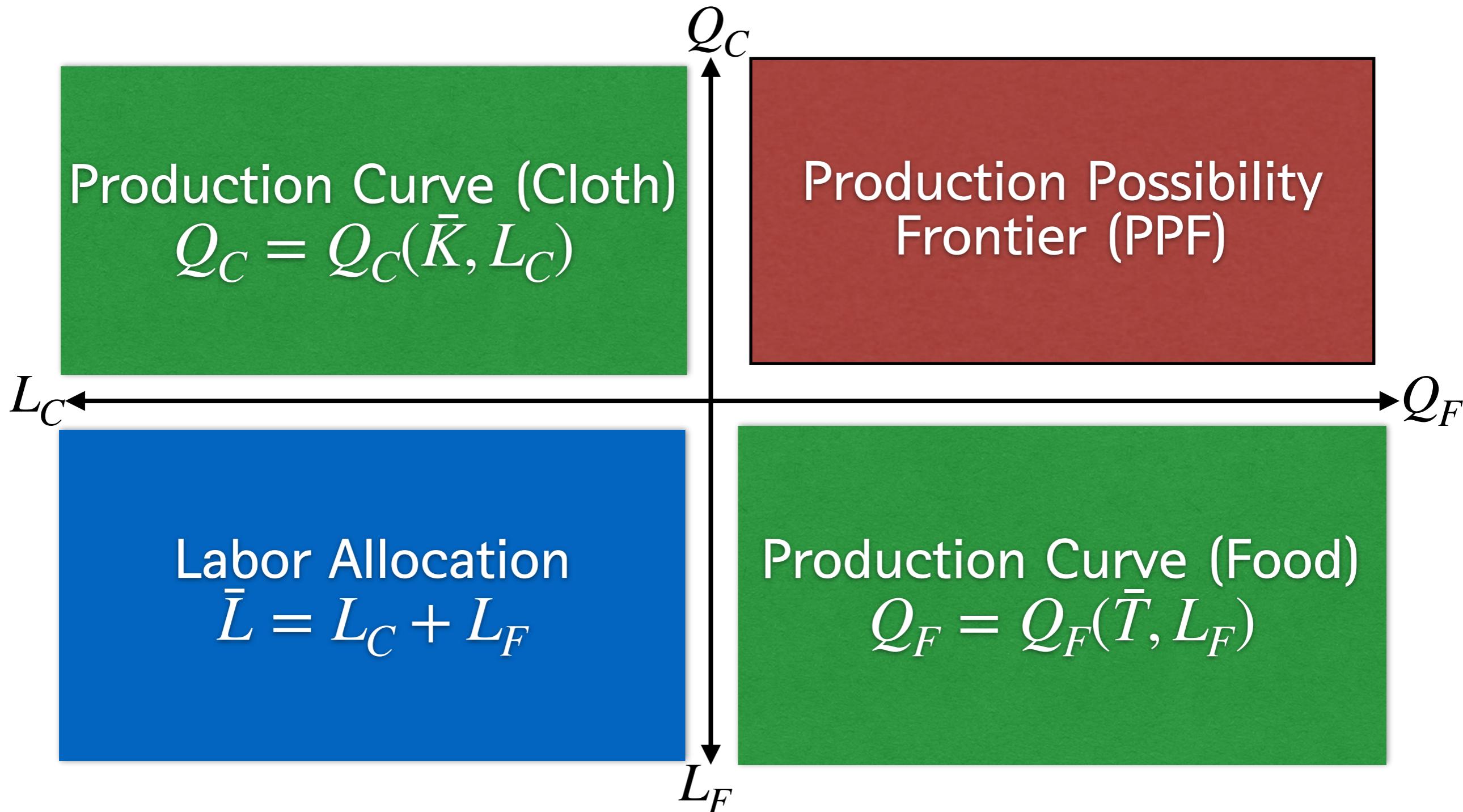
Quadrant: Big Picture



Quadrant: Big Picture



Quadrant: Big Picture



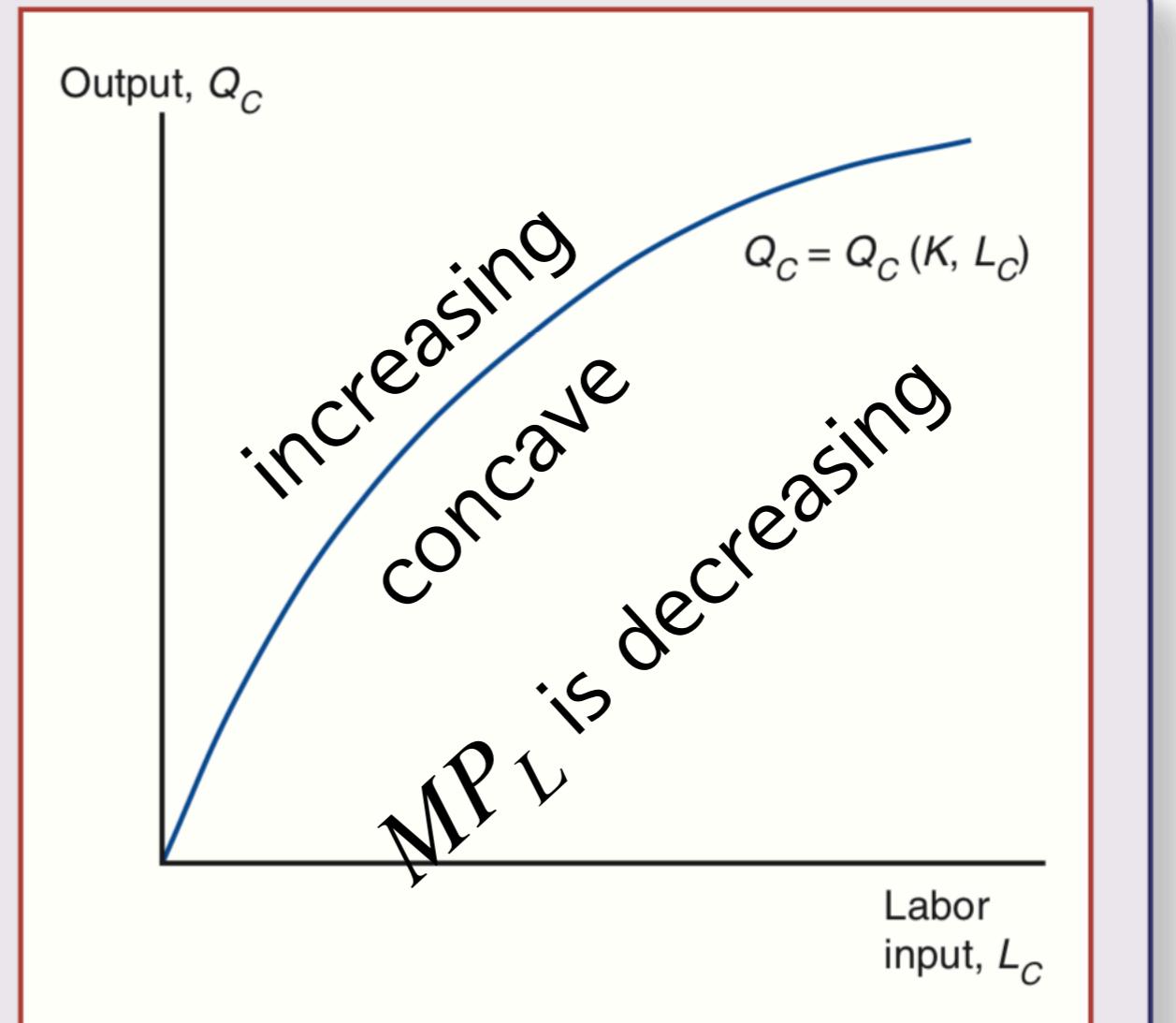
Production for Cloth:

$$Q_C = Q_C(\bar{K}, L_C)$$

FIGURE 4-1

The Production Function for Cloth

The more labor employed in the production of cloth, the larger the output. As a result of diminishing returns, however, each successive person-hour increases output by less than the previous one; this is shown by the fact that the curve relating labor input to output gets flatter at higher levels of employment.



Q_F also have same structure

Production for Cloth:

$$Q_C = Q_C(\bar{K}, L_C)$$

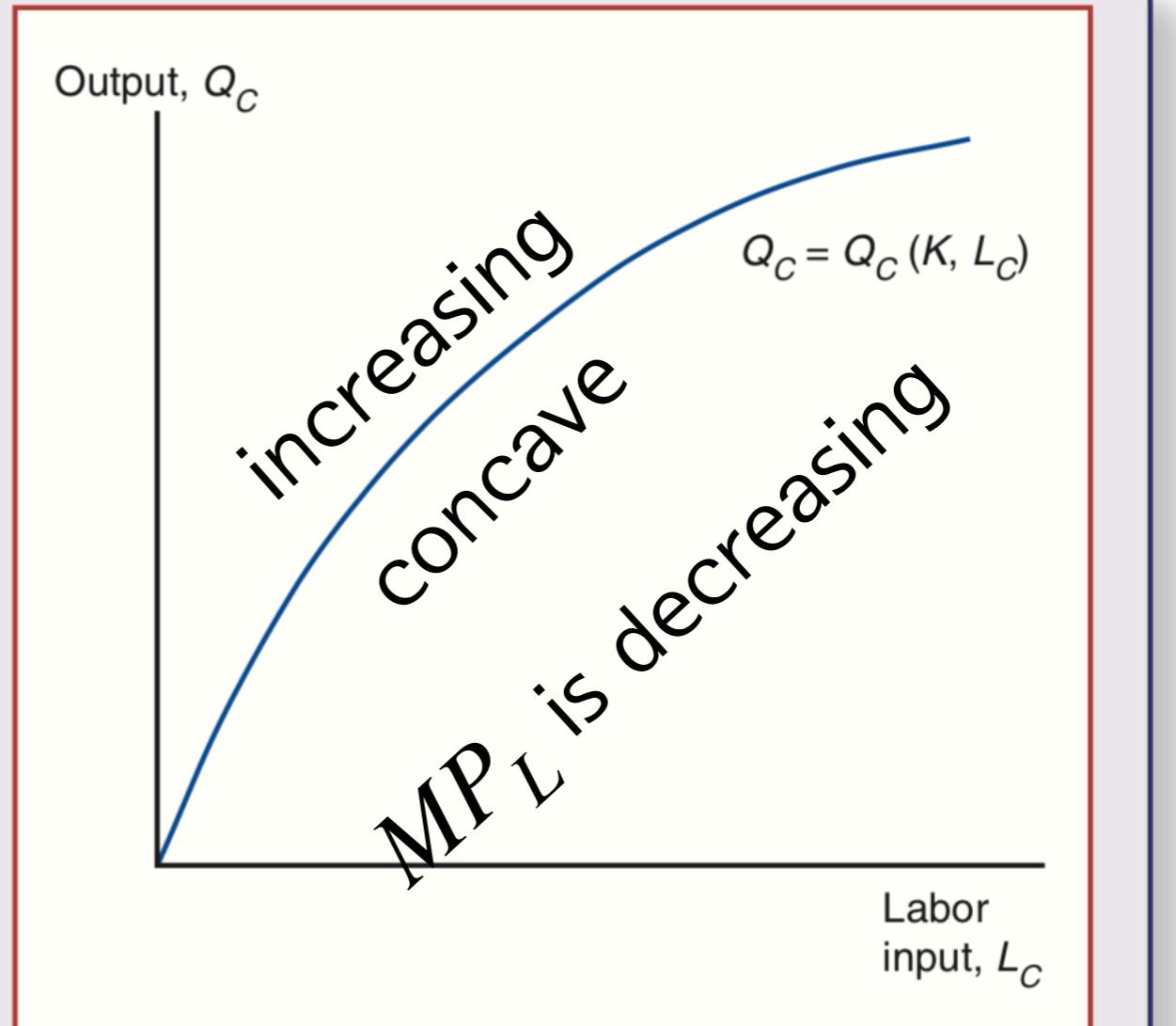
FIGURE 4-1

The Production Function for Cloth

The more labor employed in the production of cloth, the larger the output. As a result of diminishing returns, however, each successive person-hour increases output by less than the previous one; this is shown by the fact that the curve relating labor input to output gets flatter at higher levels of employment.

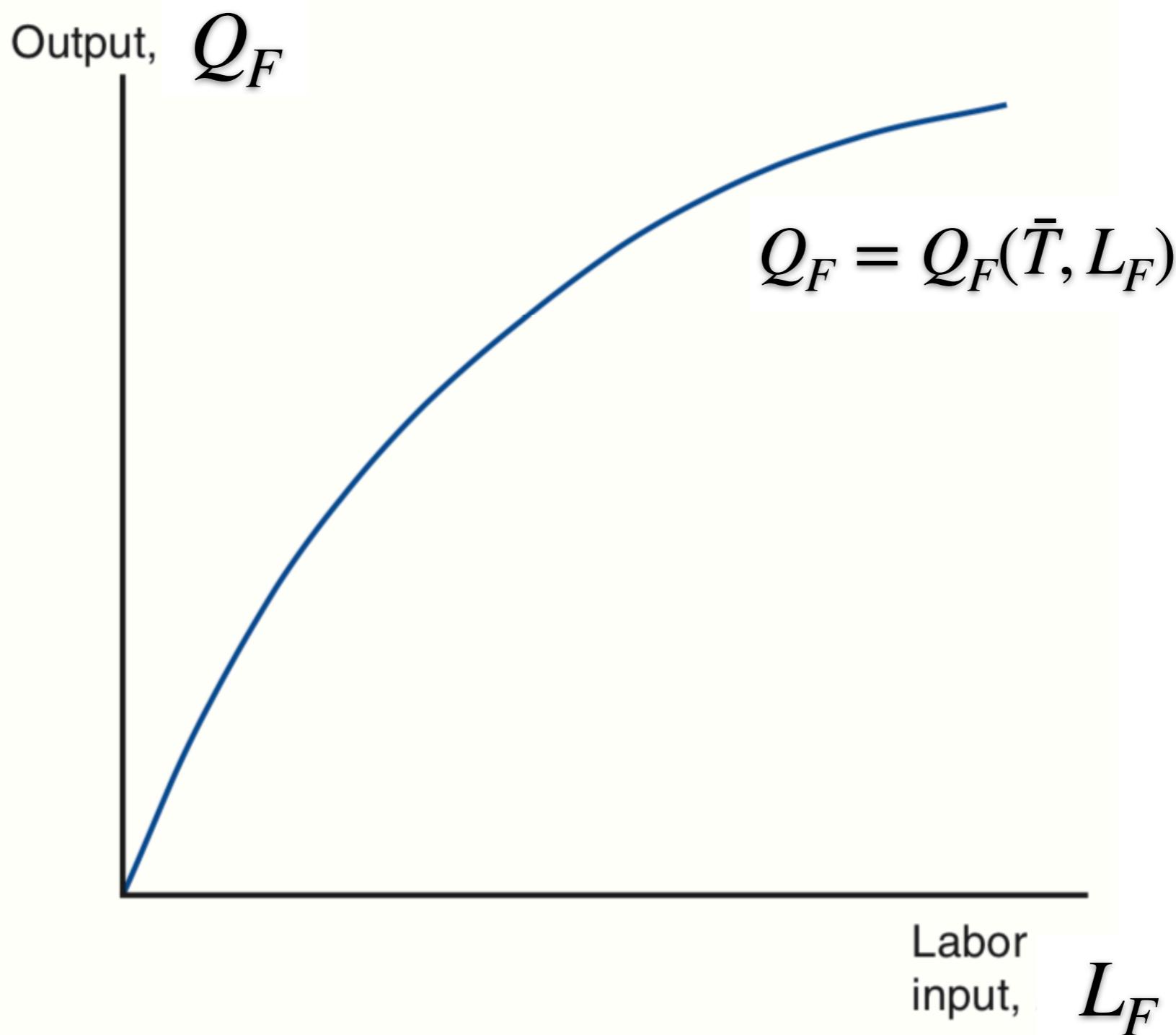
Production Curve (Cloth)

$$Q_C = Q_C(\bar{K}, L_C)$$

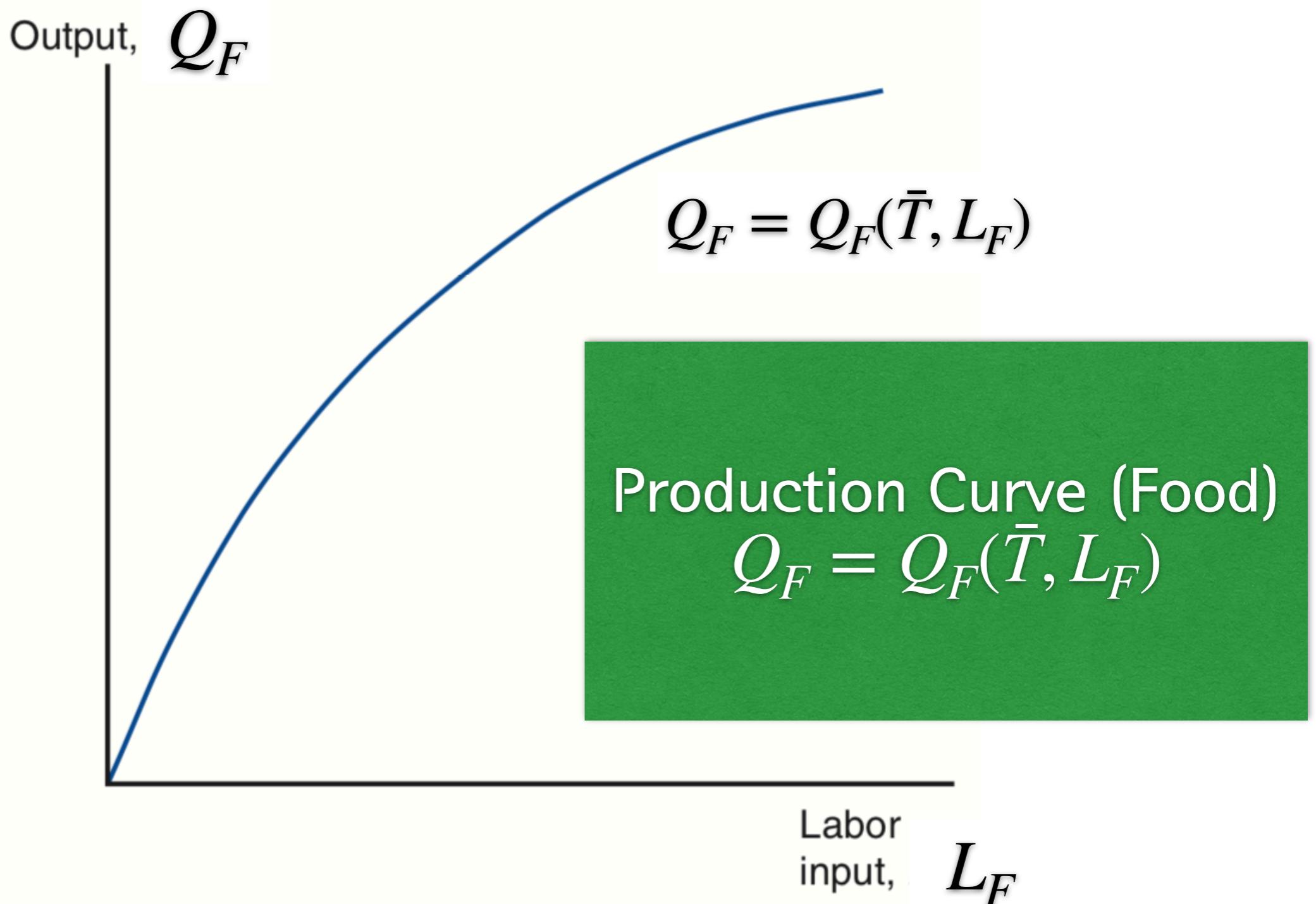


Q_F also have same structure

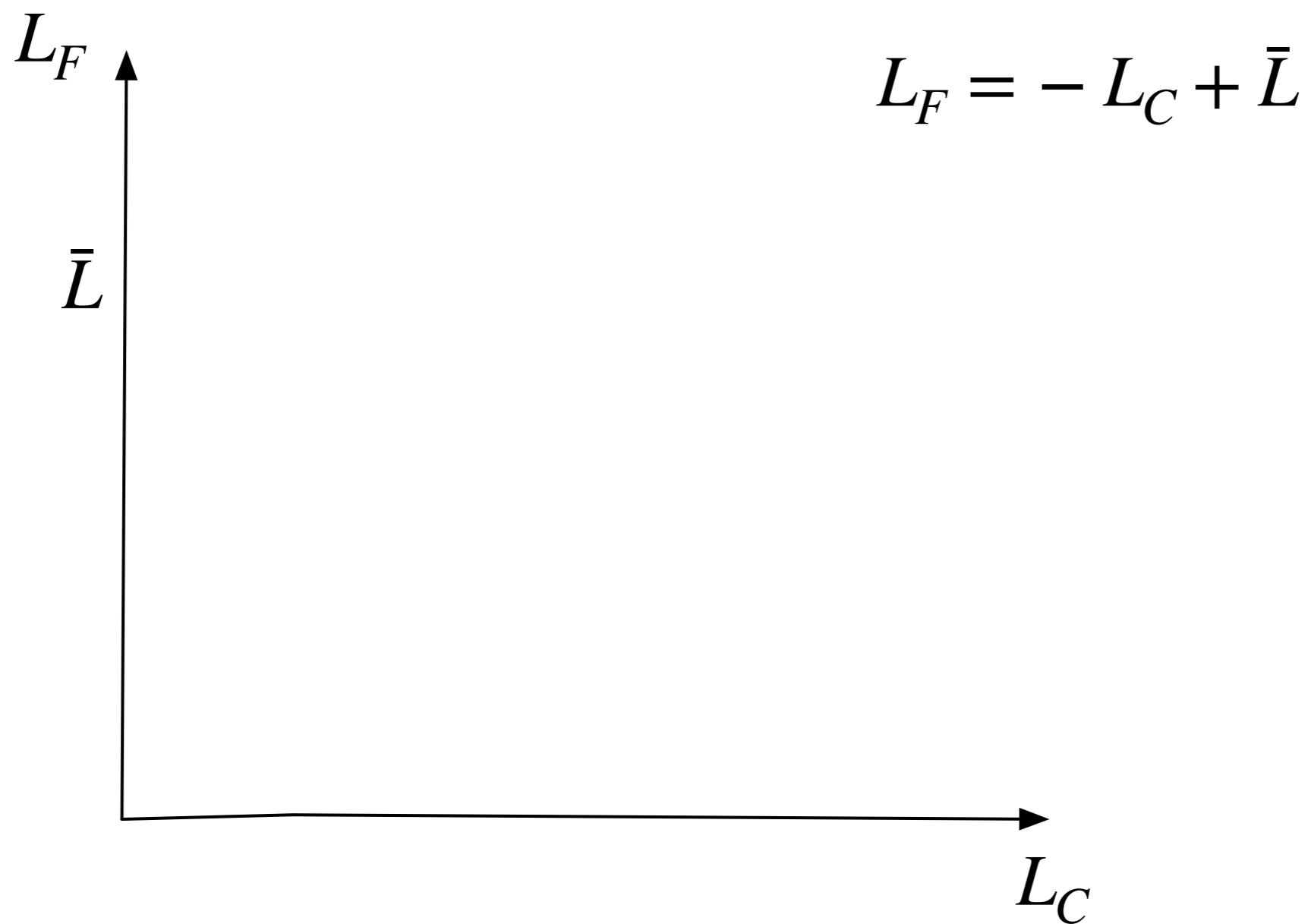
Production Function for Food



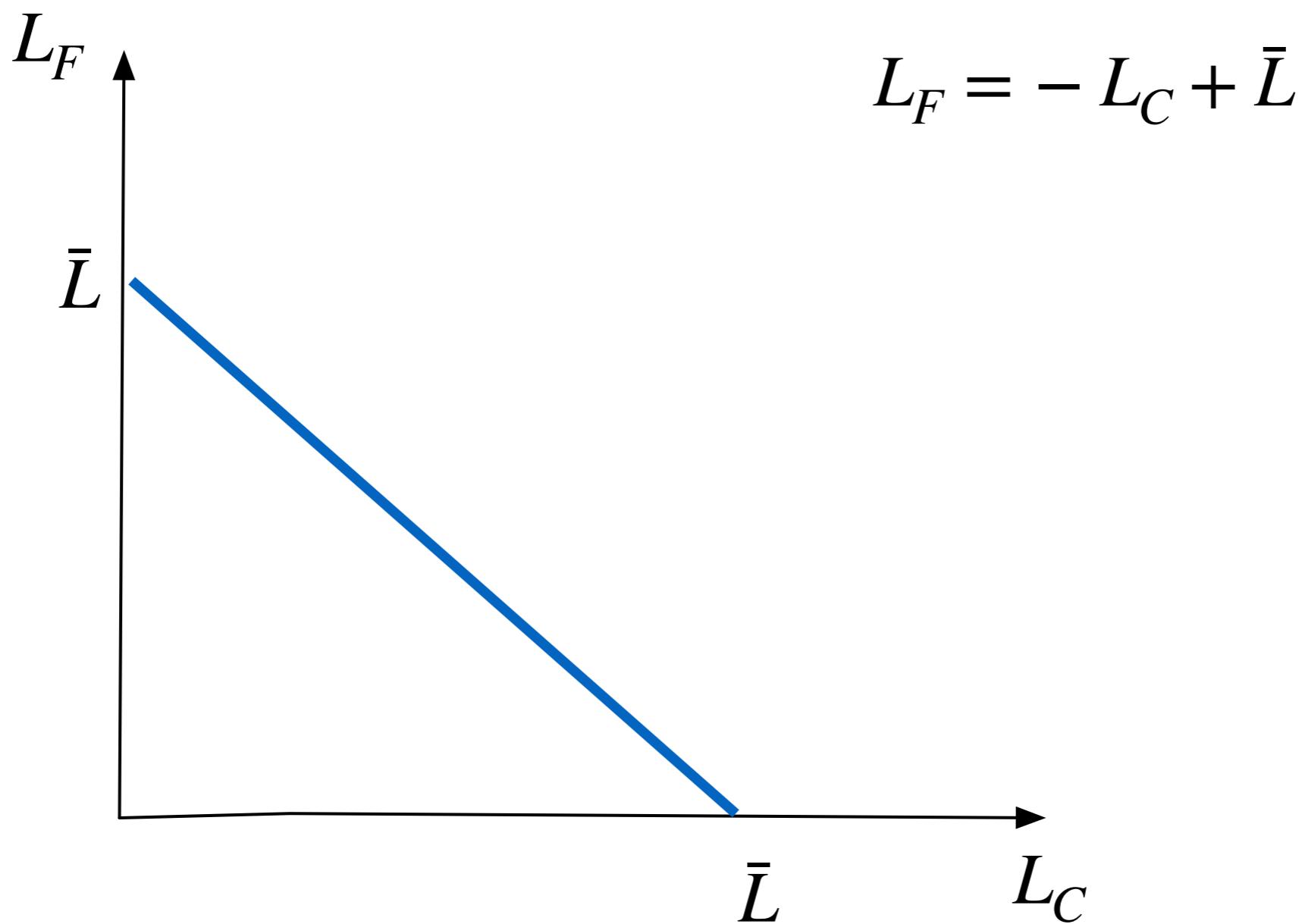
Production Function for Food



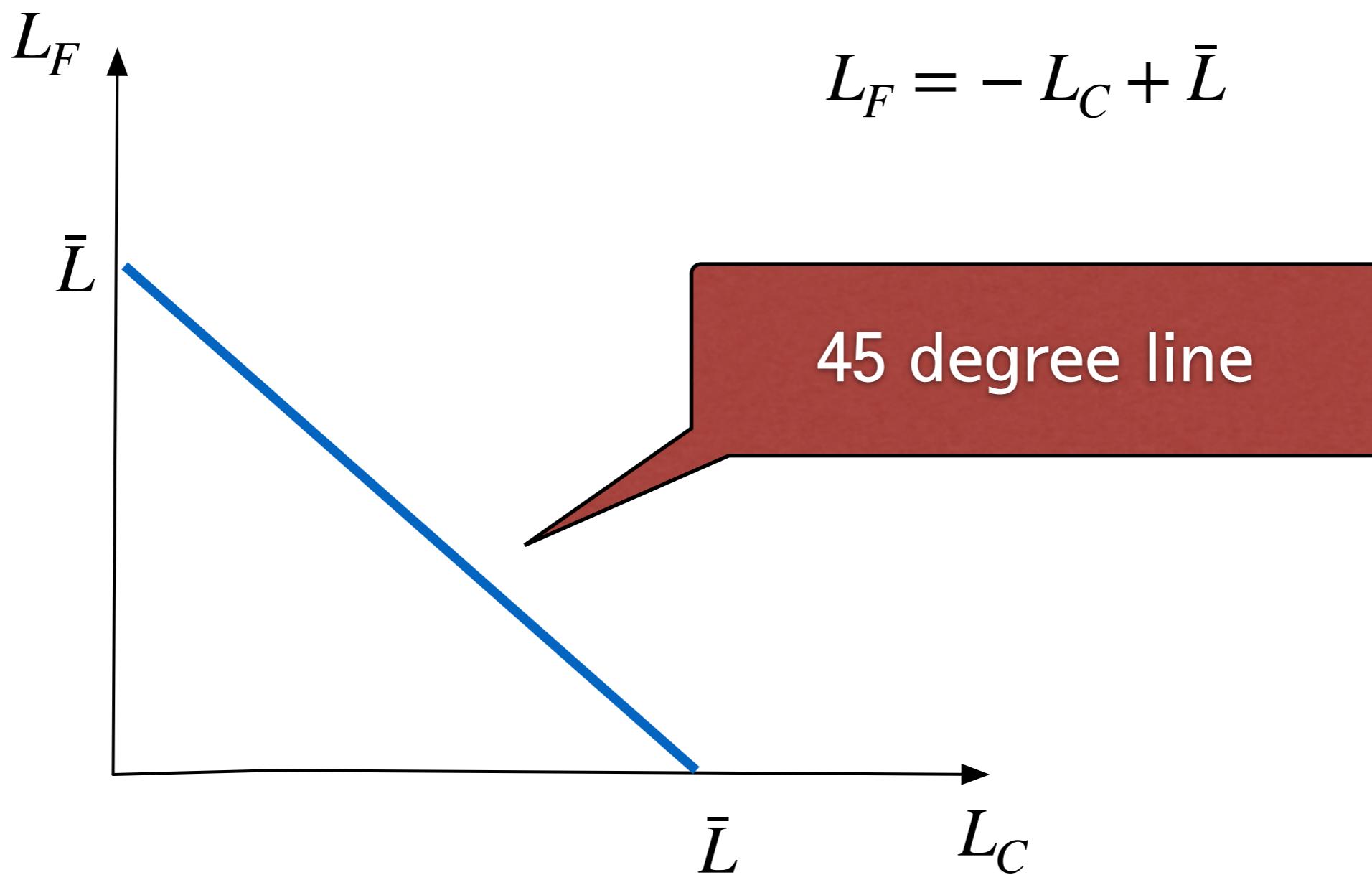
$$\bar{L} = L_C + L_F$$



$$\bar{L} = L_C + L_F$$



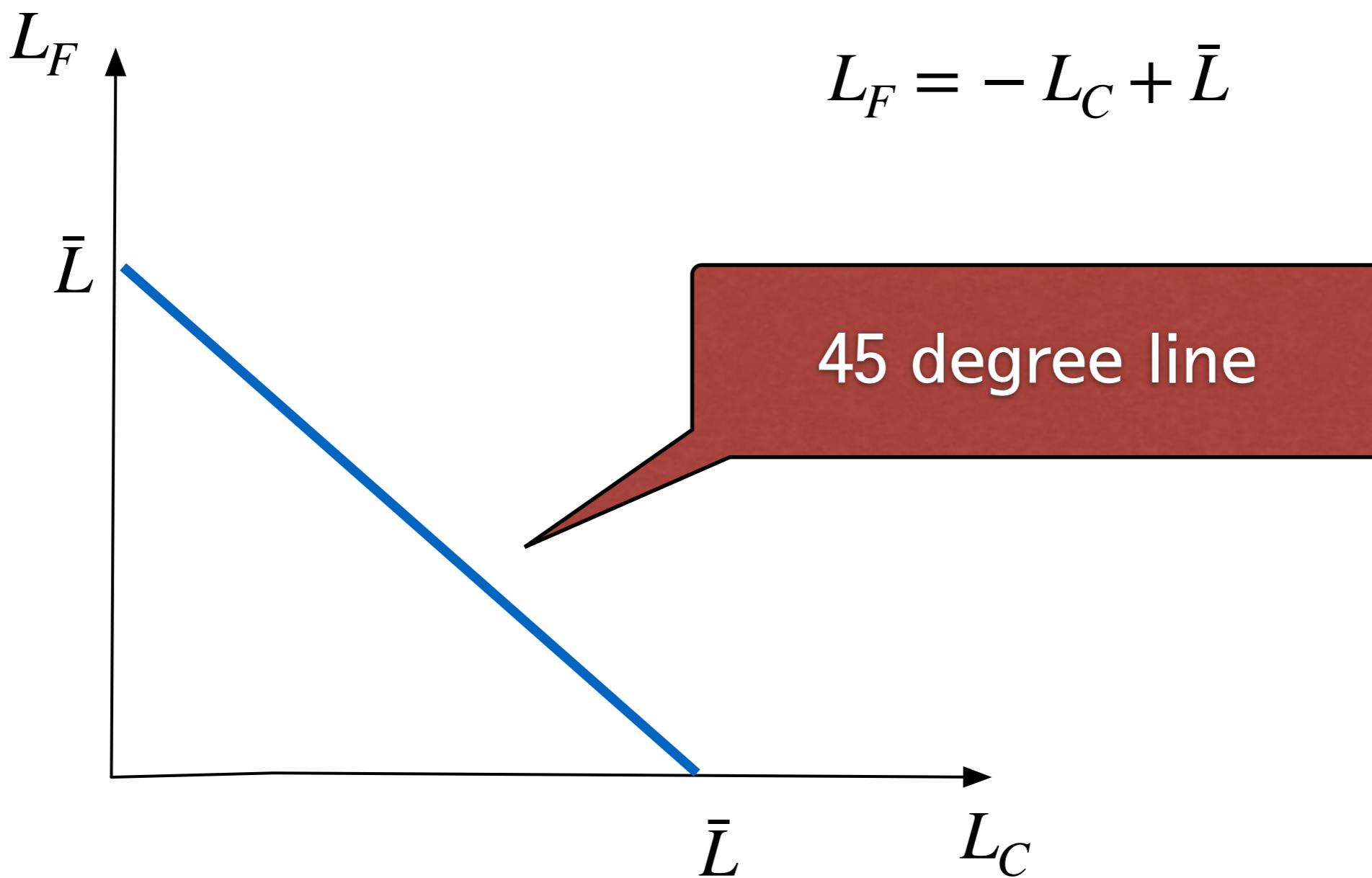
$$\bar{L} = L_C + L_F$$

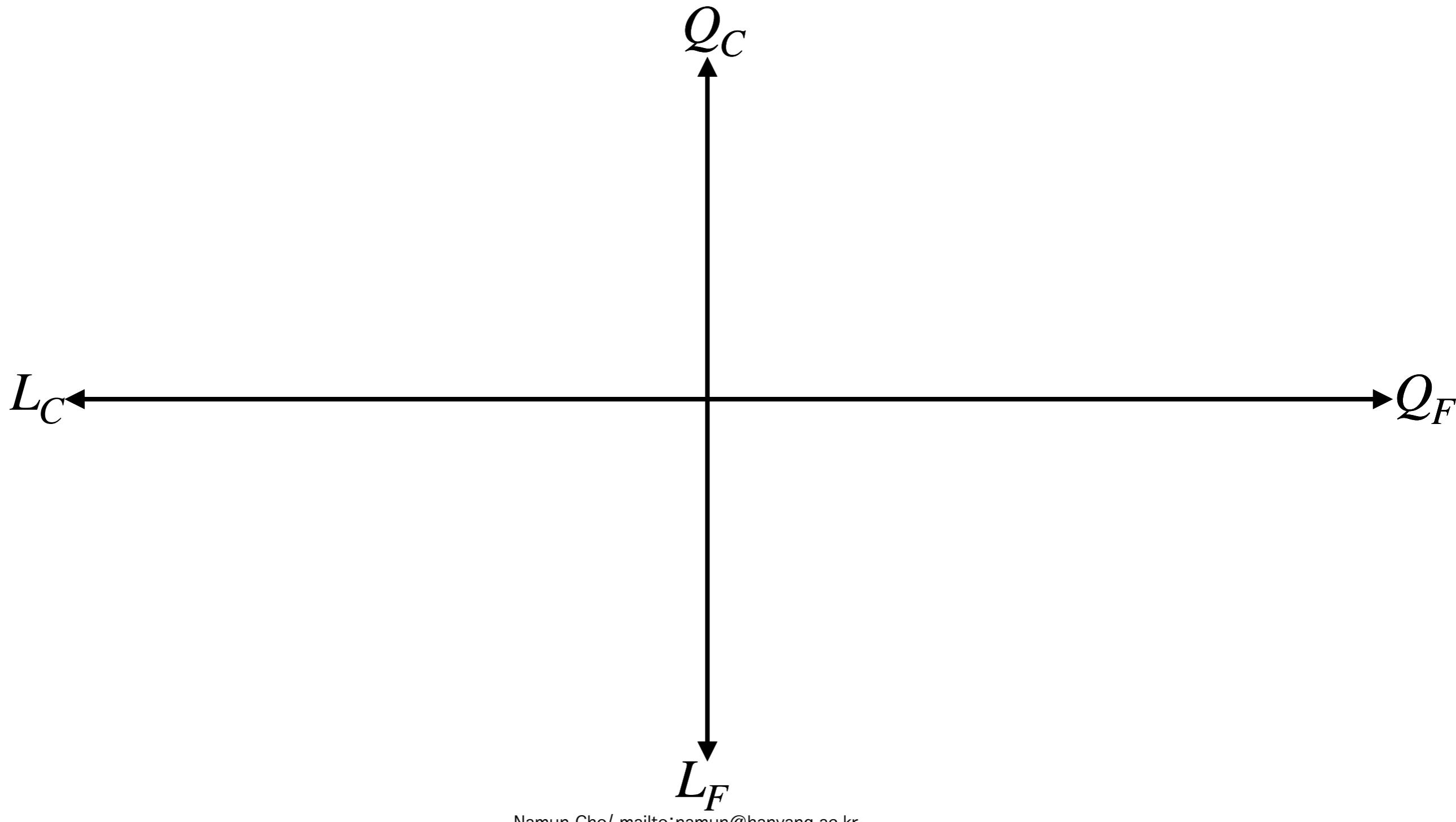


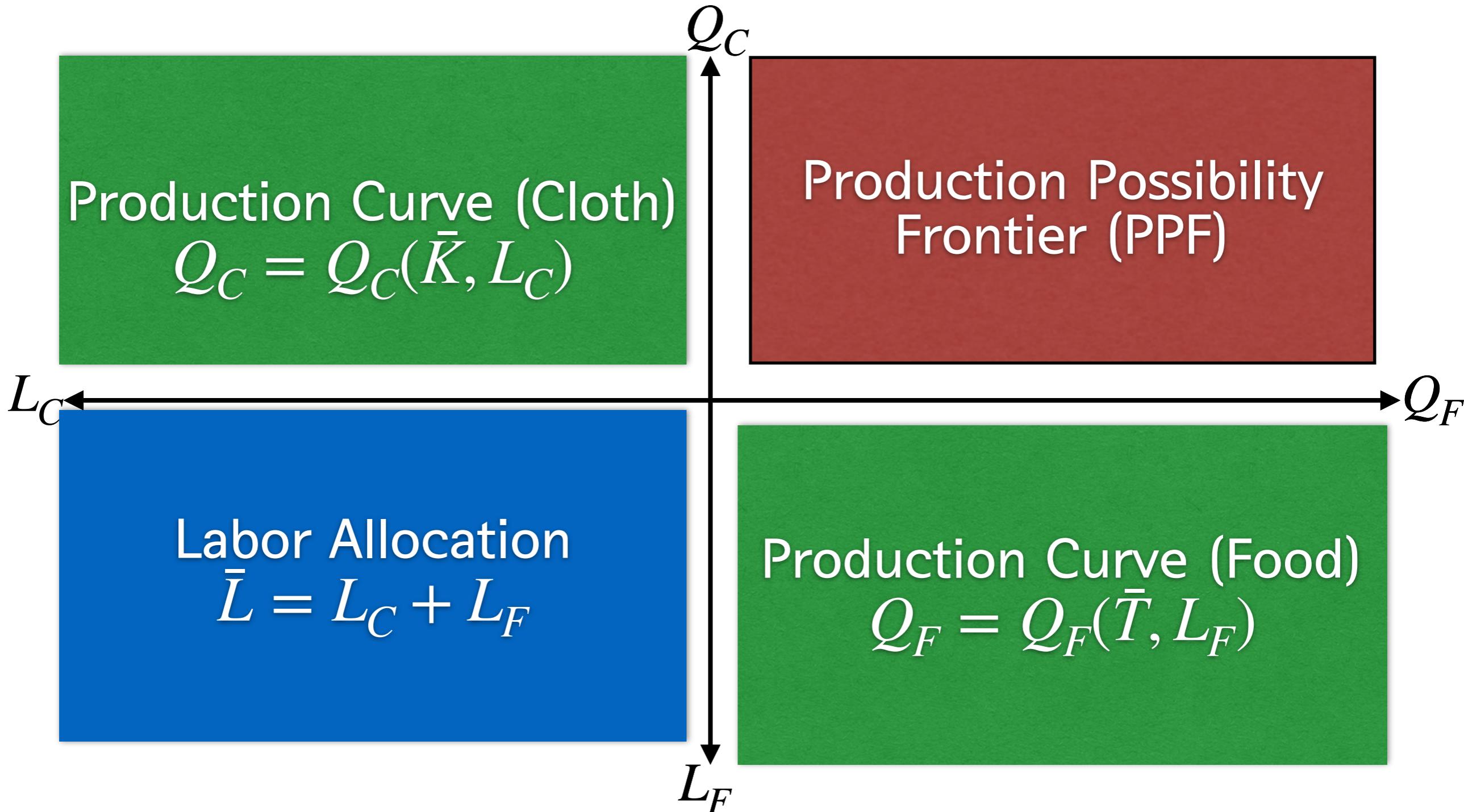
Labor Allocation

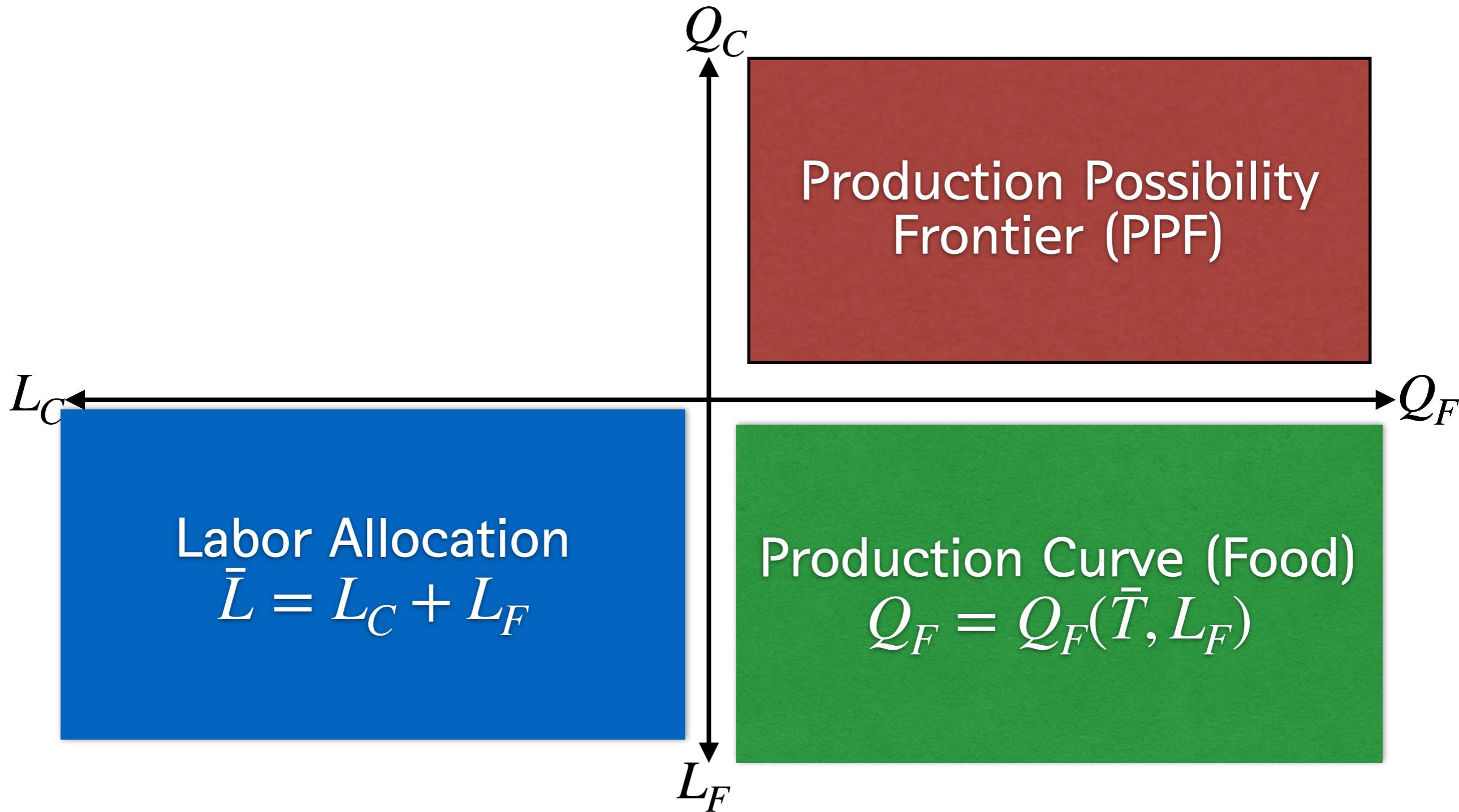
$$\bar{L} = L_C + L_F$$

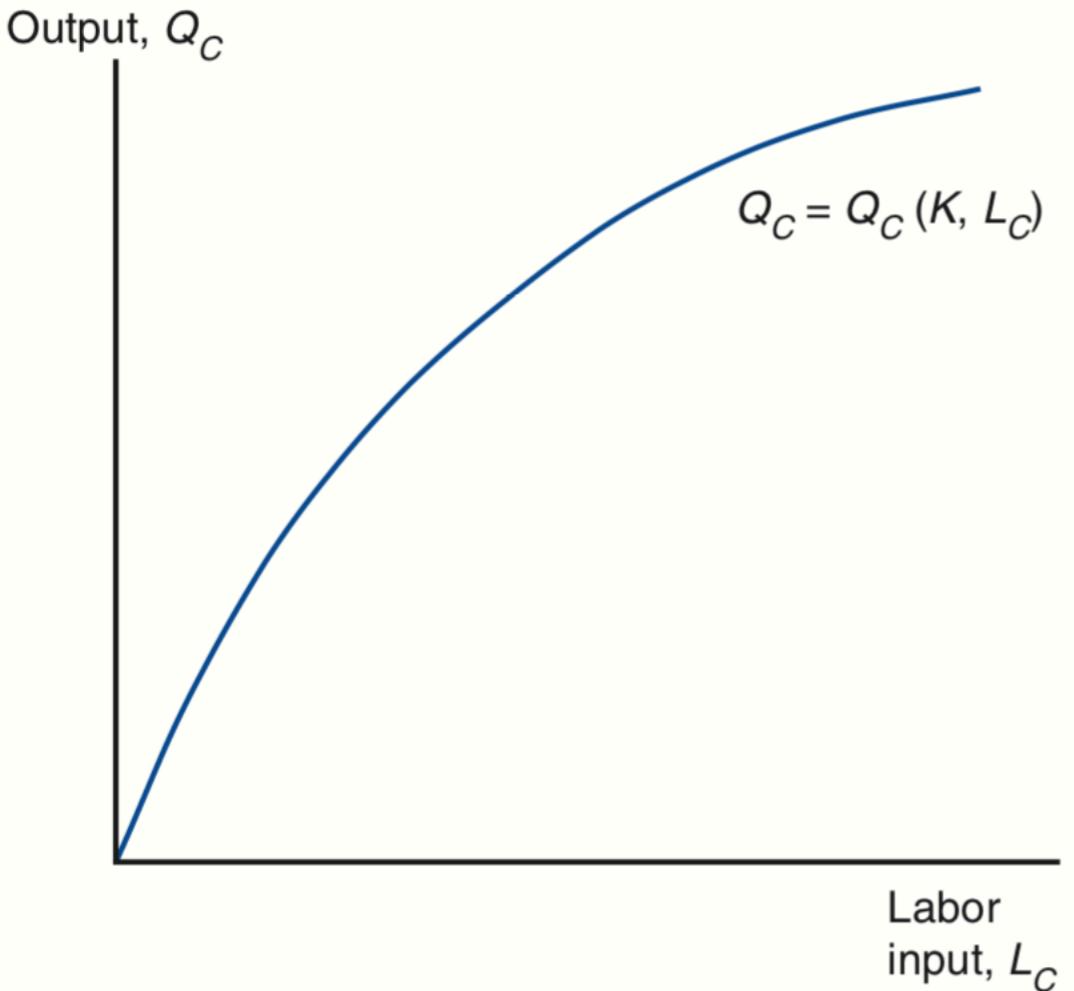
$$\bar{L} = L_C + L_F$$











Q_C

Production Possibility
Frontier (PPF)

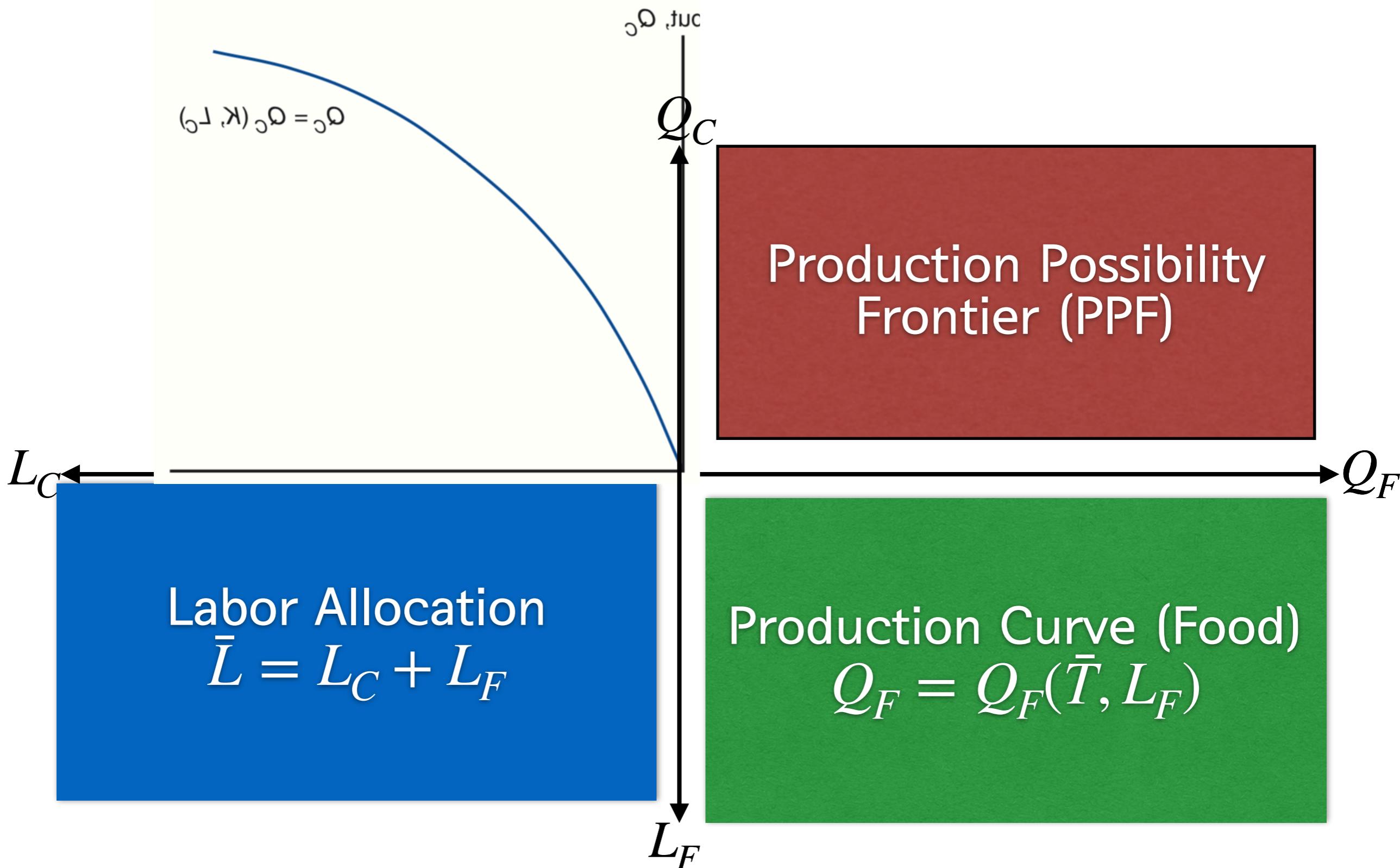
L_C

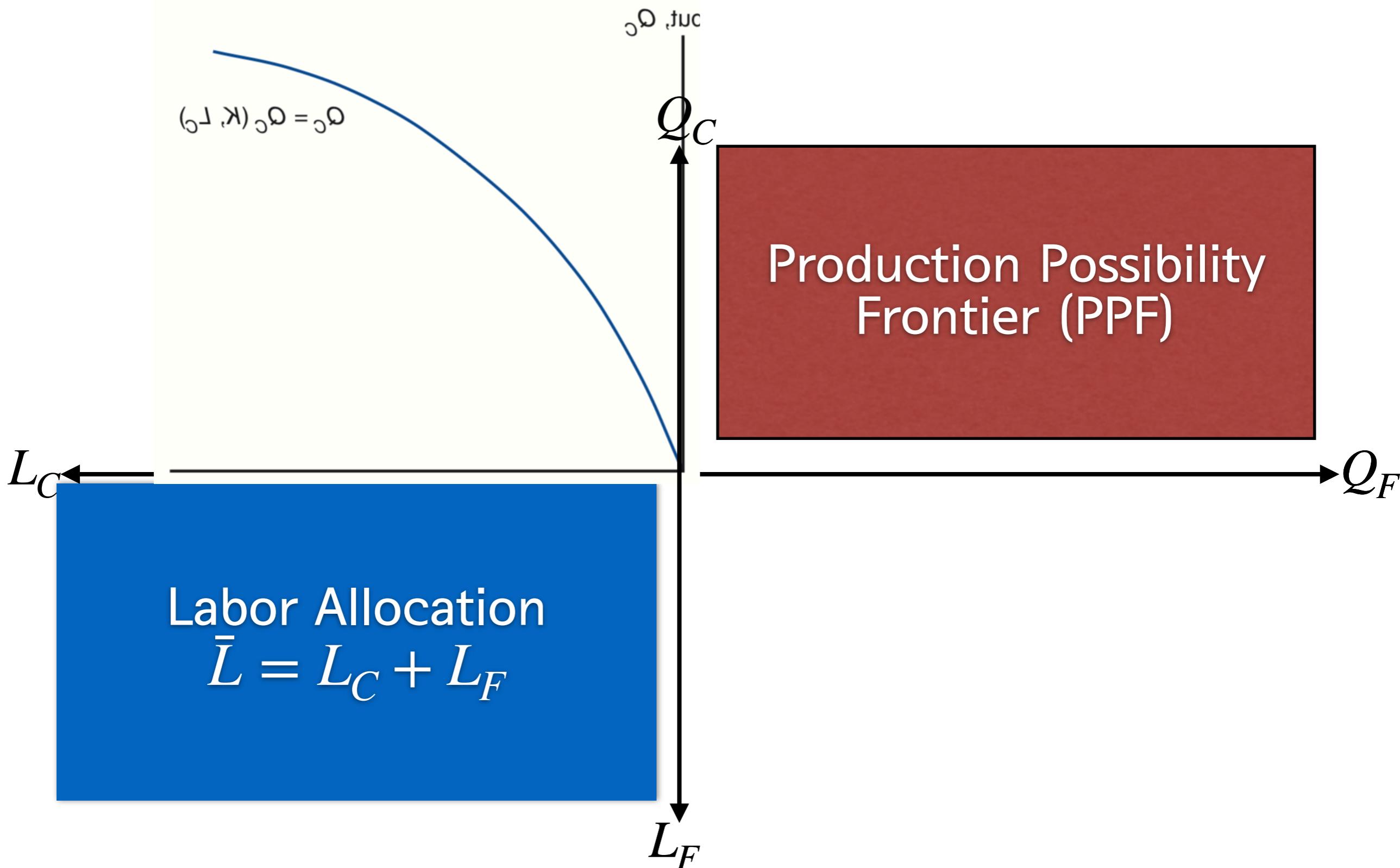
Q_F

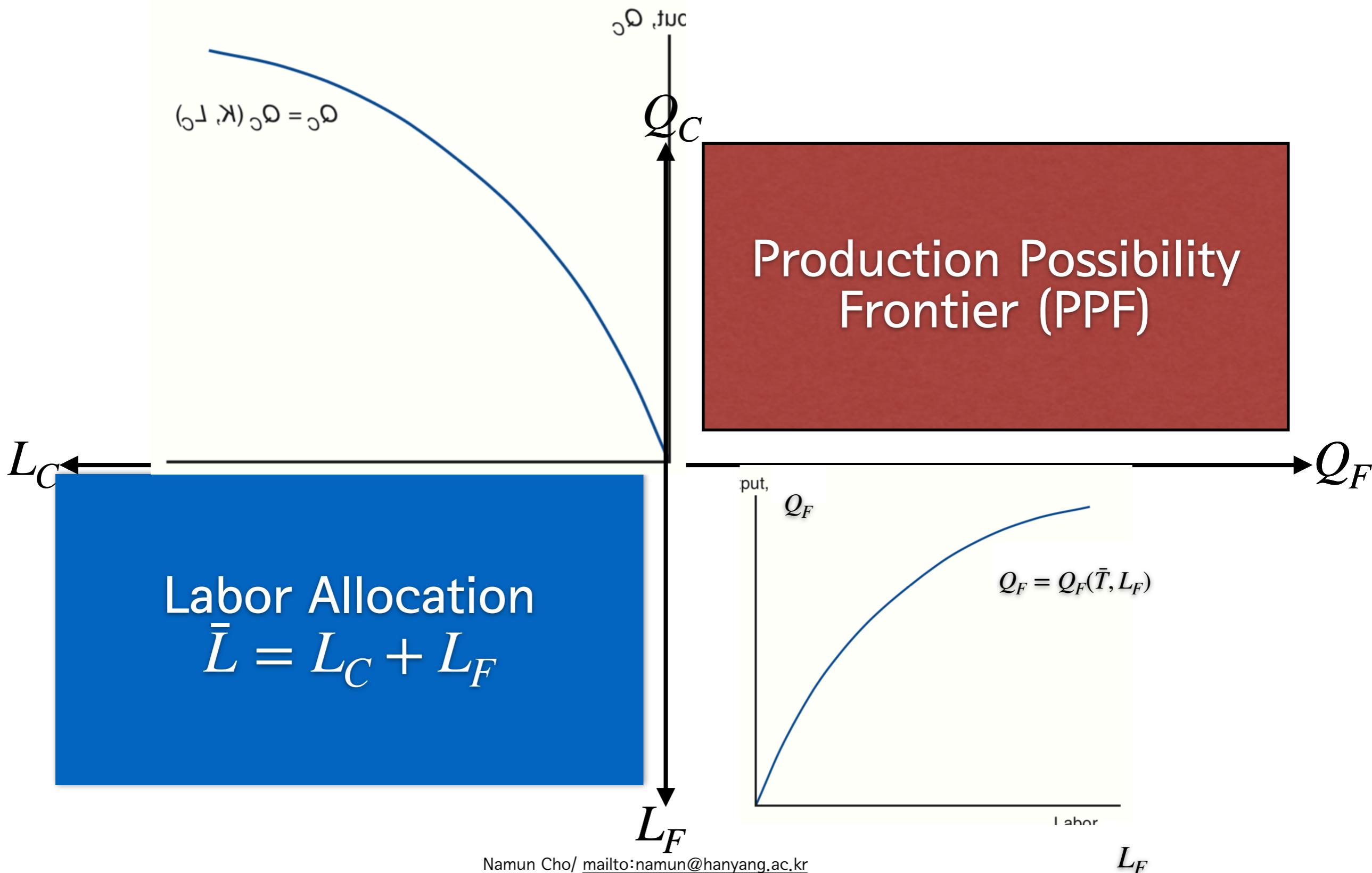
Labor Allocation
 $\bar{L} = L_C + L_F$

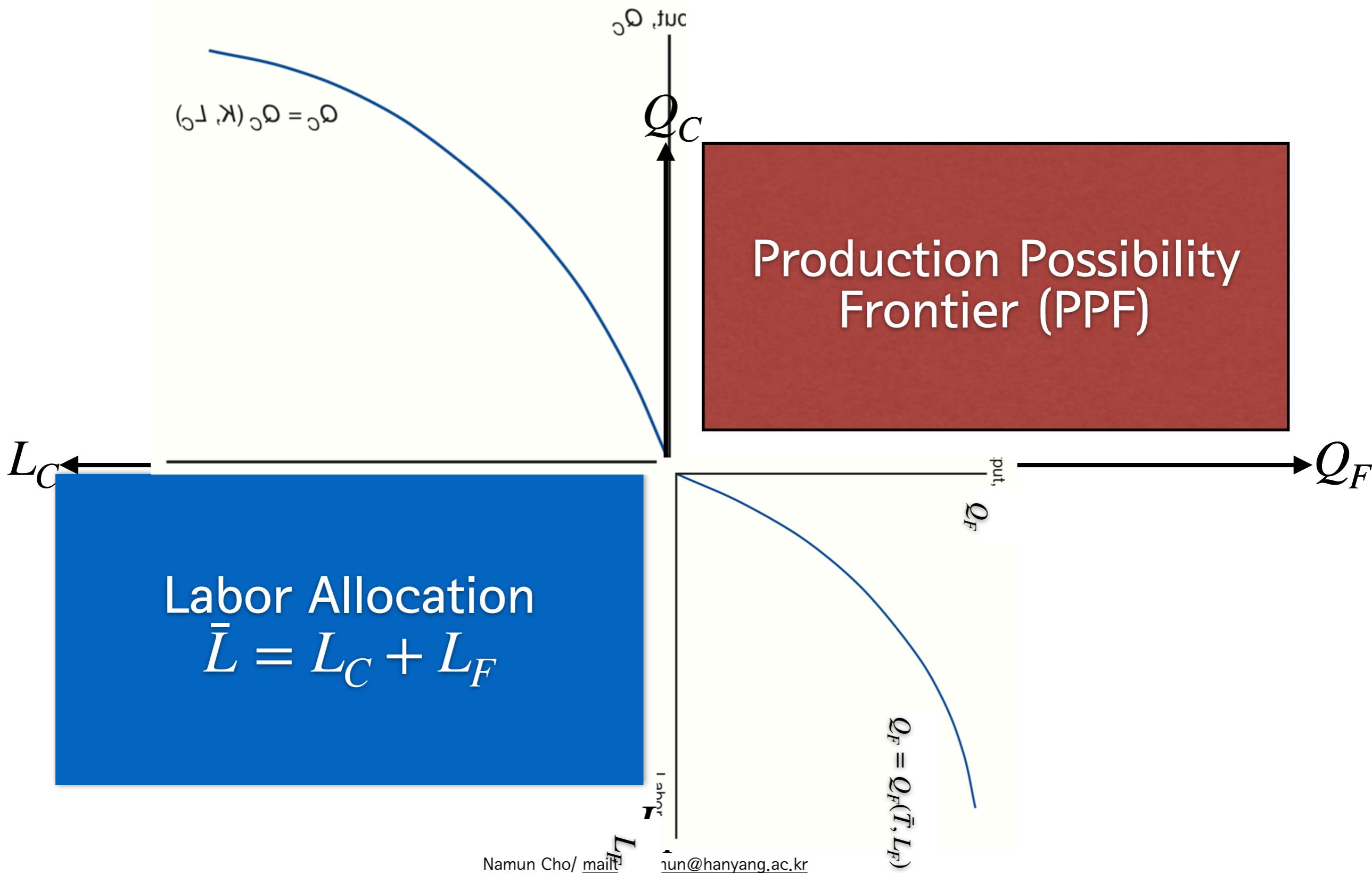
Production Curve (Food)
 $Q_F = Q_F(\bar{T}, L_F)$

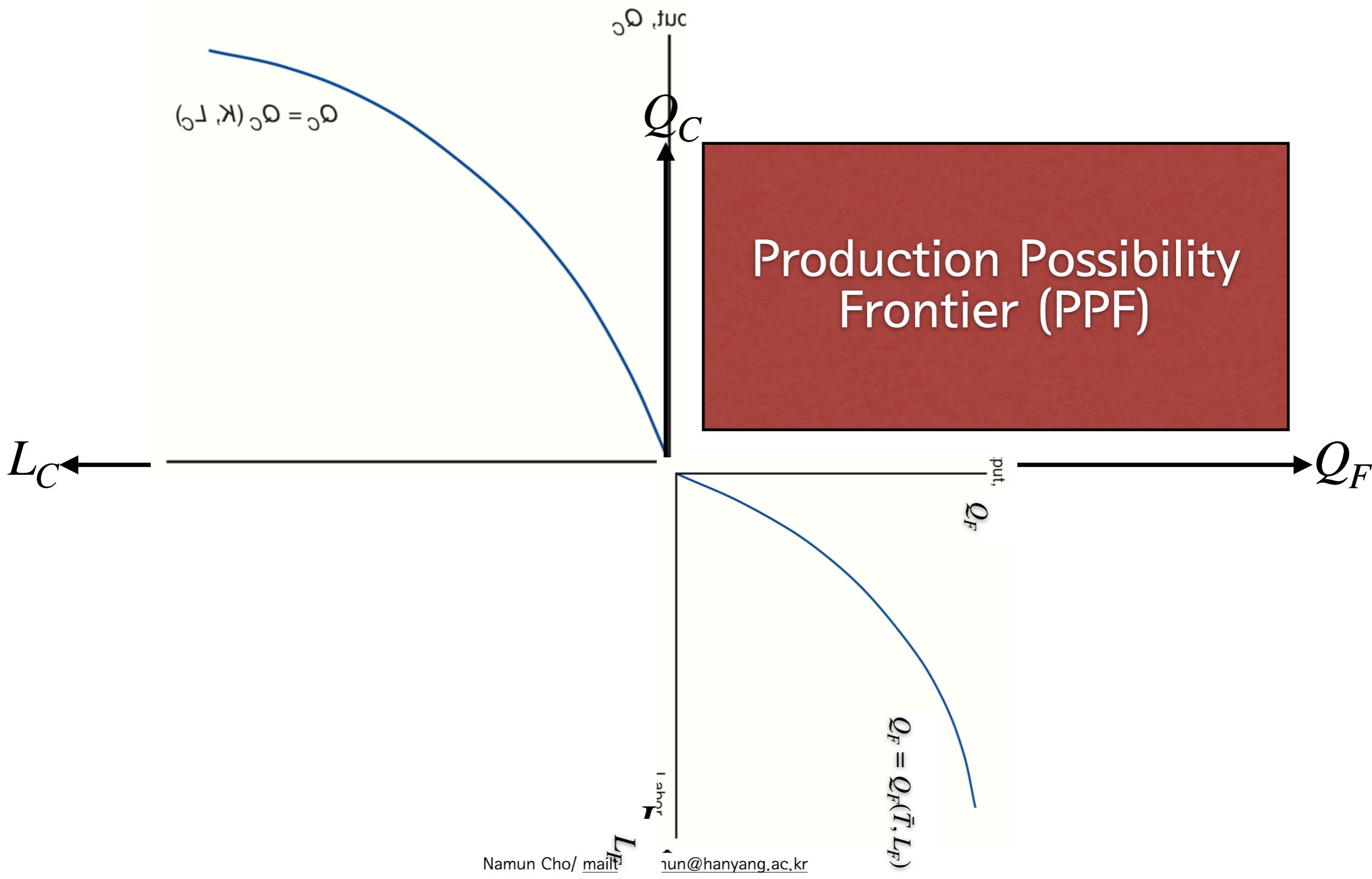
L_F

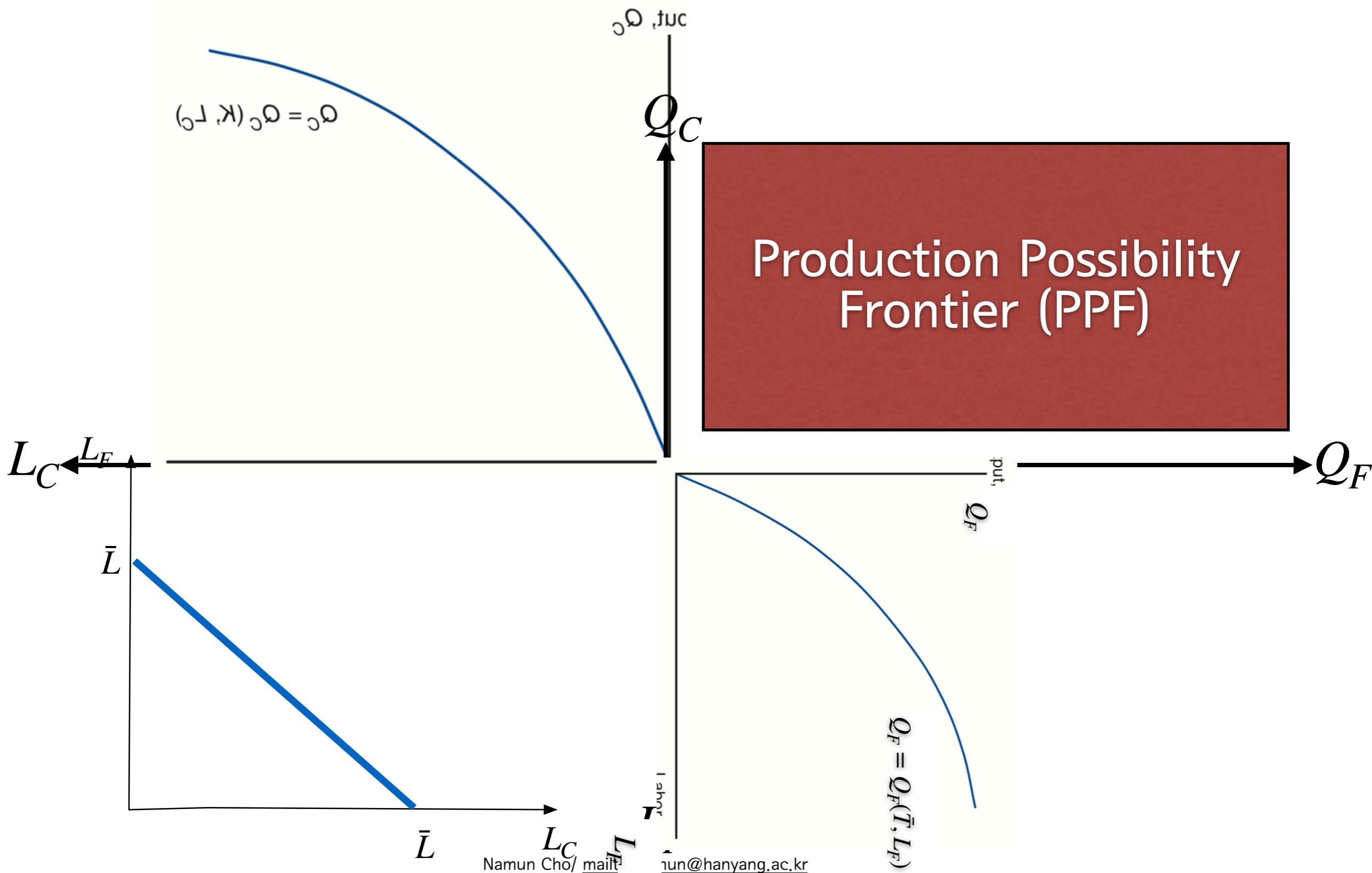


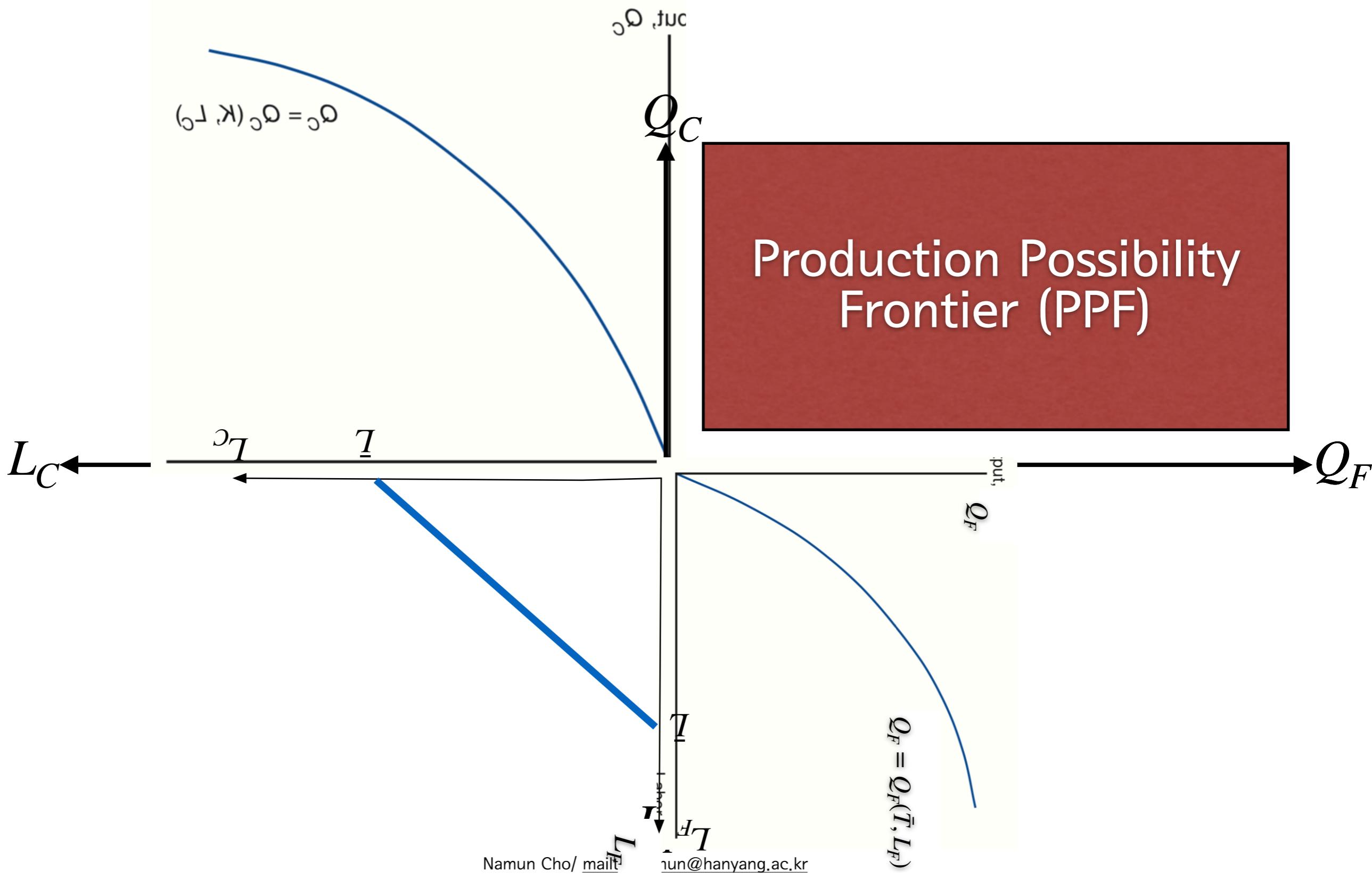




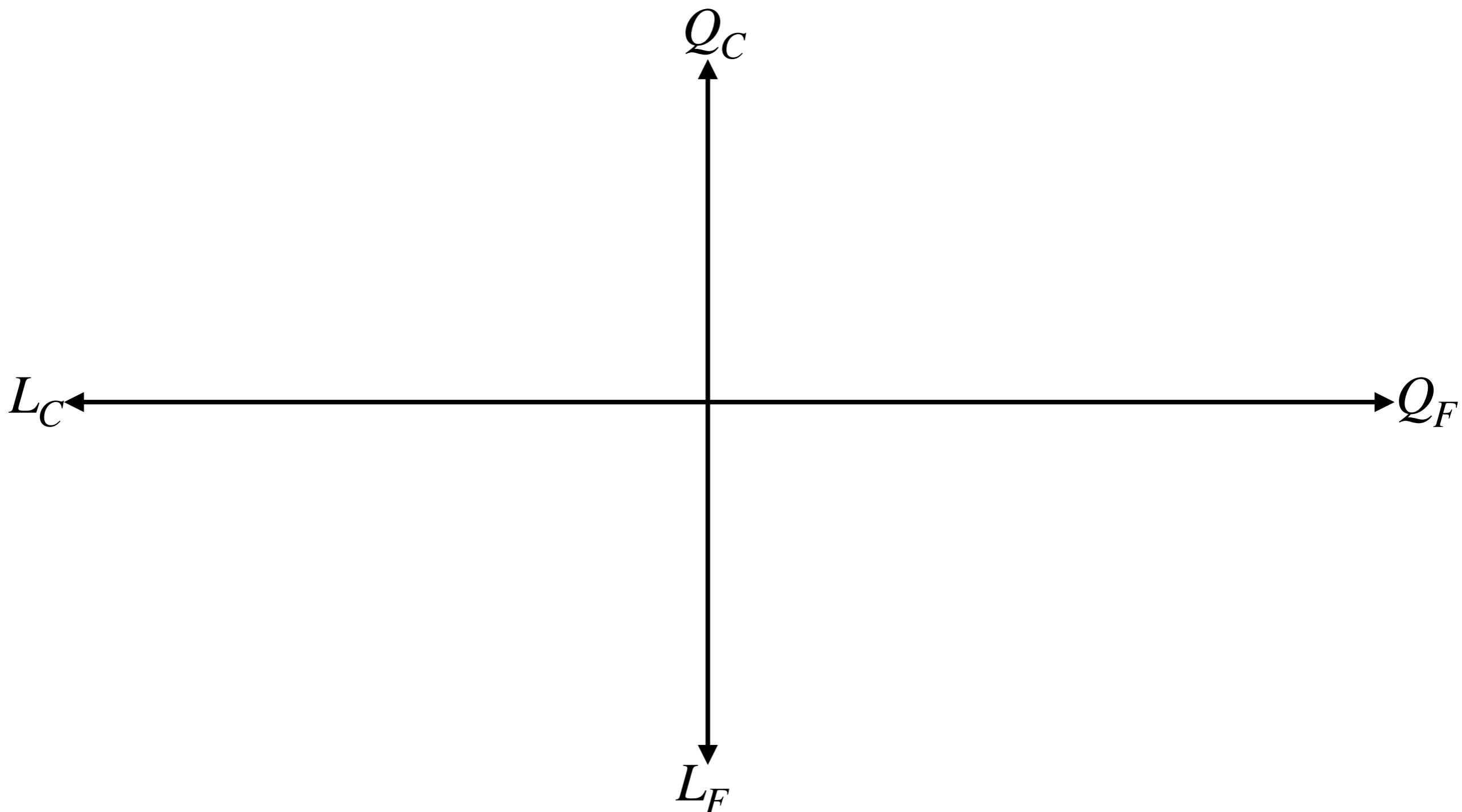




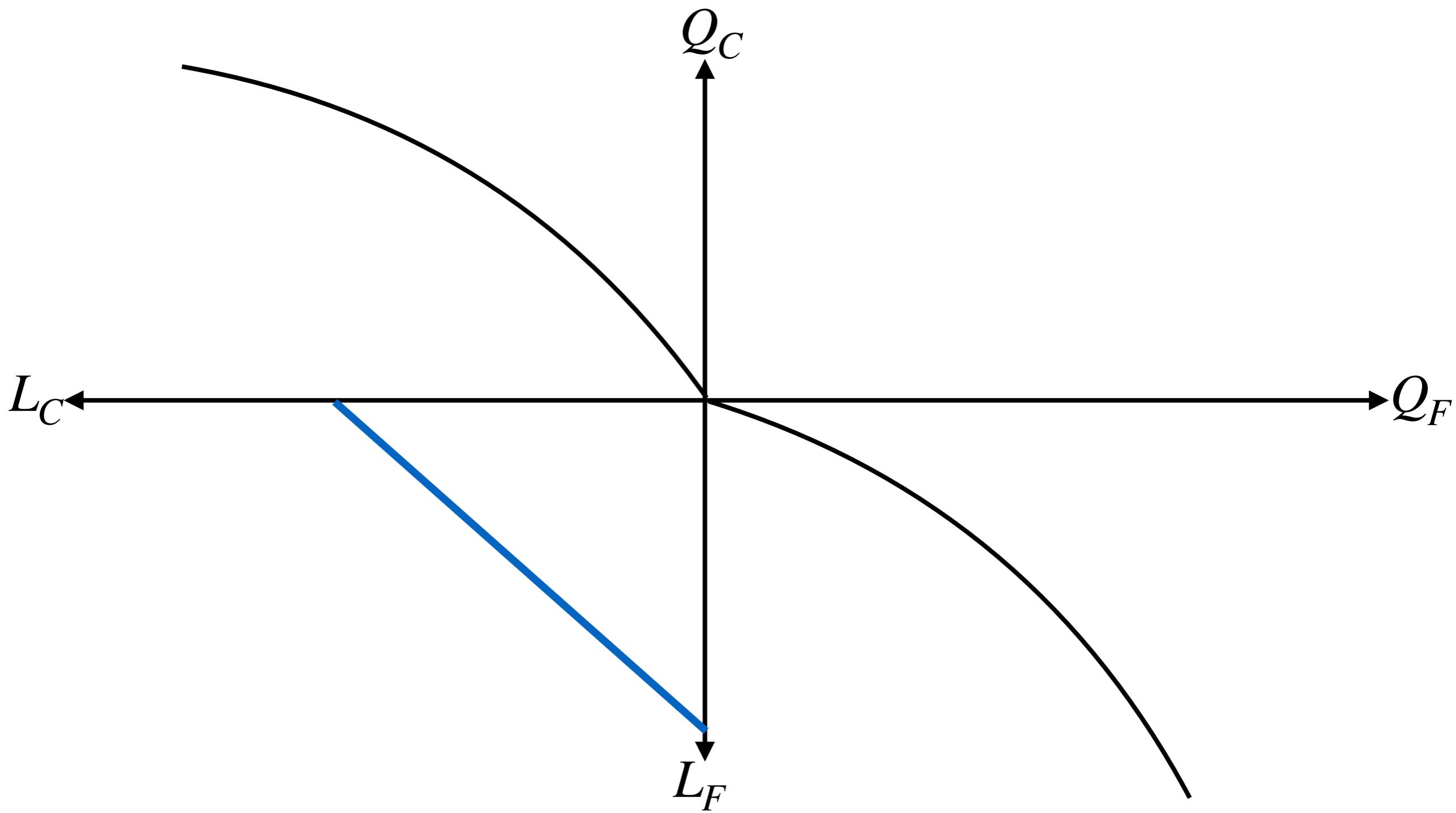




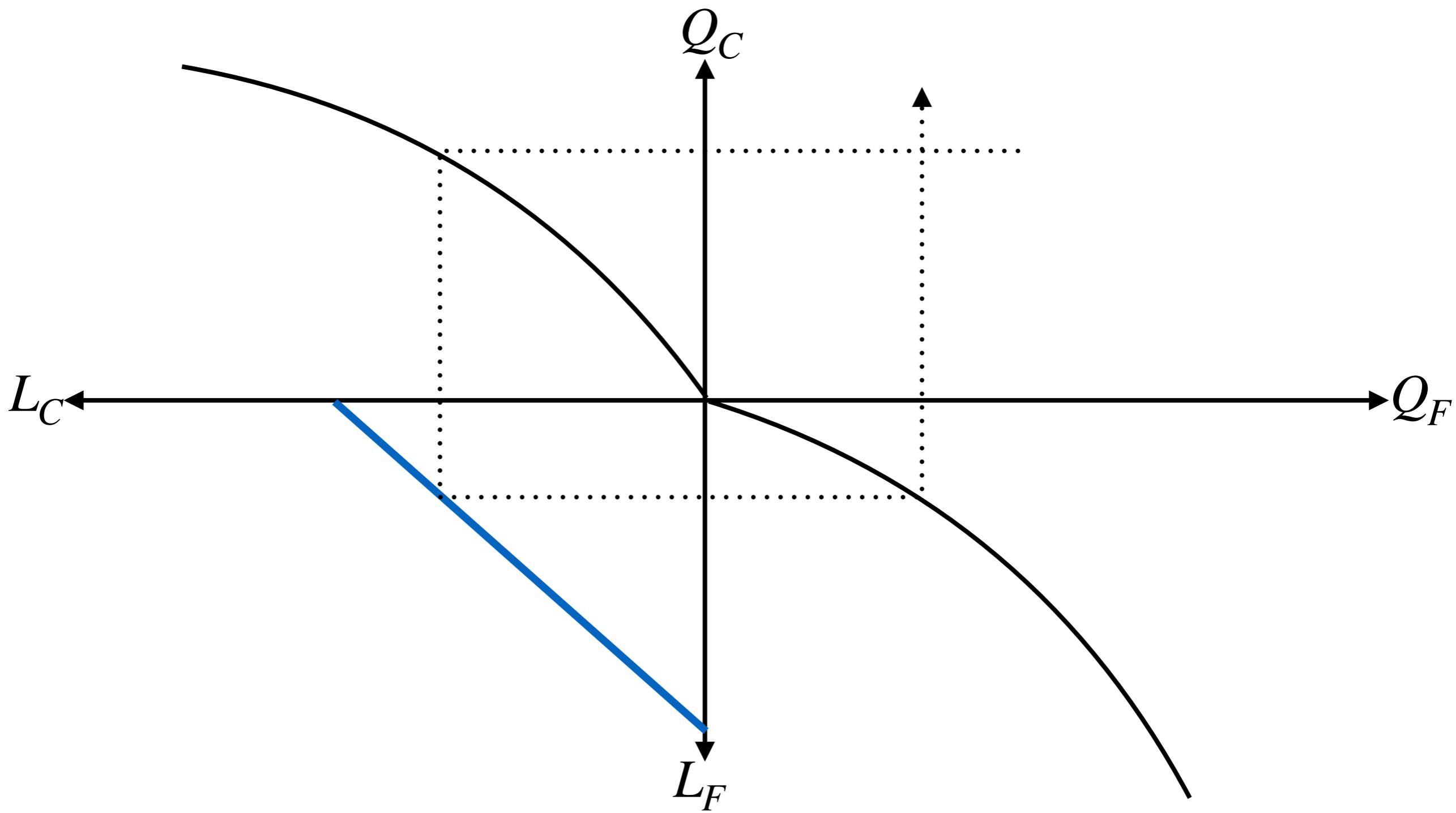
Deriving PPF from Quadrant



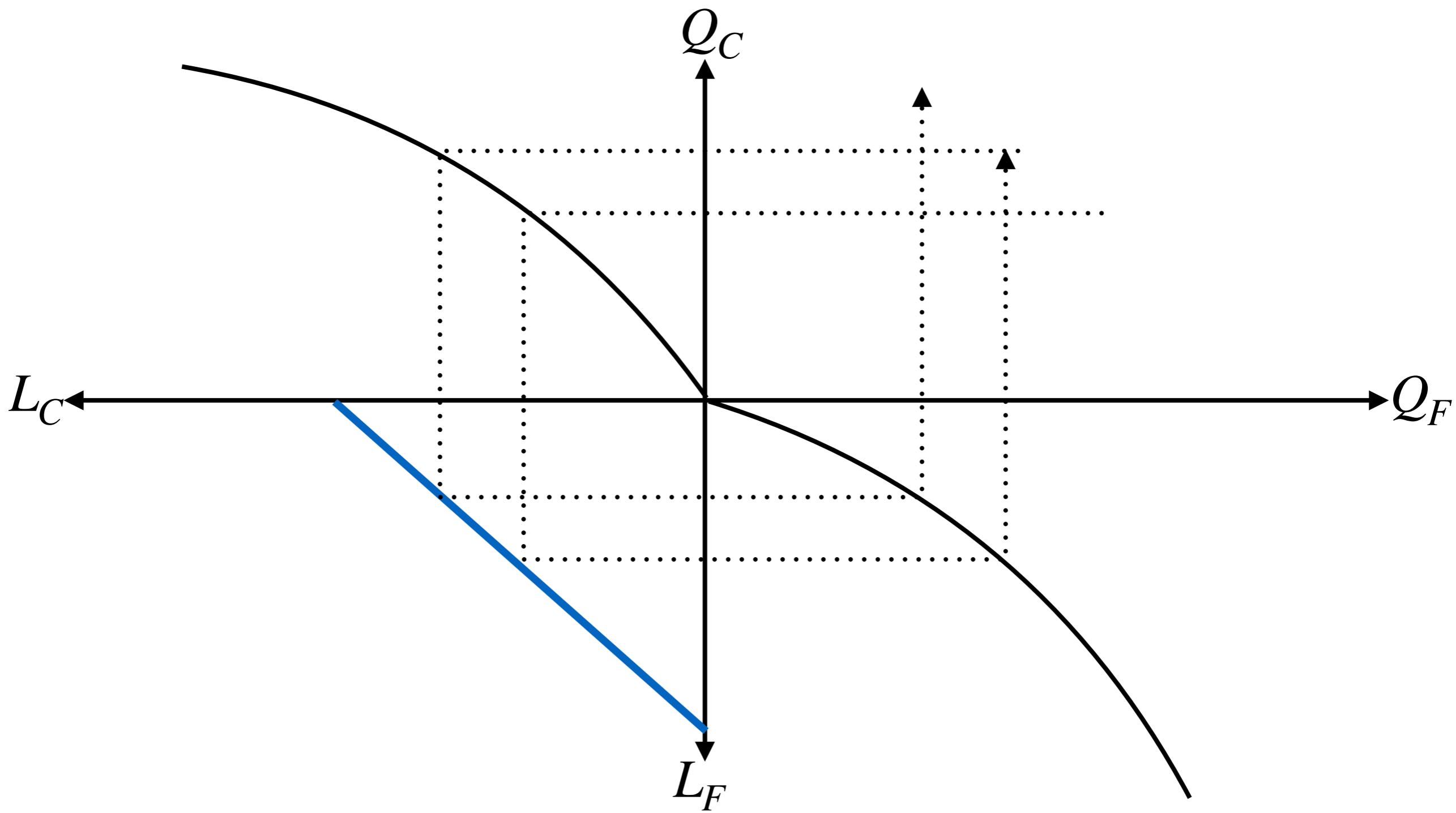
Deriving PPF from Quadrant



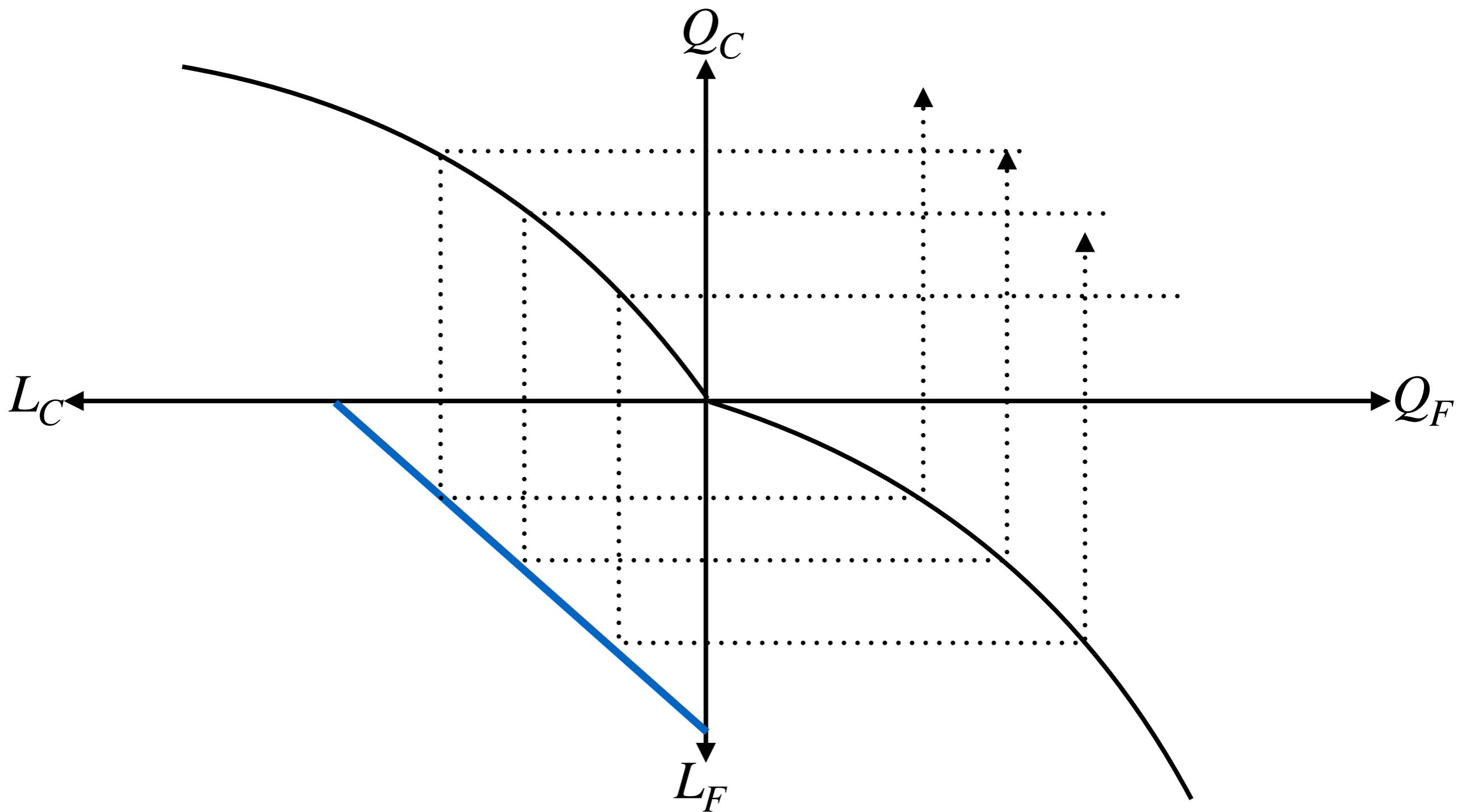
Deriving PPF from Quadrant



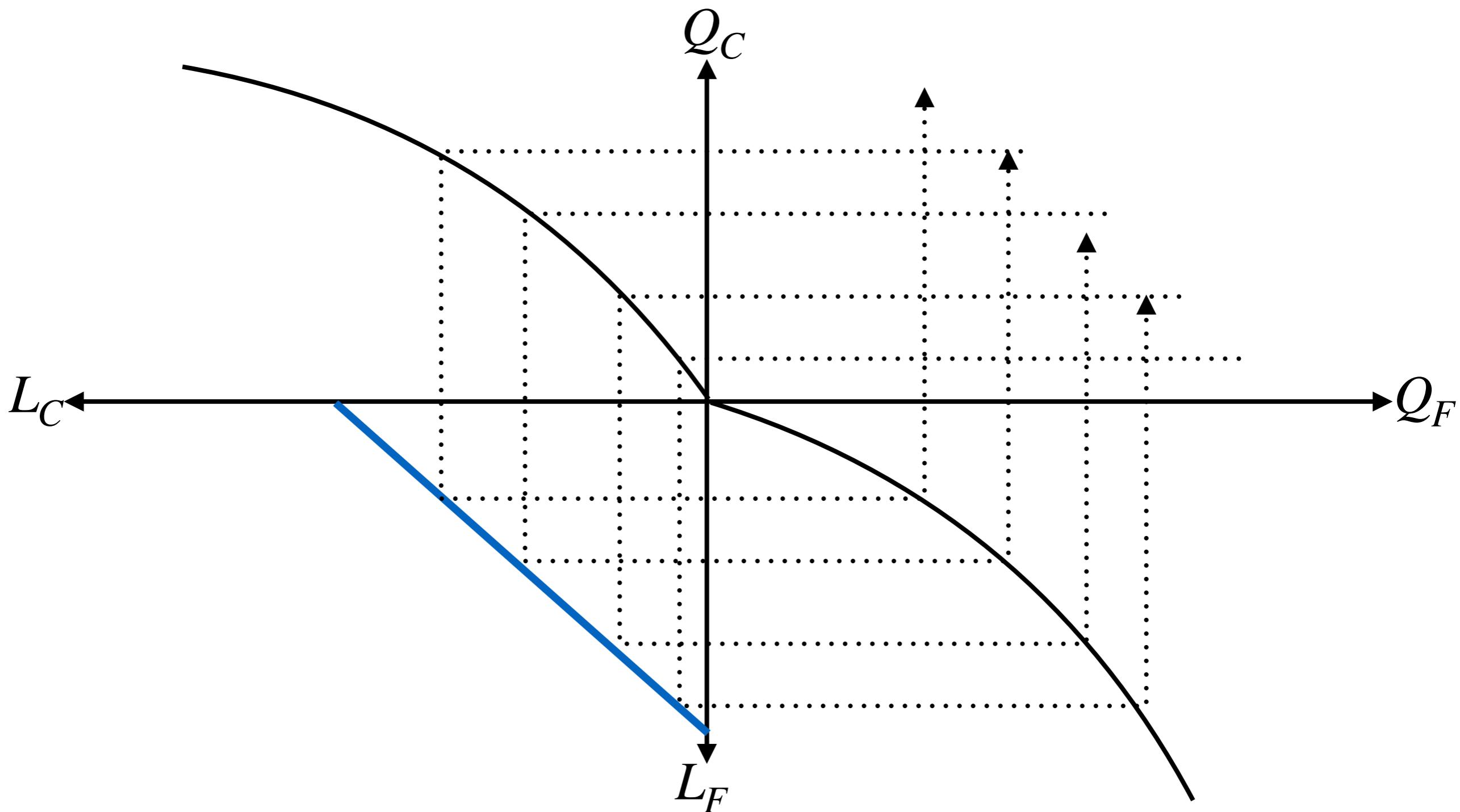
Deriving PPF from Quadrant



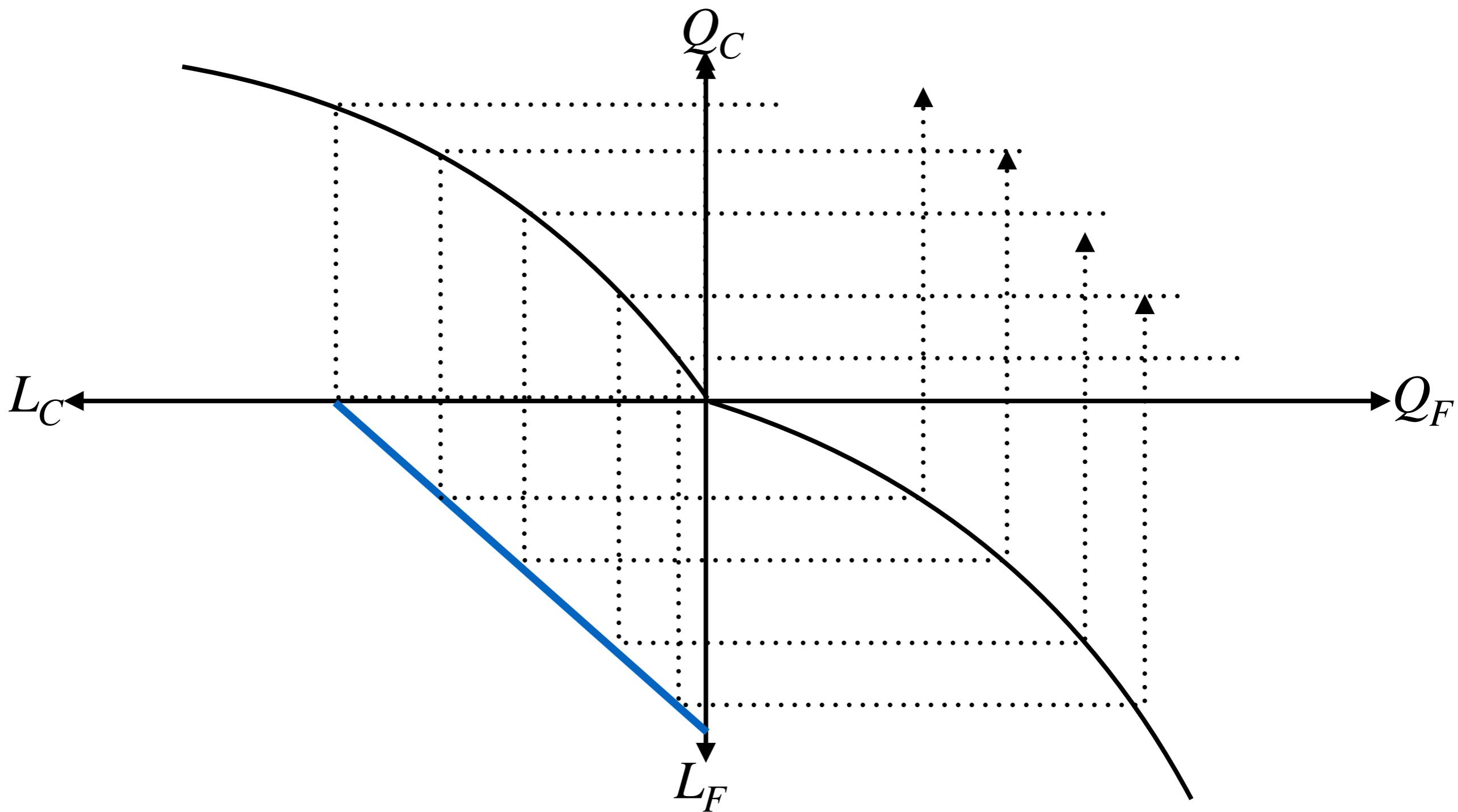
Deriving PPF from Quadrant



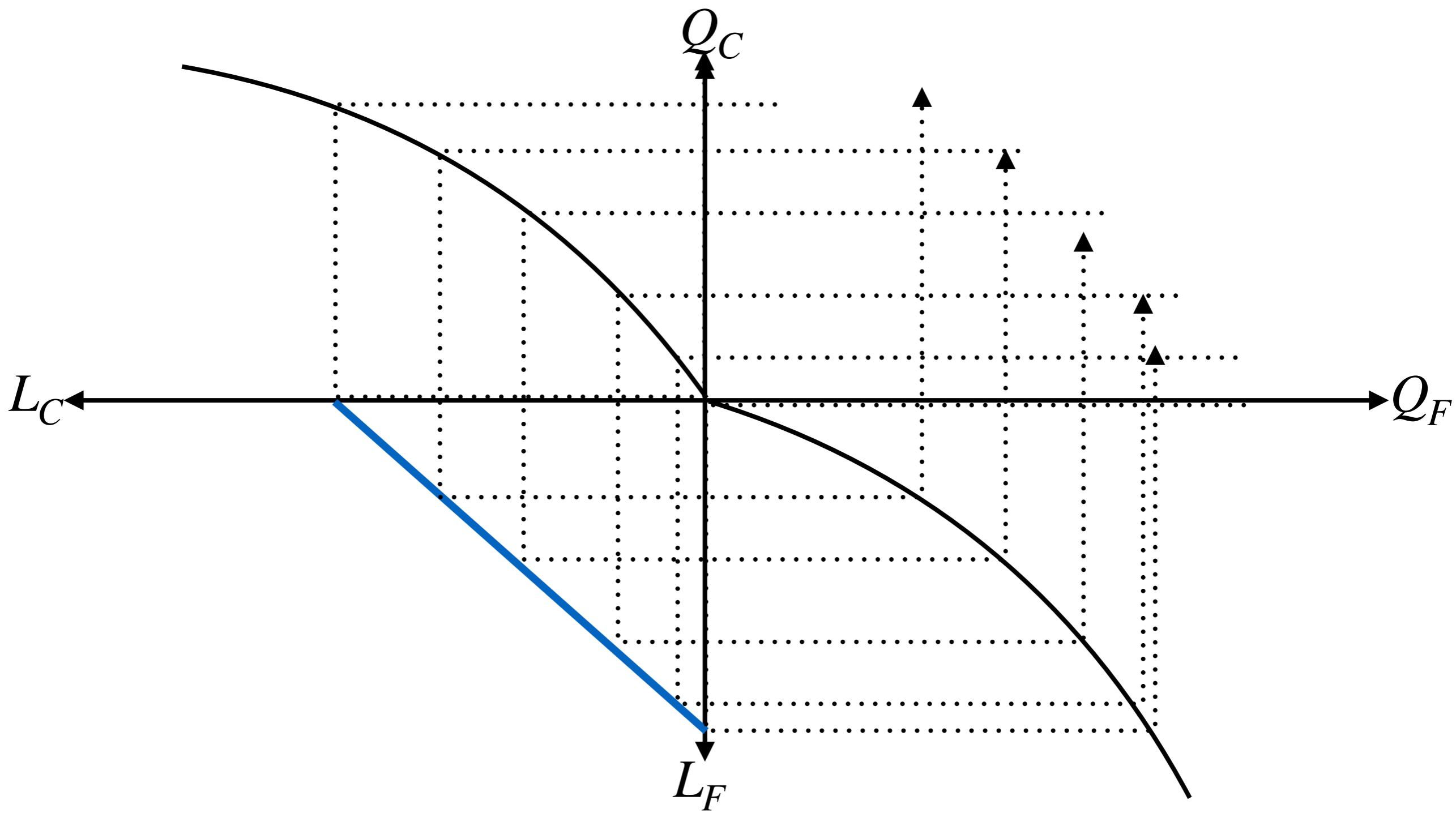
Deriving PPF from Quadrant



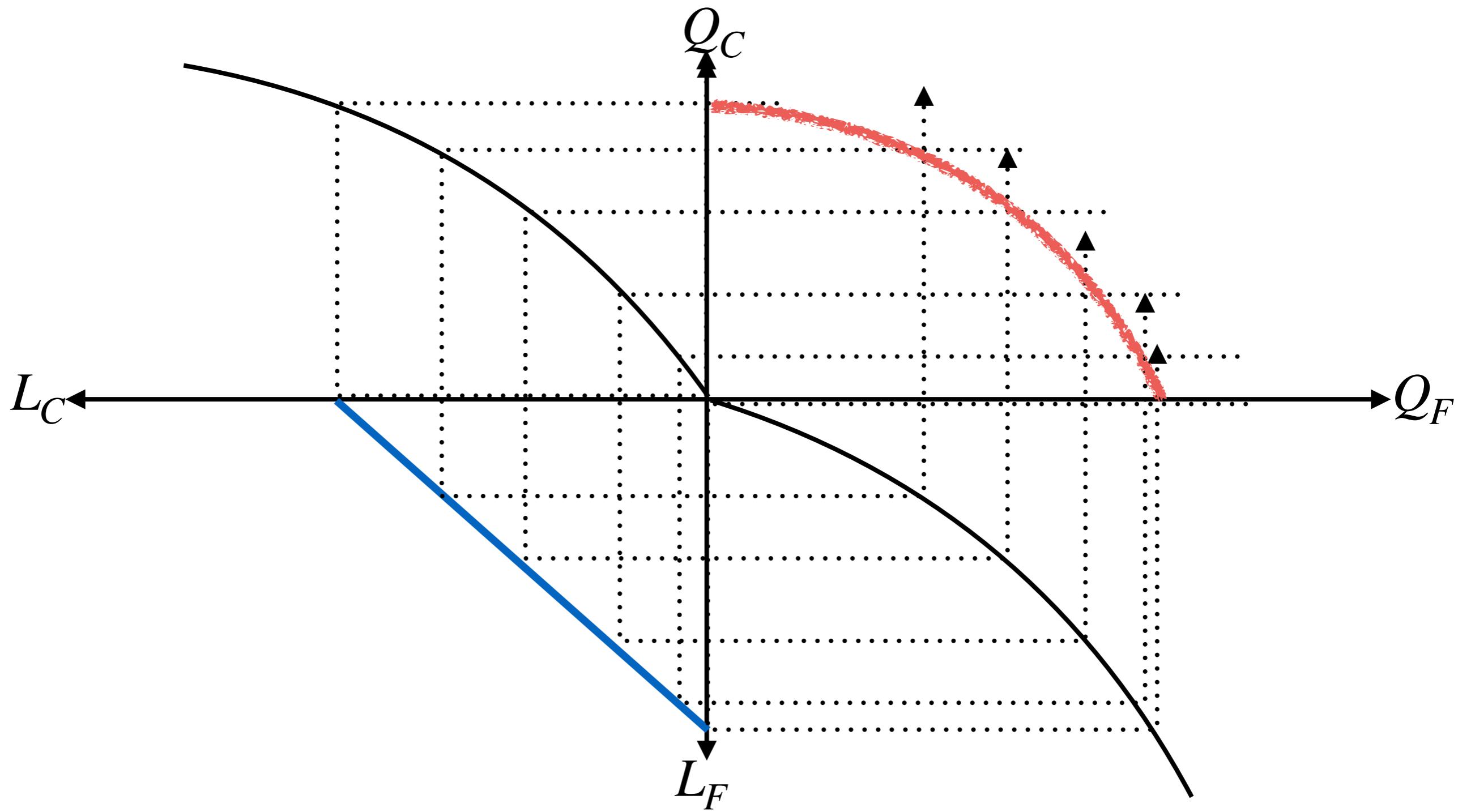
Deriving PPF from Quadrant



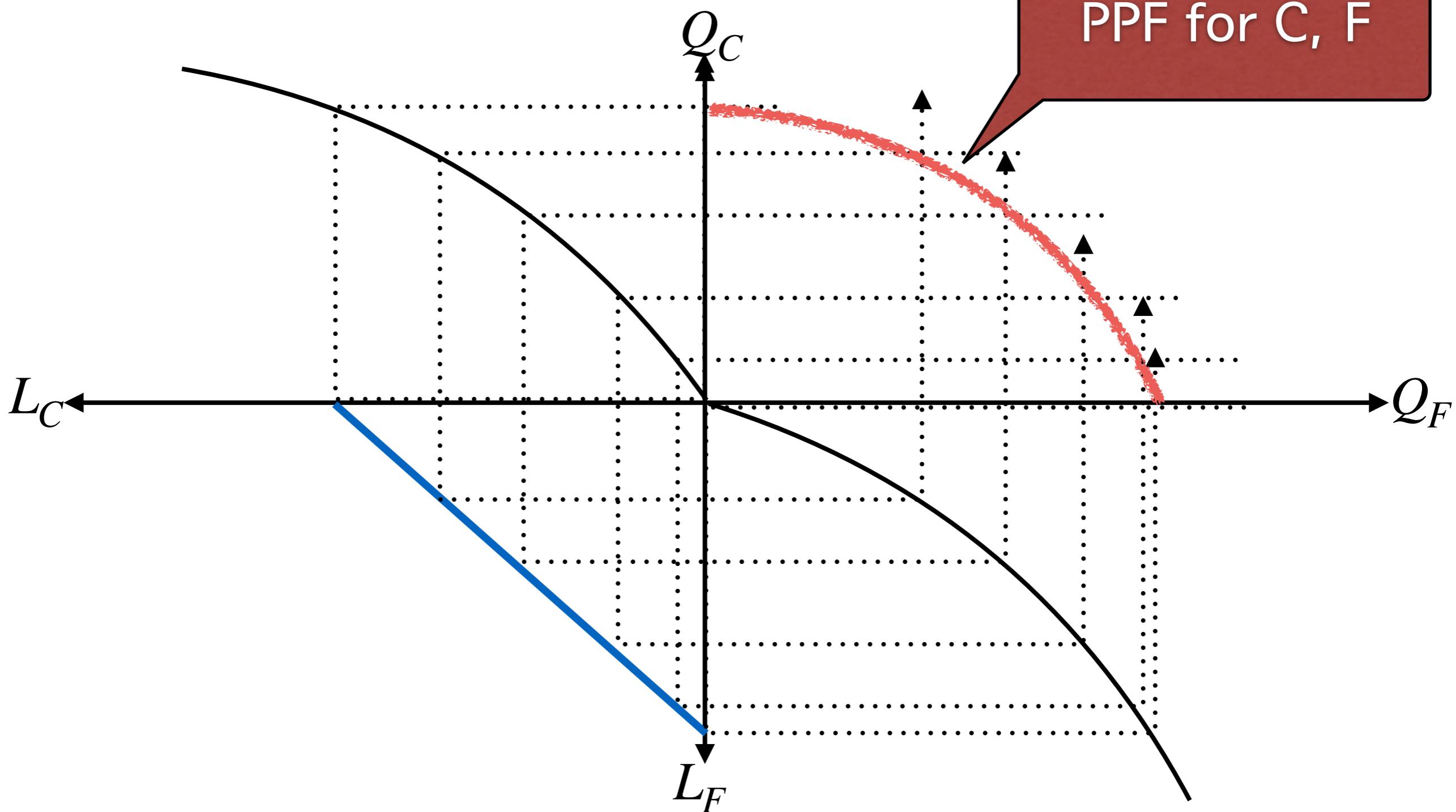
Deriving PPF from Quadrant



Deriving PPF from Quadrant



Deriving PPF from Quadrant



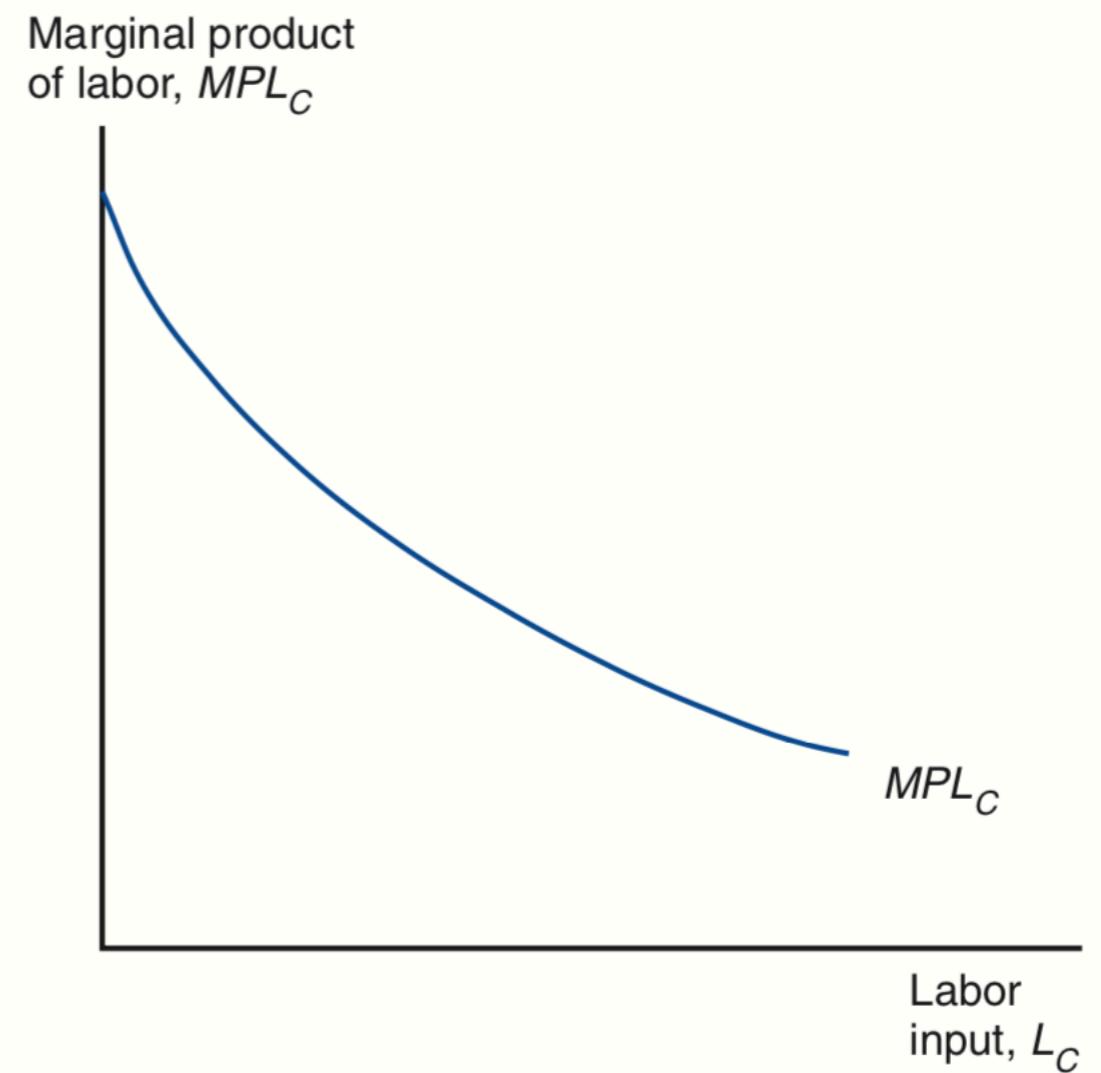
Marginal Product of Labor: MPL_C, MPL_F

- The addition to output (ΔQ_C) generated by adding one more labor (ΔL_C)
- $MPL_C := dQ_C/dL_c$
- $MPL_F := dQ_F/dL_F$
- Geometric meaning:
Slope of the production curve (PC)
- In economics, "MARGINAL" = "DIFFERENTIAL"

MPL is Slope of PC

Production Curve (PC)

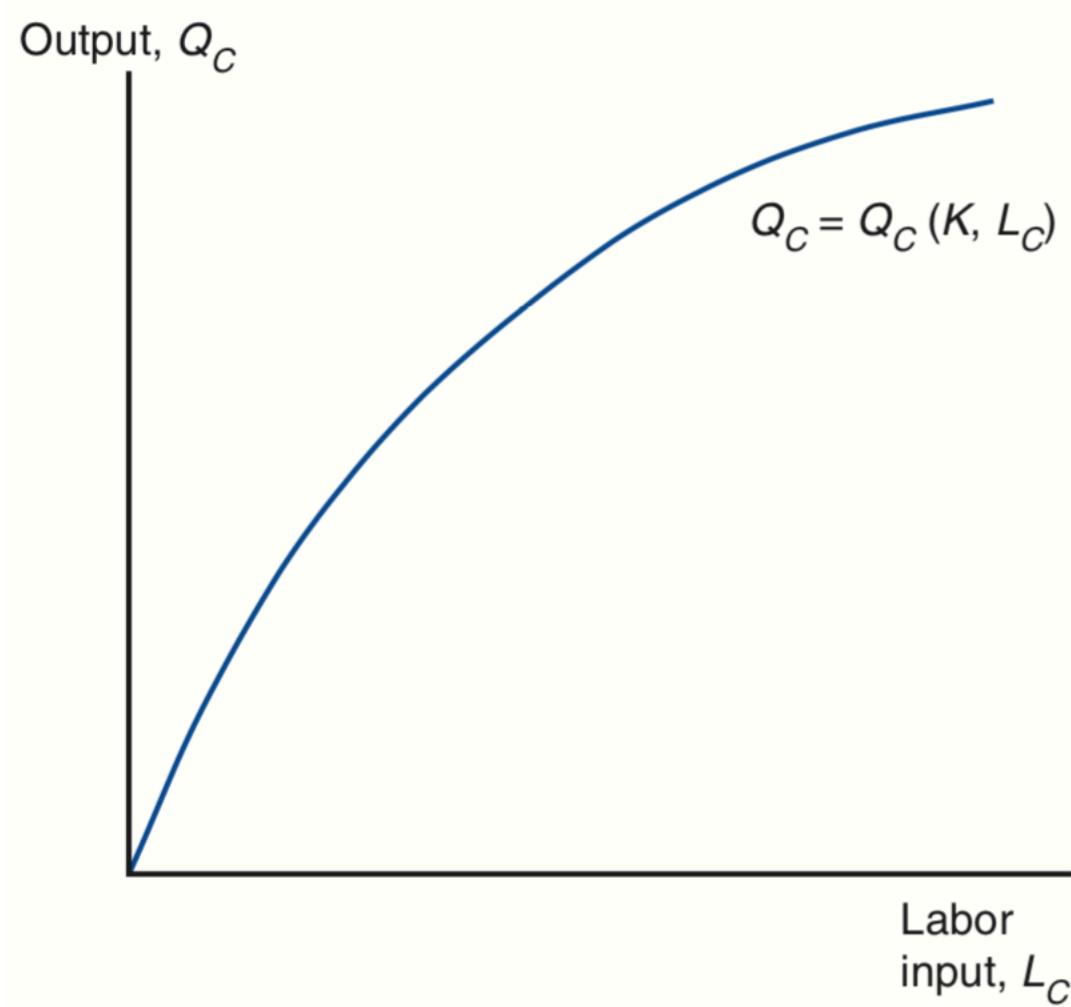
MPL Curve



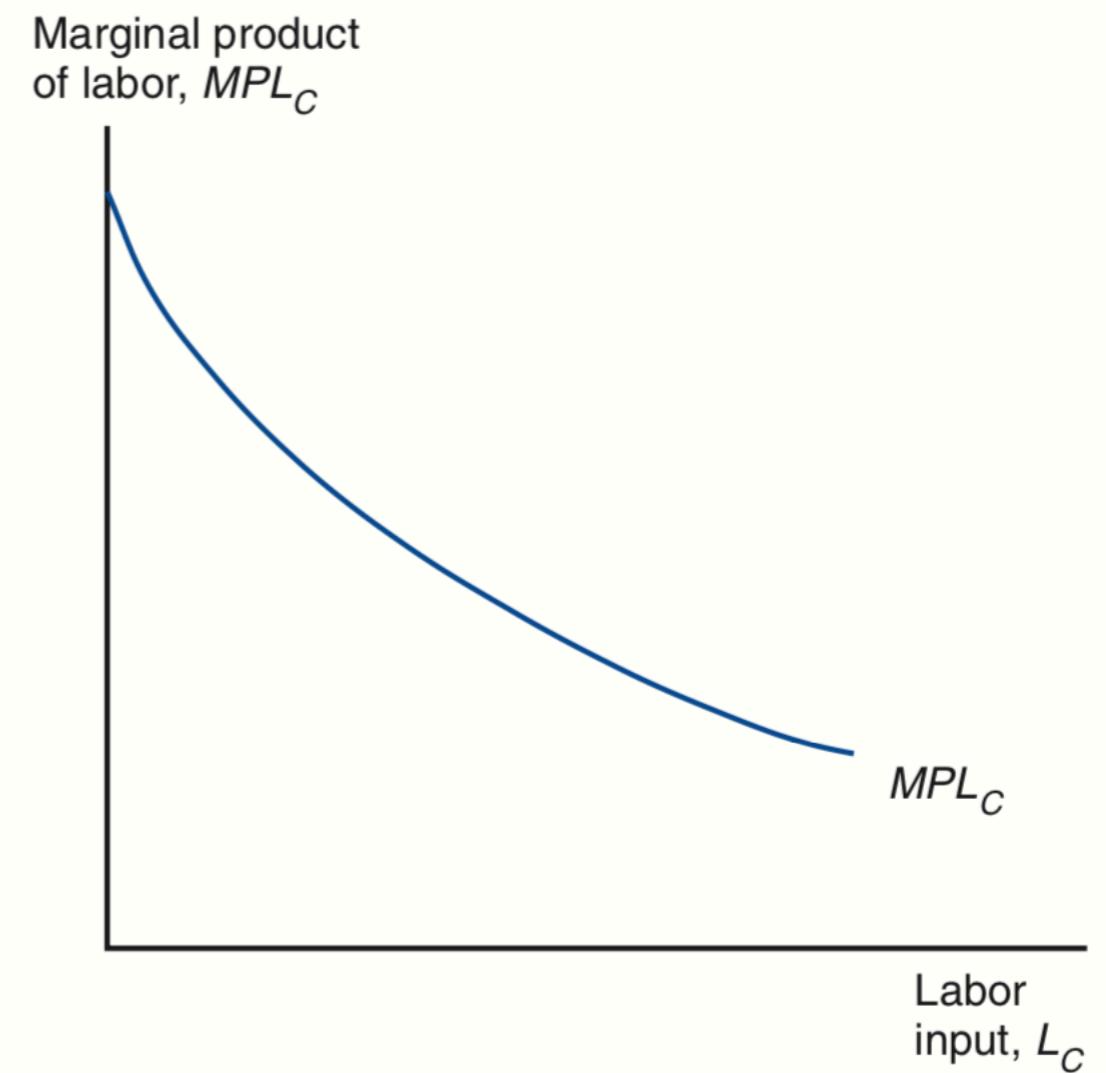
Review: Principles of Economics, Microeconomics

MPL is Slope of PC

Production Curve (PC)



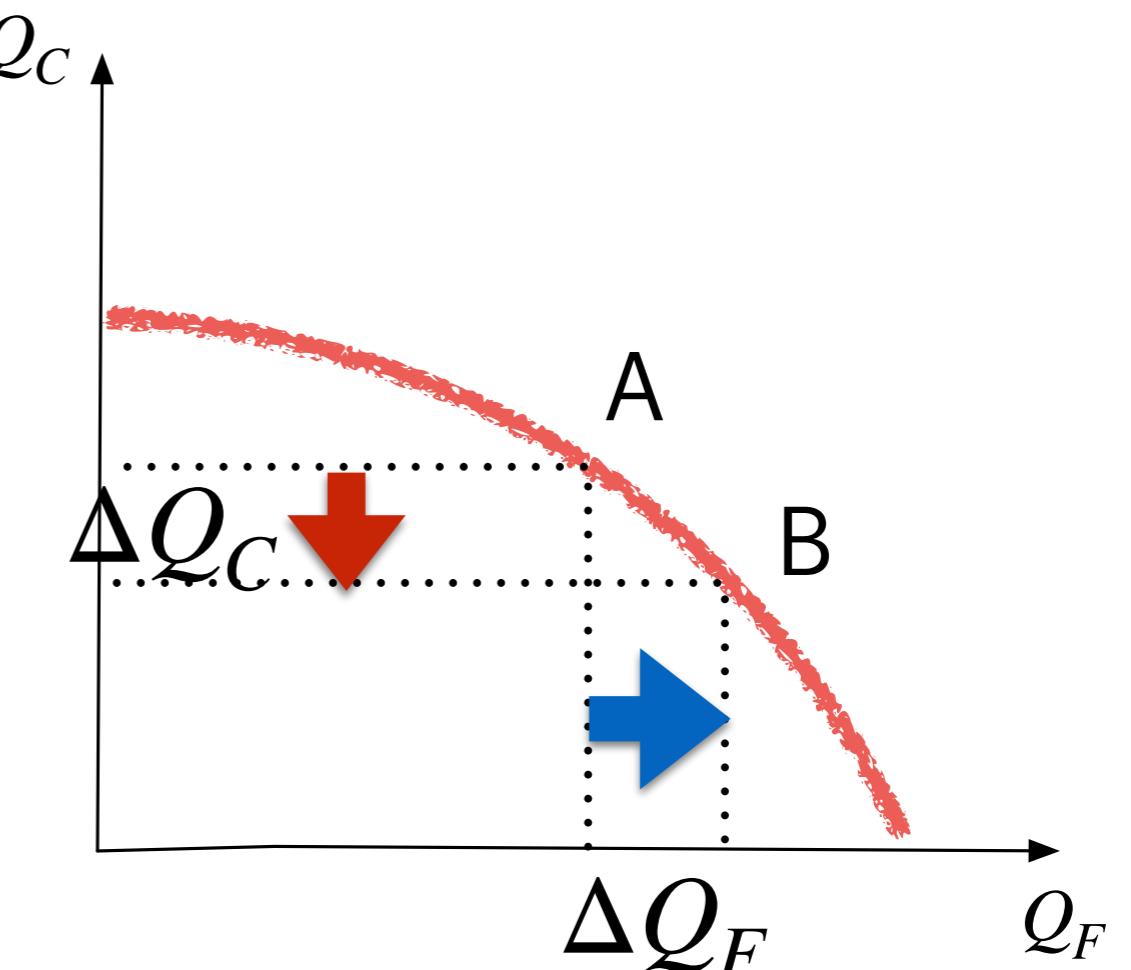
MPL Curve



Review: Principles of Economics, Microeconomics

Slope of PPF

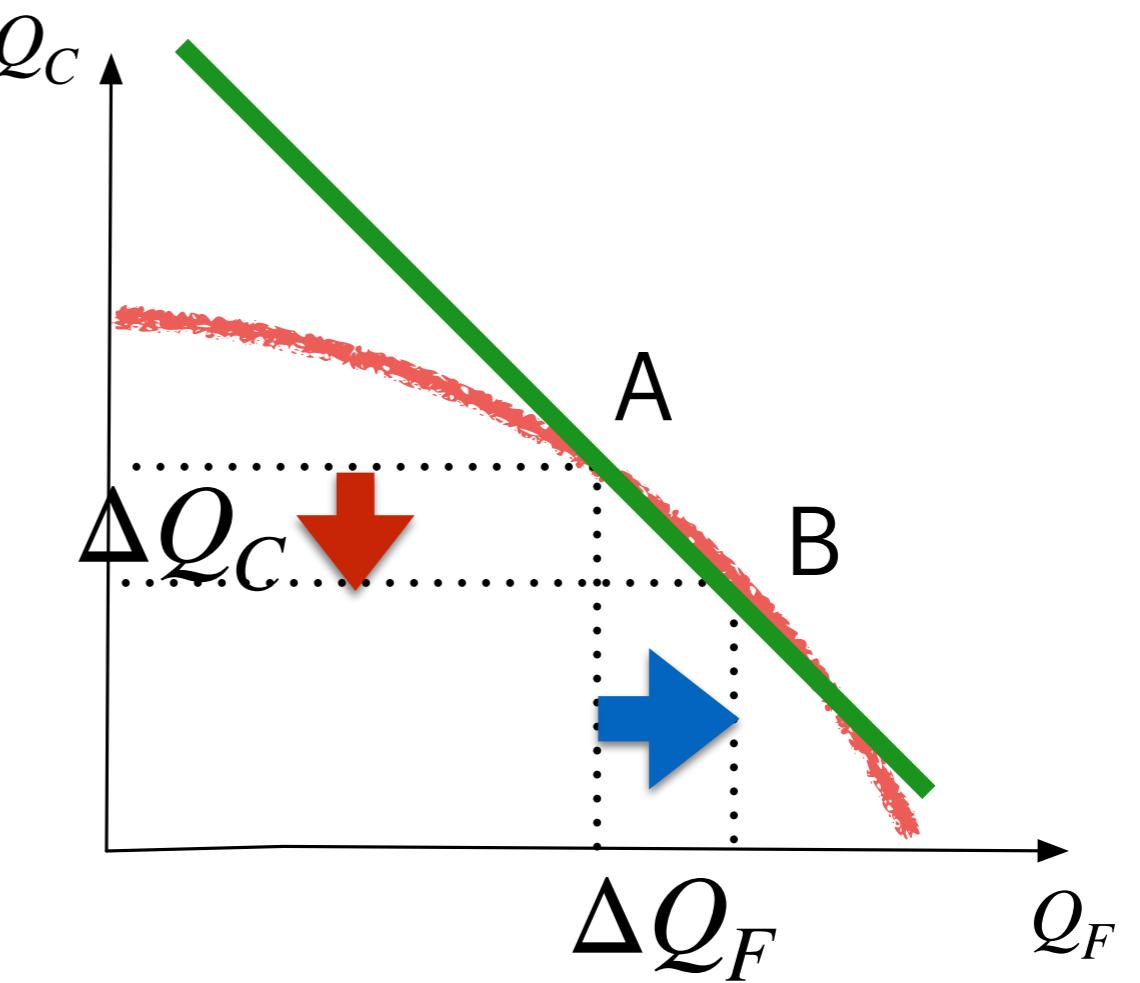
- Slope of line AB
 $= \Delta Q_C / \Delta Q_F$
 $\xrightarrow{\Delta \rightarrow 0} \frac{dQ_C}{dQ_F} = \frac{\frac{dQ_C}{dL}}{\frac{dQ_F}{dL}} = -\frac{\frac{dQ_C}{dL}}{\frac{dQ_F}{dL}} = -\frac{MPL_C}{MPL_F}.$
- $Q_C = Q_C(\bar{K}, L_C)$
 - $\frac{dQ_C}{dL} = MPL_C,$
- $Q_F = Q_F(\bar{T}, L_F)$
 - $\frac{dQ_F}{dL} = MPL_F.$



Review: Principles of Economics, Microeconomics

Slope of PPF

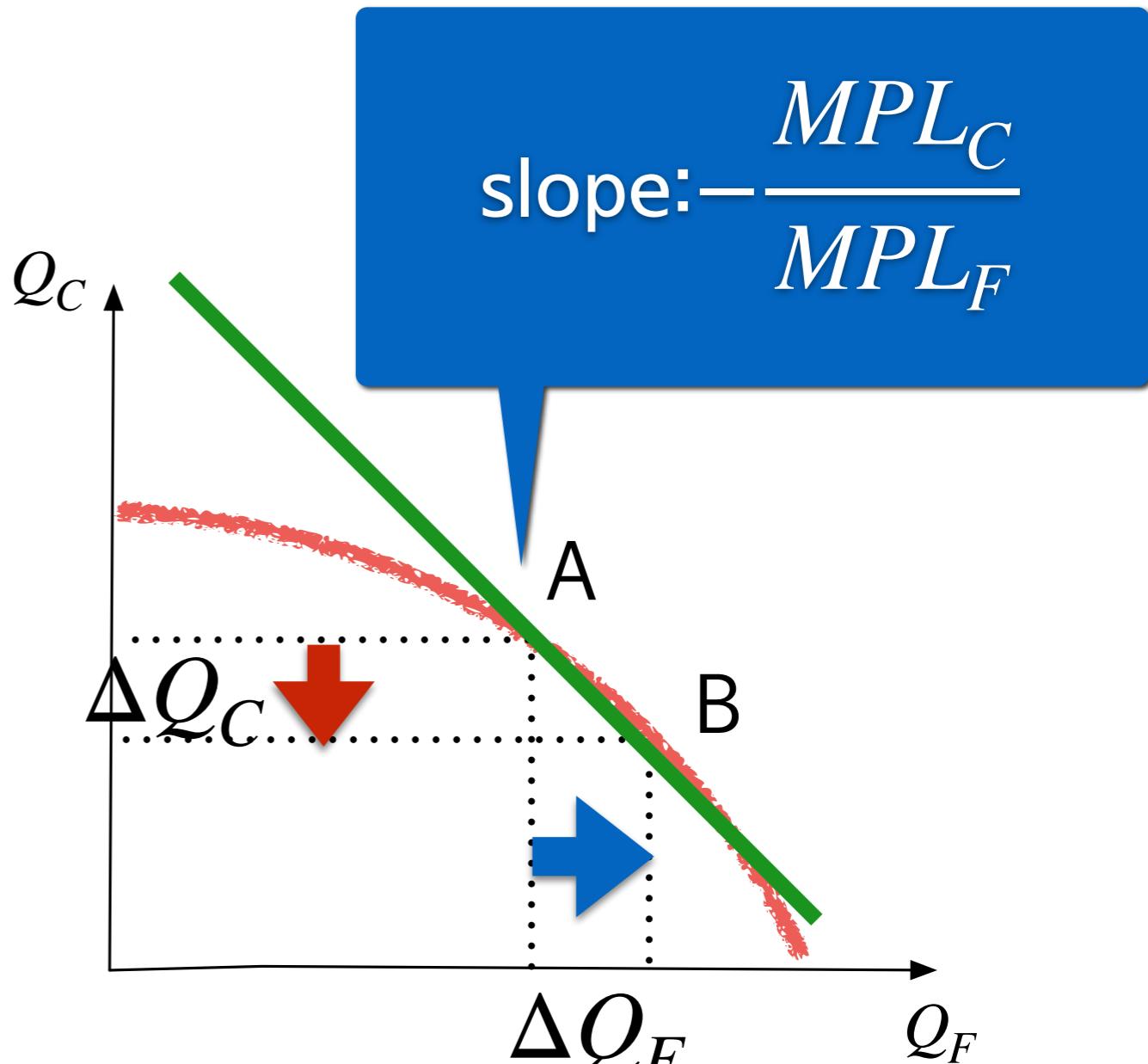
- Slope of line AB
 $= \Delta Q_C / \Delta Q_F$
 $\xrightarrow{\Delta \rightarrow 0} \frac{dQ_C}{dQ_F} = \frac{\frac{dQ_C}{dL}}{\frac{dQ_F}{dL}} = -\frac{\frac{dQ_C}{dL_C}}{\frac{dQ_F}{dL_F}} = -\frac{MPL_C}{MPL_F}.$
- $Q_C = Q_C(\bar{K}, L_C)$
 - $\frac{dQ_C}{dL} = MPL_C,$
- $Q_F = Q_F(\bar{T}, L_F)$
 - $\frac{dQ_F}{dL} = MPL_F.$



Review: Principles of Economics, Microeconomics

Slope of PPF

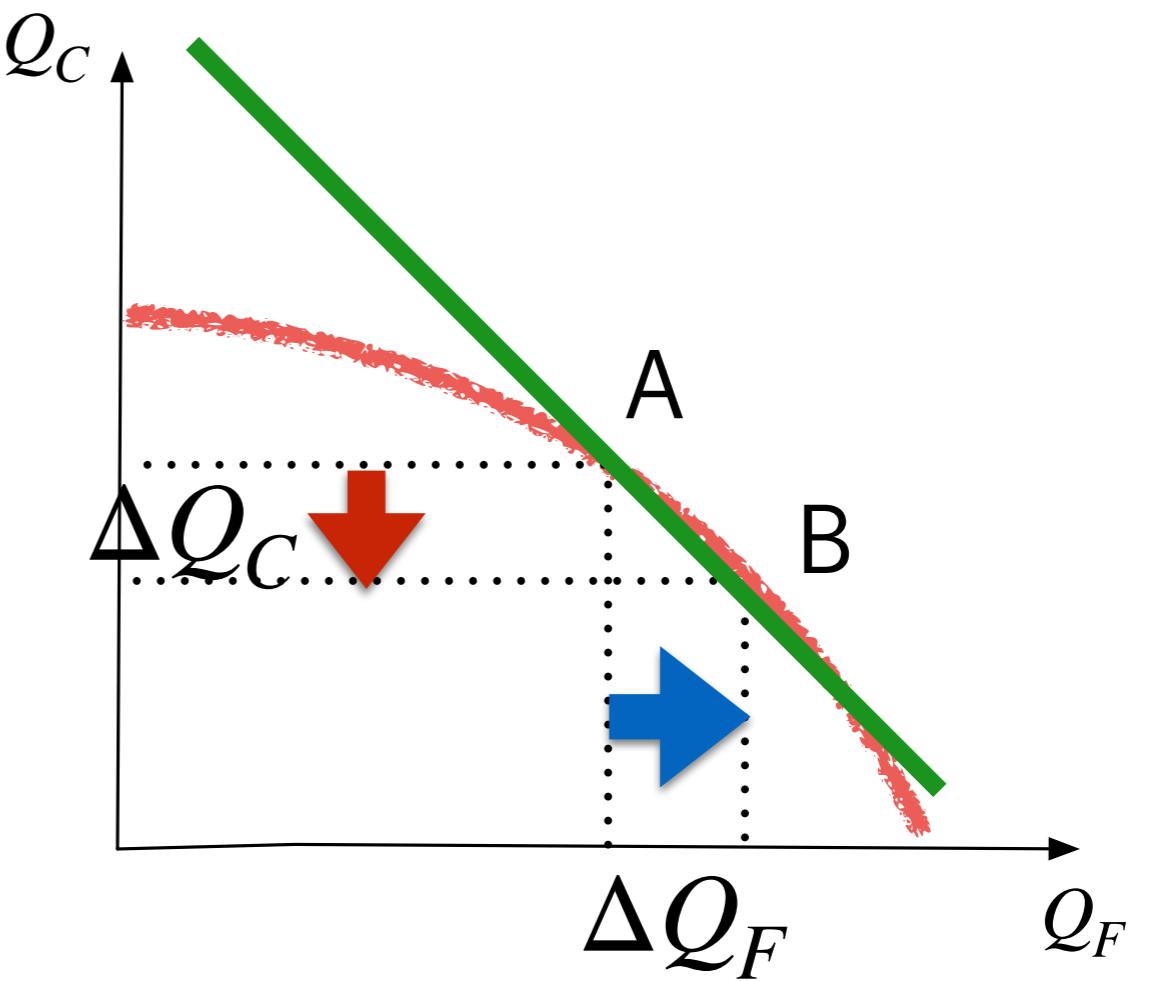
- Slope of line AB
 $= \Delta Q_C / \Delta Q_F$
 $\xrightarrow{\Delta \rightarrow 0} \frac{dQ_C}{dQ_F} = \frac{\frac{dQ_C}{dL}}{\frac{dQ_F}{dL}} = -\frac{\frac{dQ_C}{dL}}{\frac{dQ_F}{dL}} = -\frac{MPL_C}{MPL_F}.$
- $Q_C = Q_C(\bar{K}, L_C)$
 - $\frac{dQ_C}{dL} = MPL_C,$
- $Q_F = Q_F(\bar{T}, L_F)$
 - $\frac{dQ_F}{dL} = MPL_F.$



Review: Principles of Economics, Microeconomics

Slope of PPF: Meaning

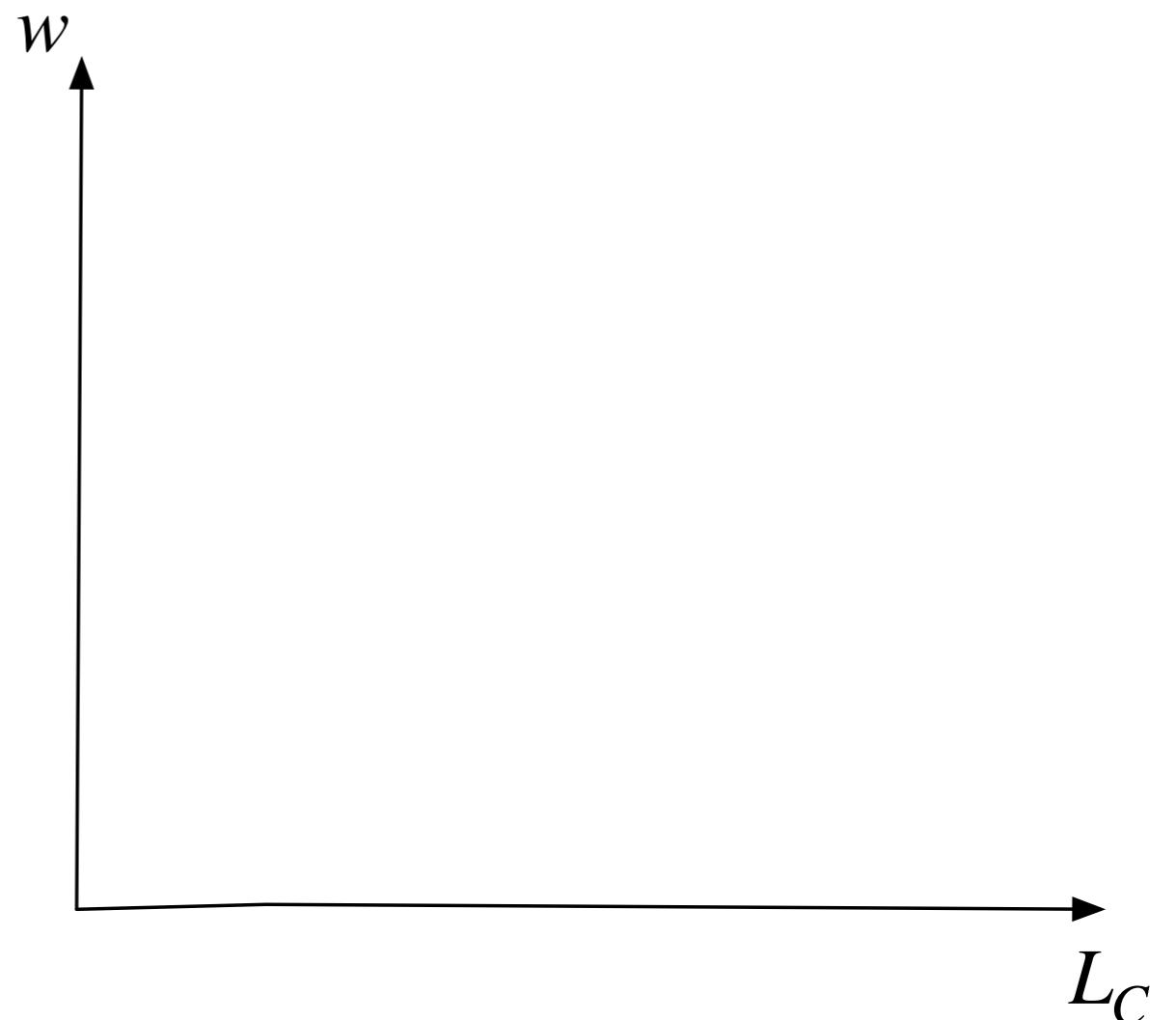
- Opportunity Cost (OC) of increasing more product
- To make more Food (ΔQ_F), we should make less Cloth(ΔQ_C).



Review: Principles of Economics, Microeconomics

Labor market

- Final object:
 - Model for Labor allocation
 - Graph on Price-Quantity plane
- Labor markets for L_C, L_F
 - **Quantity** of Labor:
 - L_C, L_F
 - **Price** of Labor:
 - equilibrium wage
 - $w_C = w_F = w$



Value of MPL (VMPL)

- Wage rate w = unit price of labor
- One unit can produce total $[MPL_C]$ or $[MPL_F]$ units of product (1)
- Value of the product = quantity of product \times price of product (2)
- from (1), (2), we get VMPL: $MPL_C \times P_C$, or $MPL_F \times P_F$
- Firms will hire labor until wage equals to VMPL

$$MPL_C \times P_C = w$$

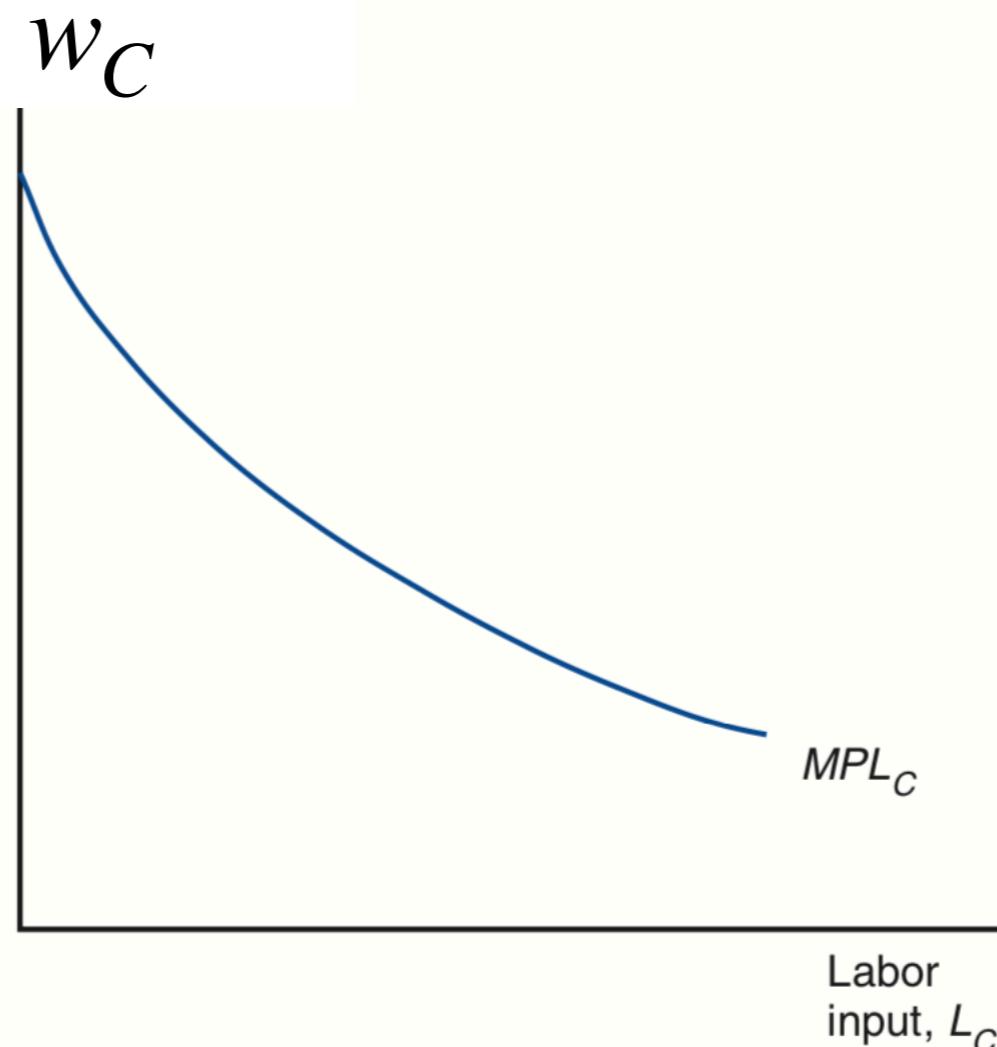
$$MPL_F \times P_F = w$$

$$w_C = w_F = w$$

- In this (simple) model, workers can choose freely between two sectors
 - It is not true especially in the professional sectors
- It means labor is a mobile factor
 - $w_C > w_F \Rightarrow$ workers move to Cloth sector
 - $w_C < w_F \Rightarrow$ workers move to Food sector

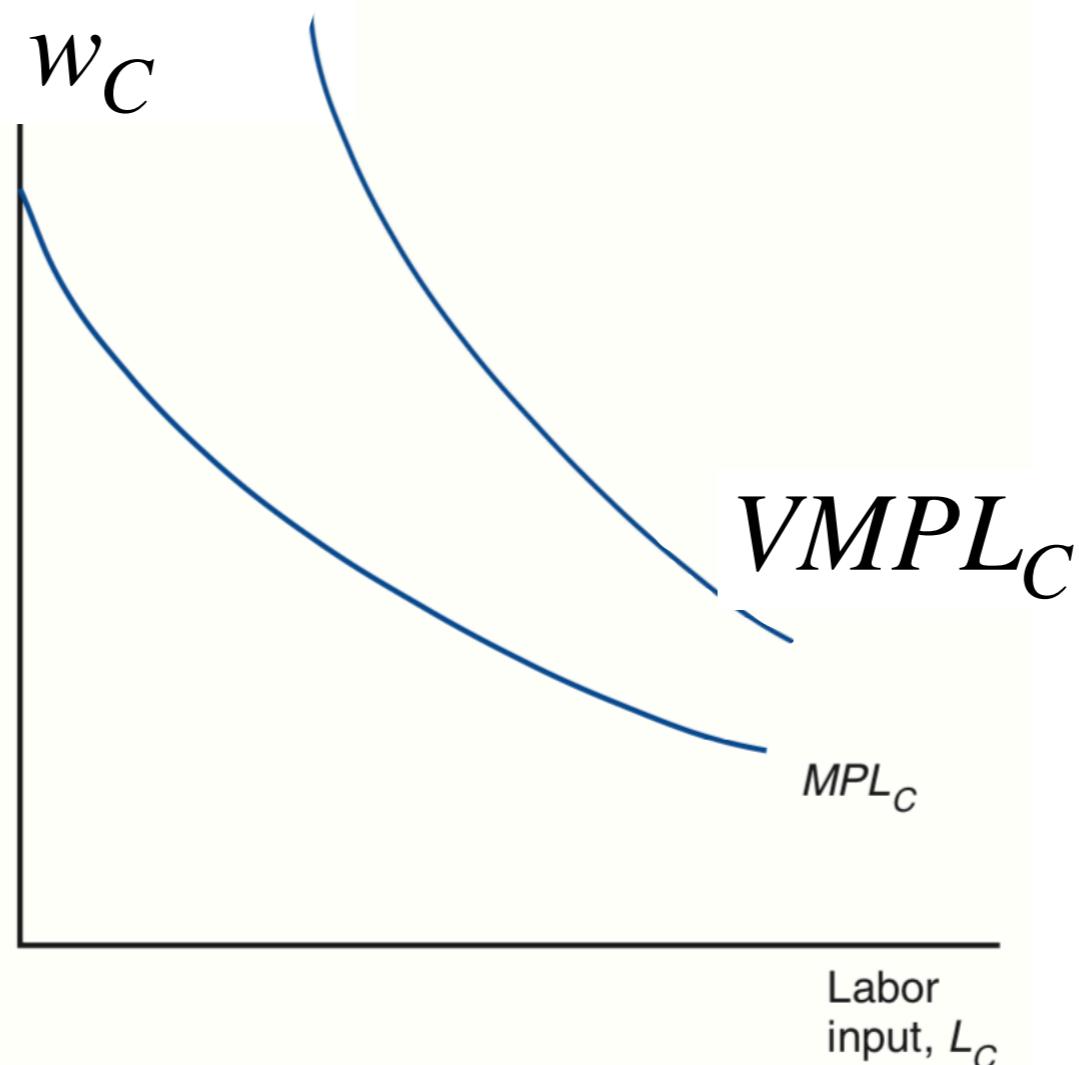
VMPL Curve is Labor Demand Curve

if $P_C = 2 \Rightarrow \text{VMPL: } MPL_C \times 2$



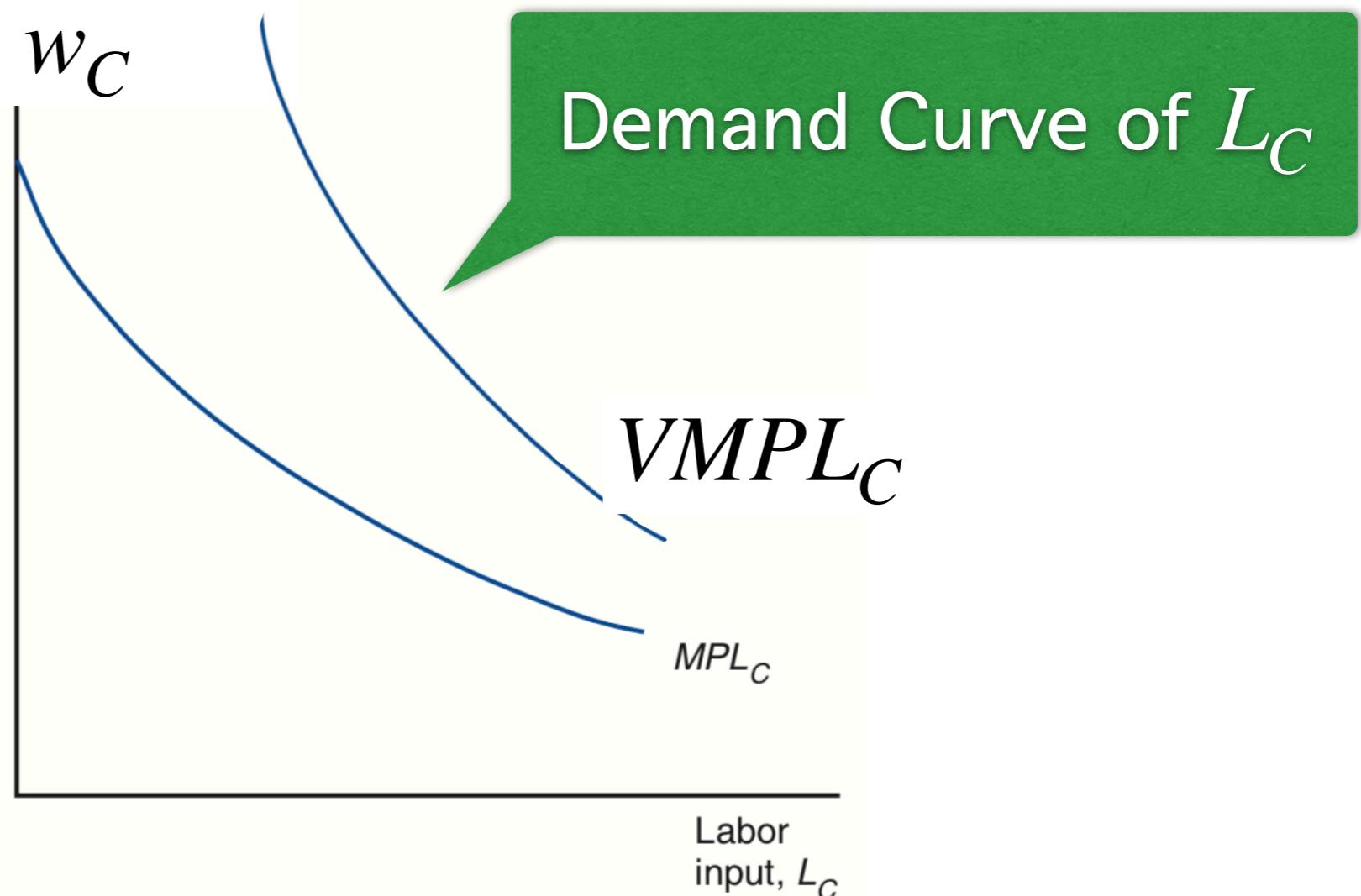
VMPL Curve is Labor Demand Curve

if $P_C = 2 \Rightarrow \text{VMPL: } MPL_C \times 2$



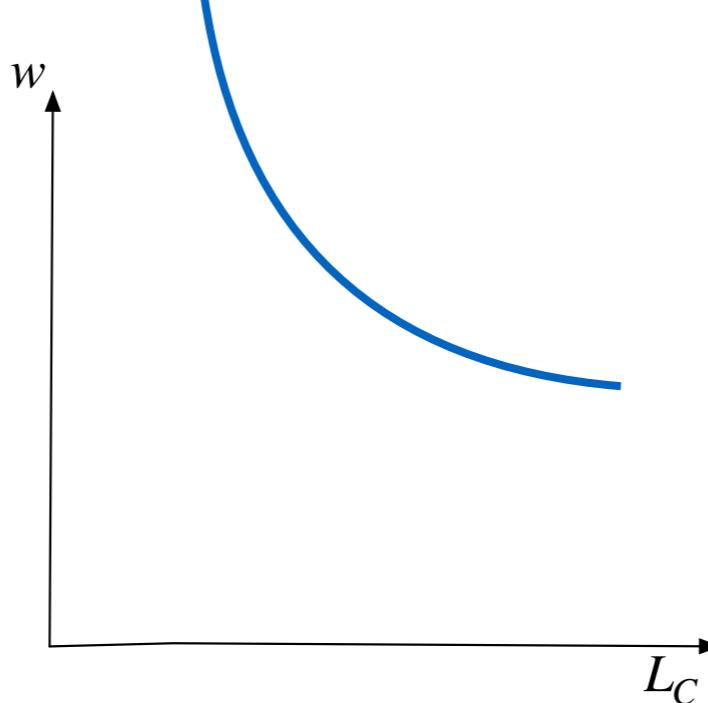
VMPL Curve is Labor Demand Curve

if $P_C = 2 \Rightarrow \text{VMPL: } MPL_C \times 2$



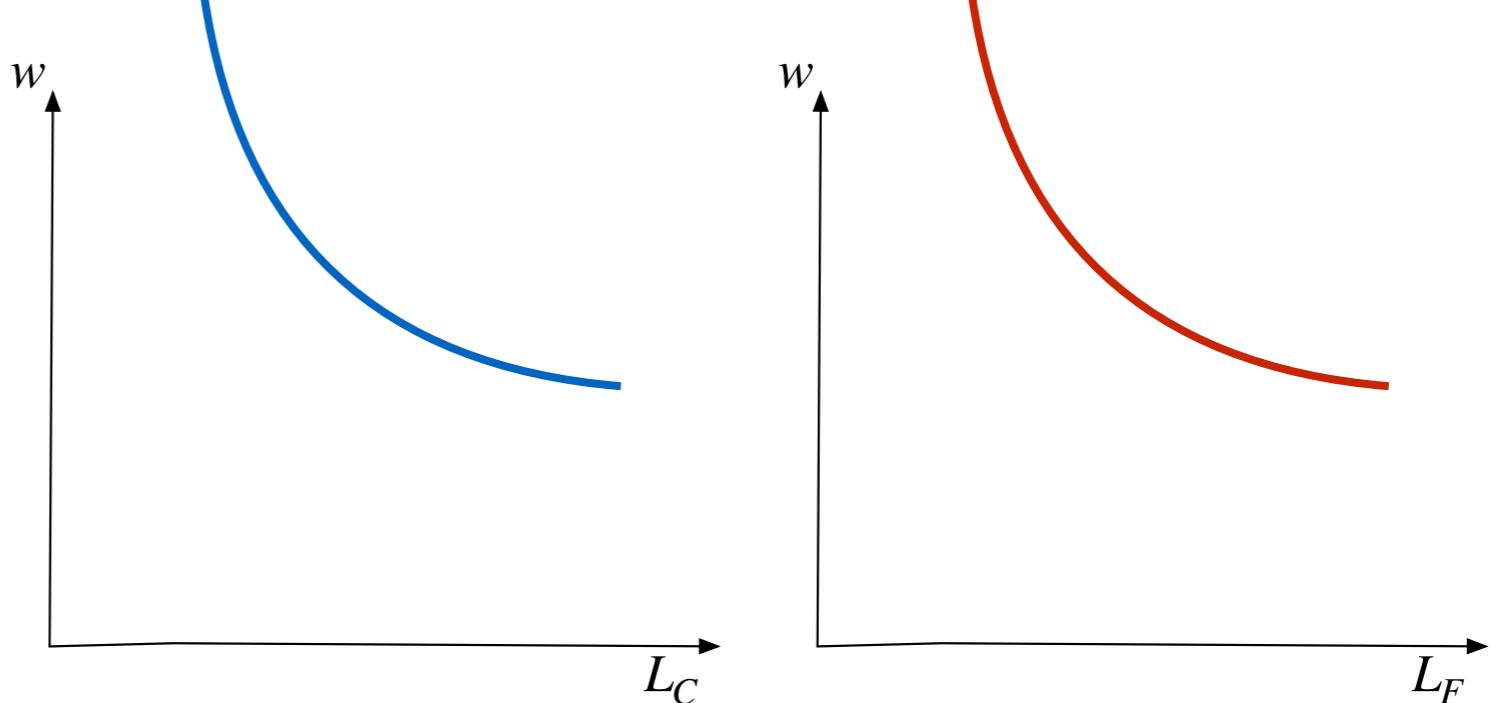
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



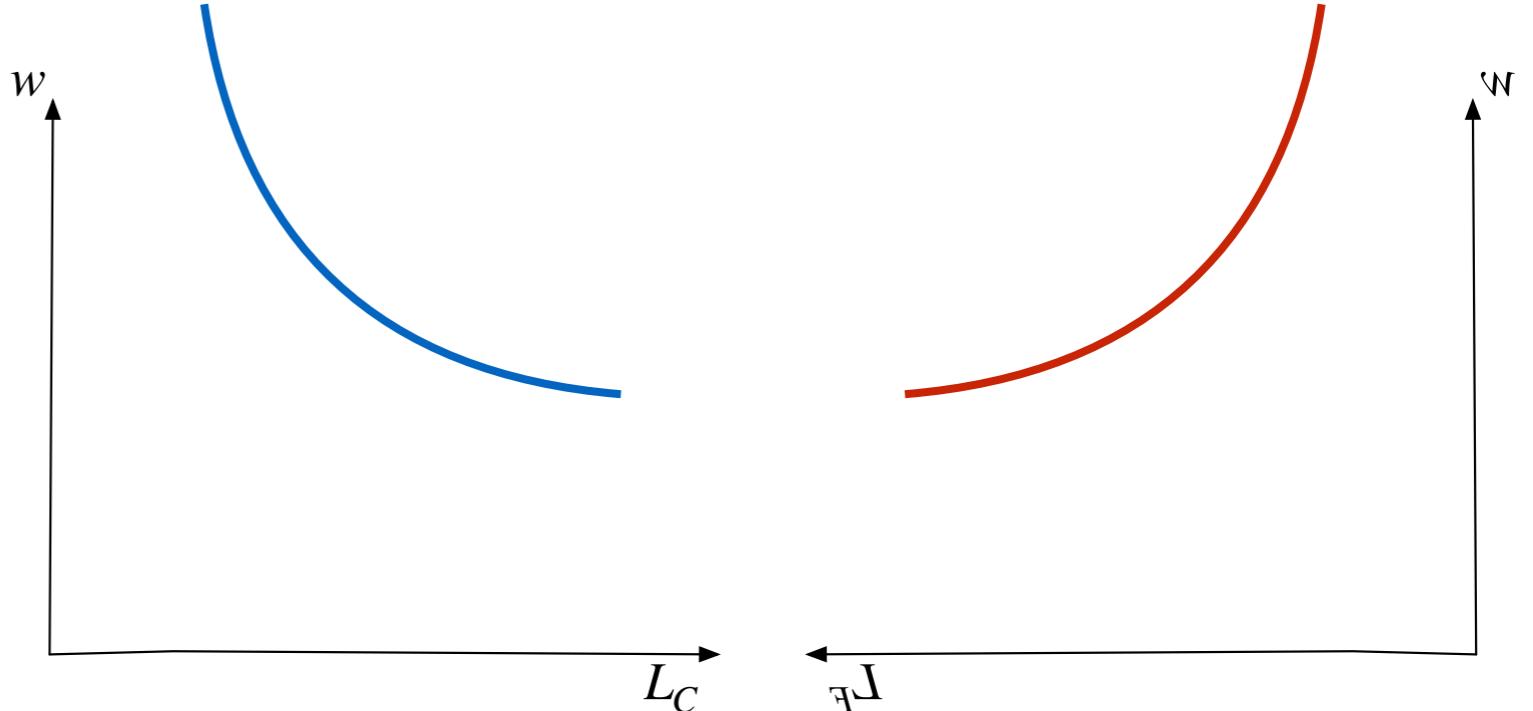
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



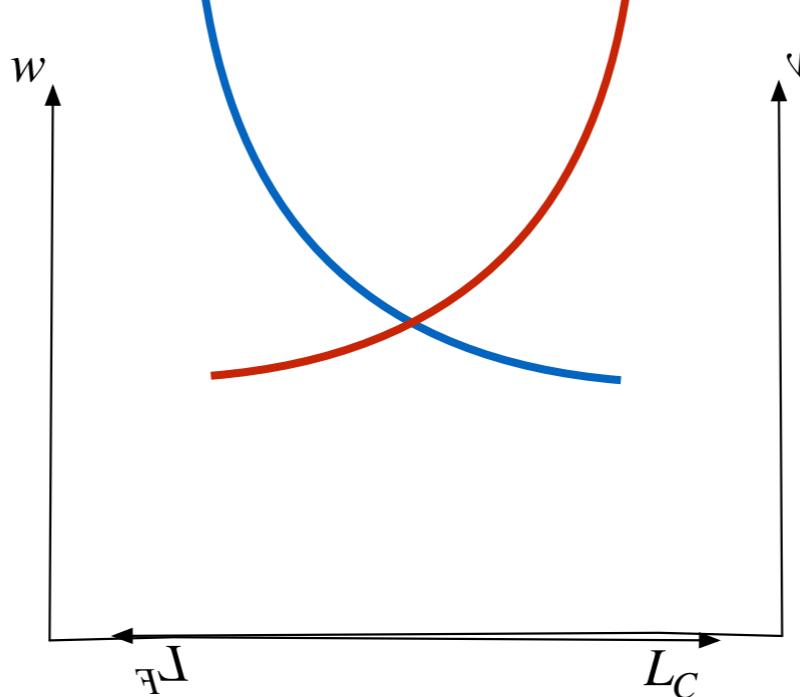
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



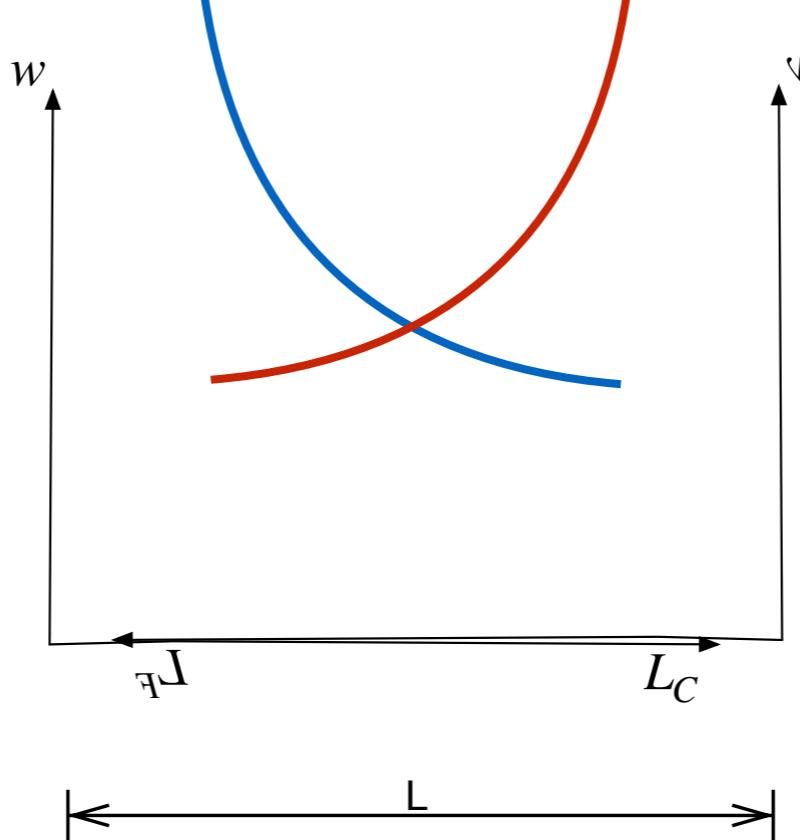
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



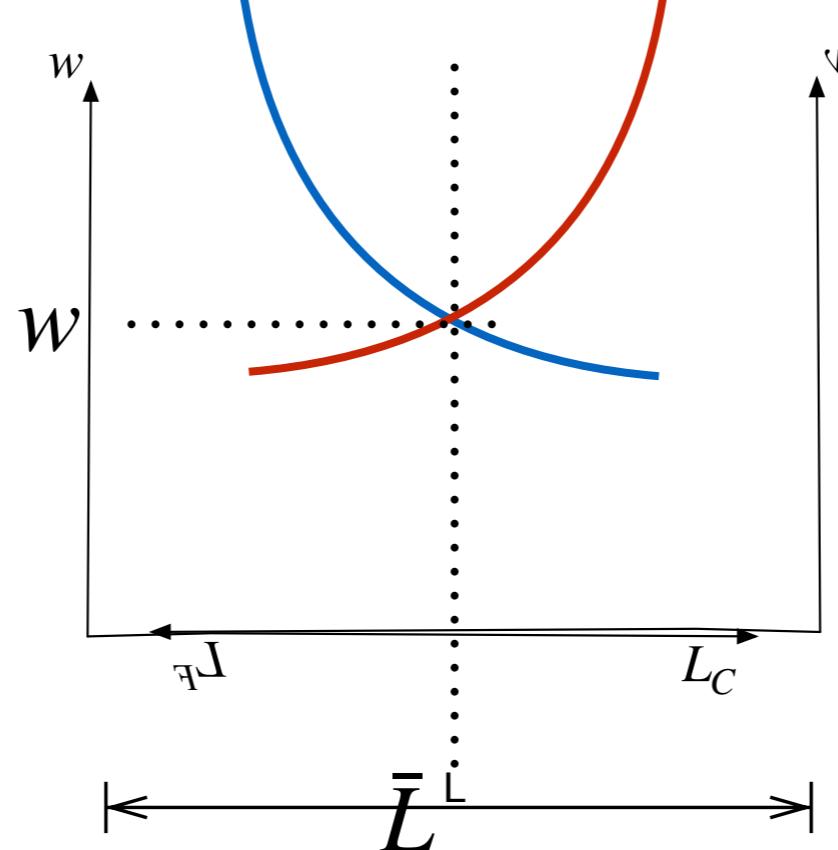
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



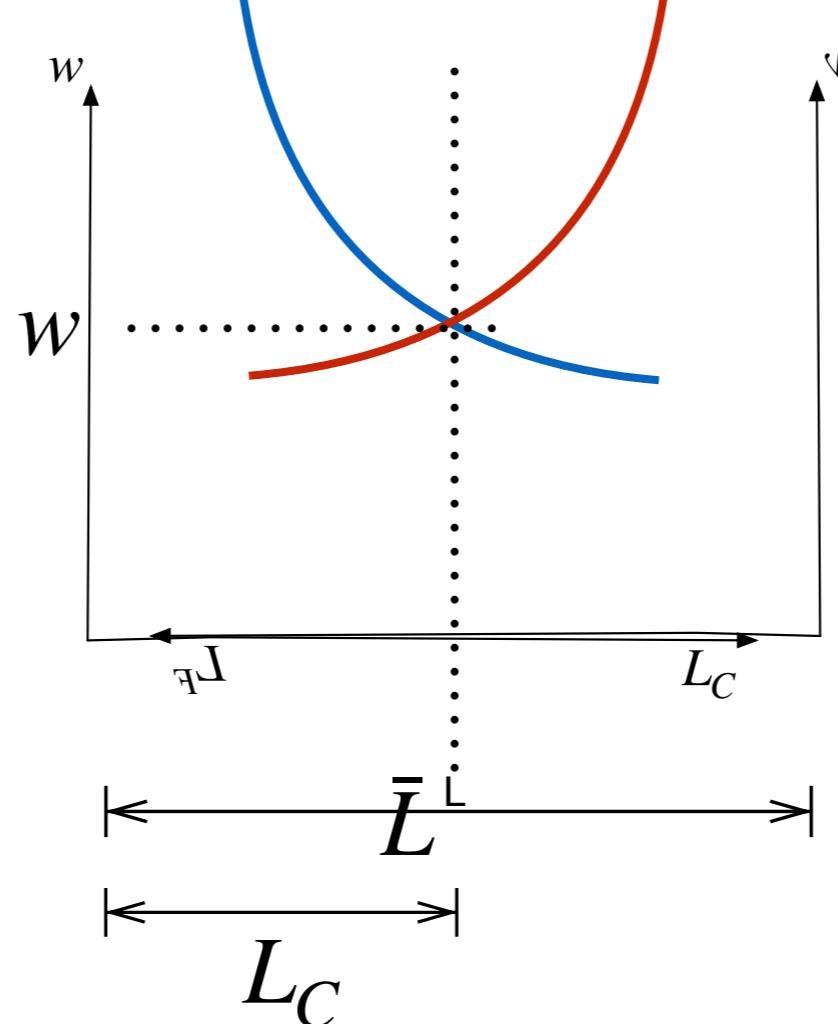
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
 $P_C \times MPC_C$
 $= P_F \times MPC_F = w.$
- $-MPL_F/MPL_C$
 $= -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



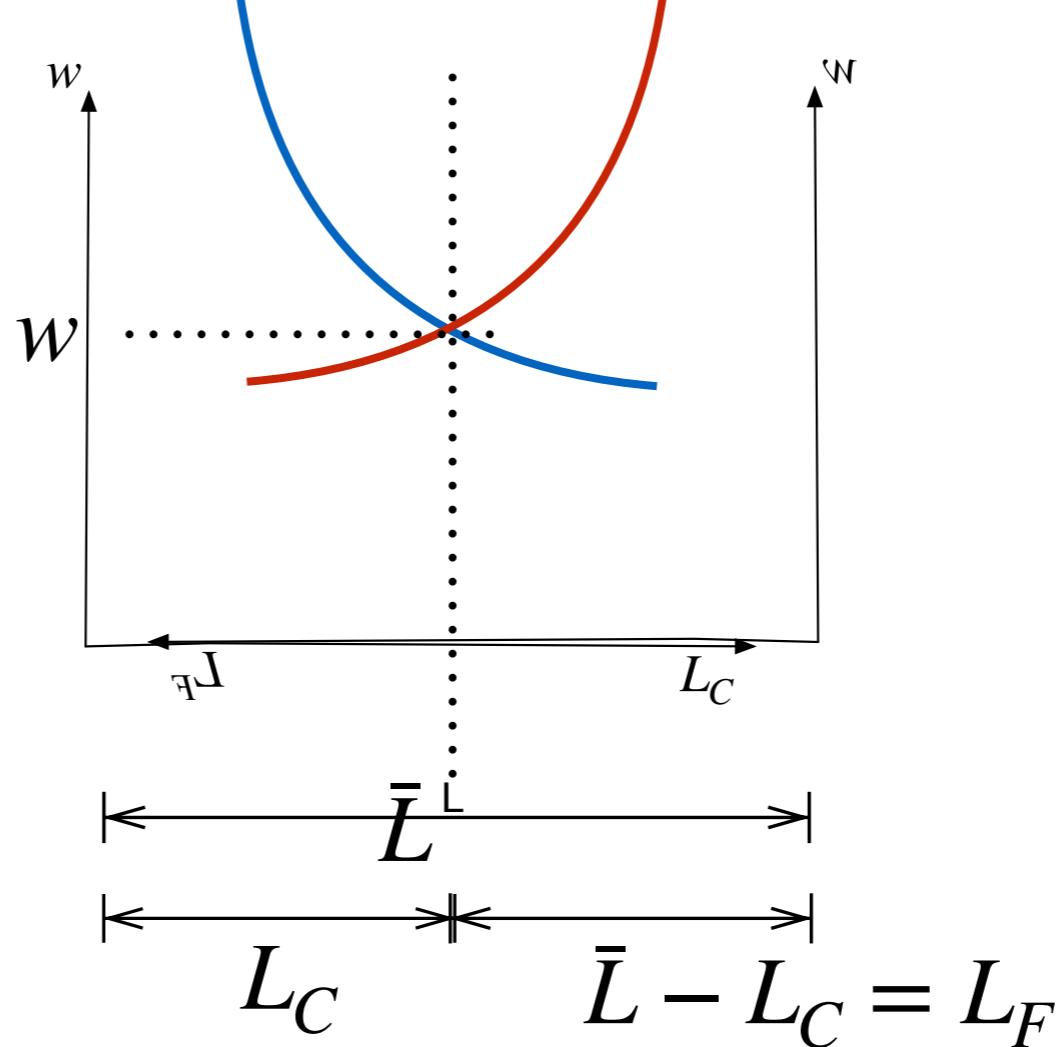
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



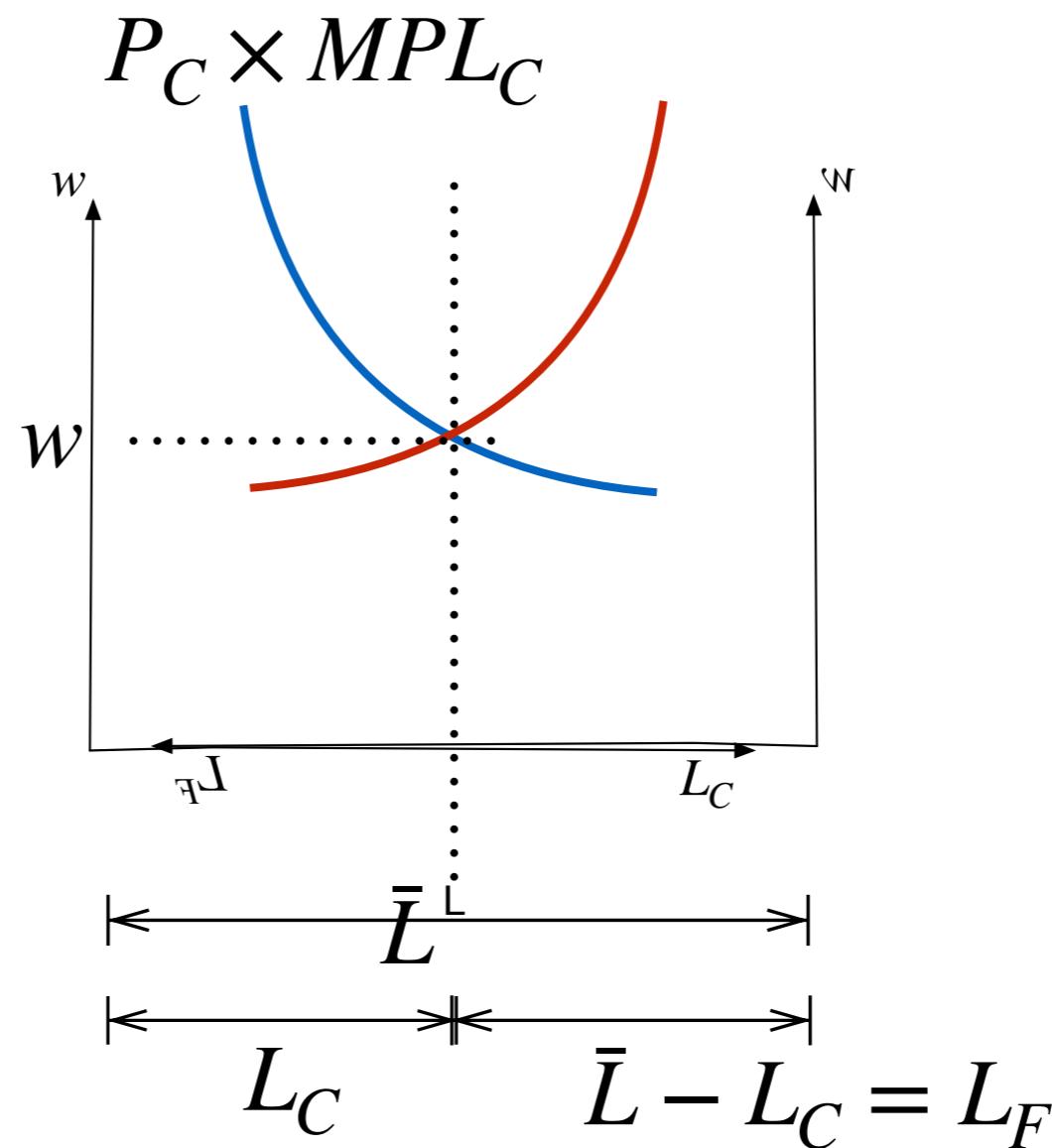
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



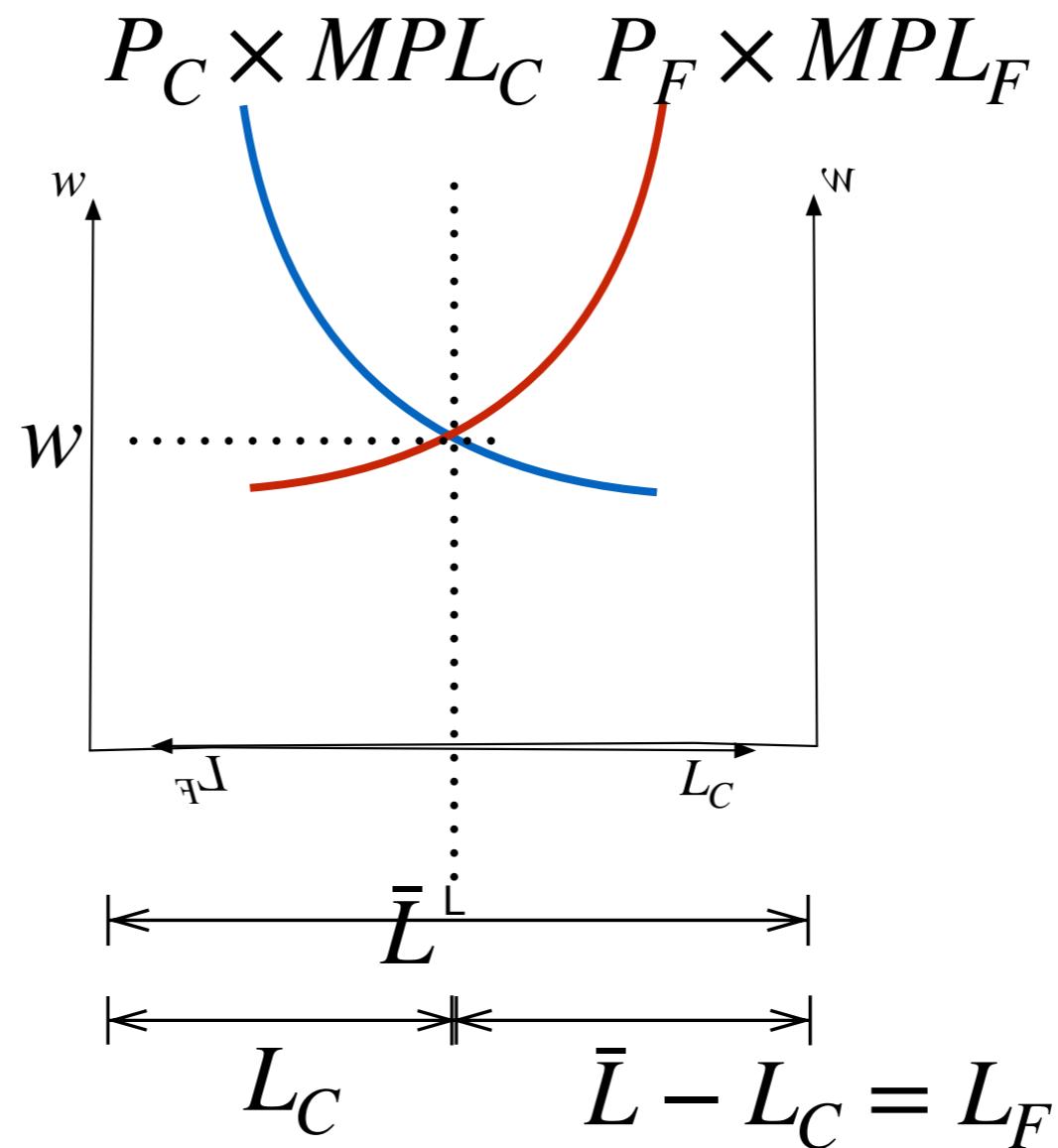
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



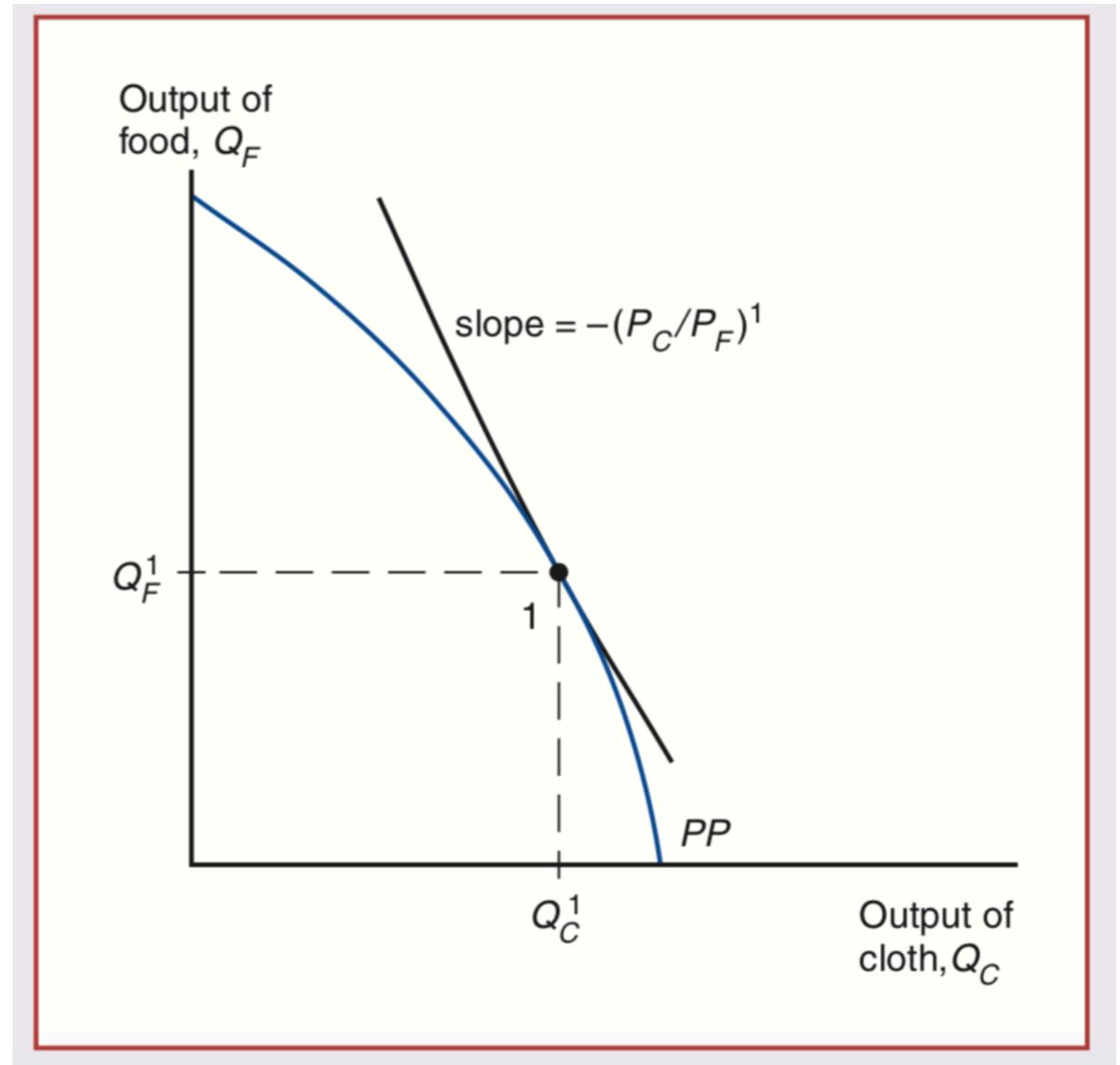
The Allocation of Labor

- Full allocation of Labor:
 - $L_C + L_F = \bar{L}$
- Full allocation implies:
$$P_C \times MPC_C = P_F \times MPC_F = w.$$
- $-MPL_F/MPL_C = -P_C/P_F.$ <eq4.6>
- LHS: slope of PPF
- RHS: relative price of Cloth i.t.o. Food



$$-MPL_F/MPL_C = -P_C/P_F.$$

- at the production point, the production possibility frontier must be tangent to a line whose slope is minus the price of cloth divided by that of food.

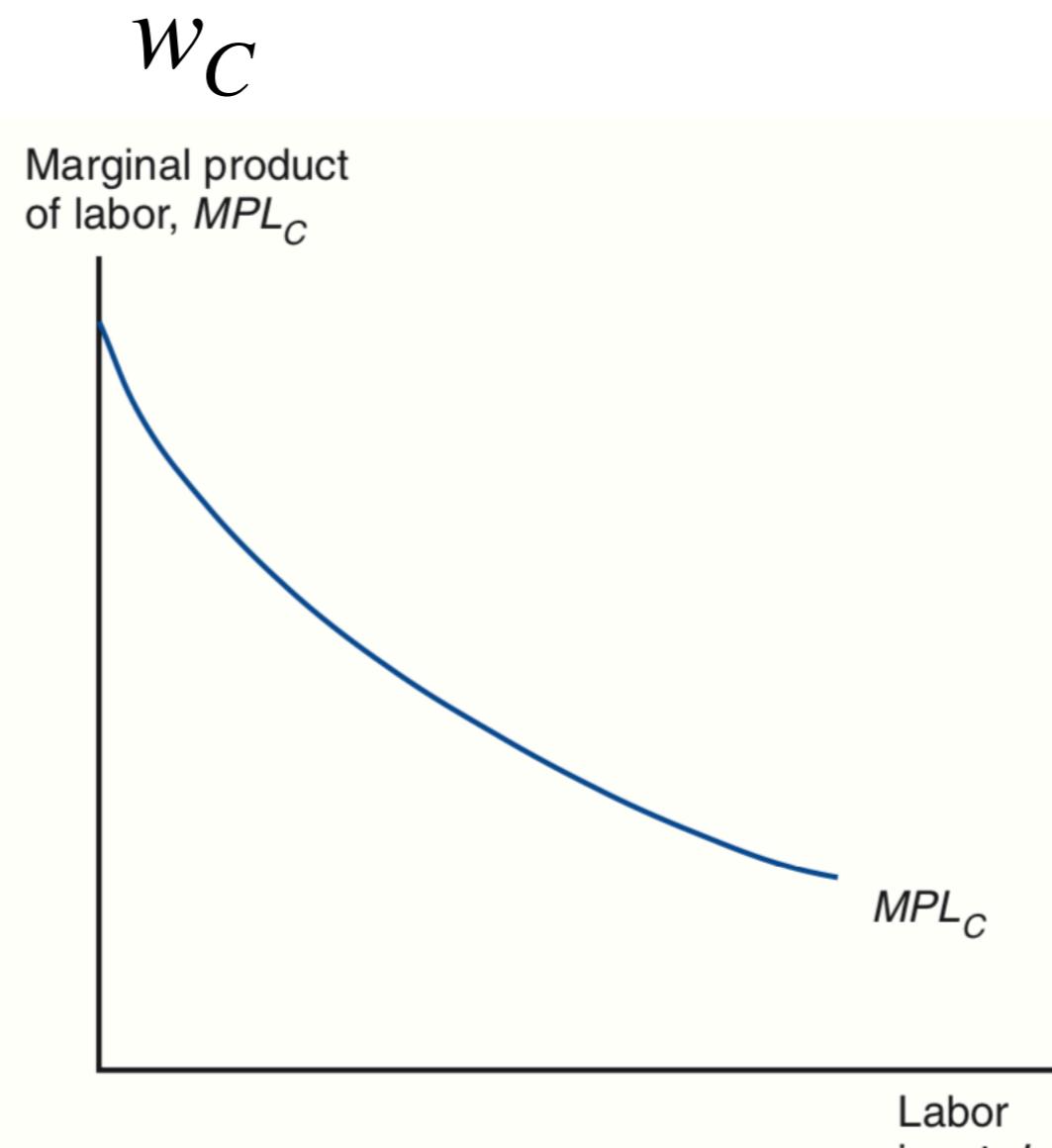


Effect of Price Change

- Two Cases:
 - An Equal-Proportional change in prices
 - In this case, Relative prices DO NOT CHANGE
 - A Change in Relative prices

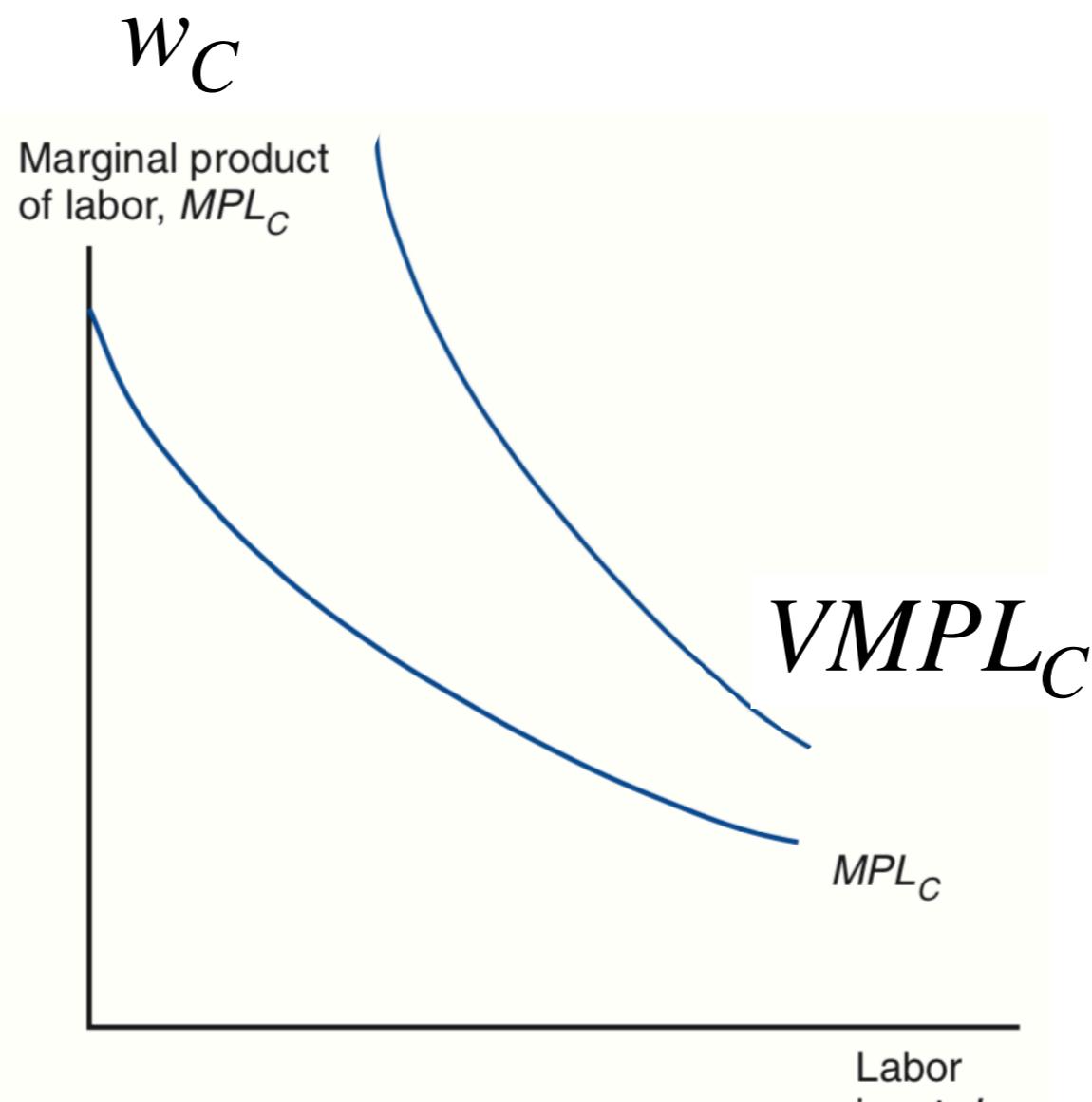
Price $\uparrow \Rightarrow$ VMPL \uparrow

if $P_C = 2 \Rightarrow$ VMPL: $MPL_C \times 2$
if $P_C = 3 \Rightarrow$ VMPL': $MPL_C \times 3$



Price $\uparrow \Rightarrow VMPL \uparrow$

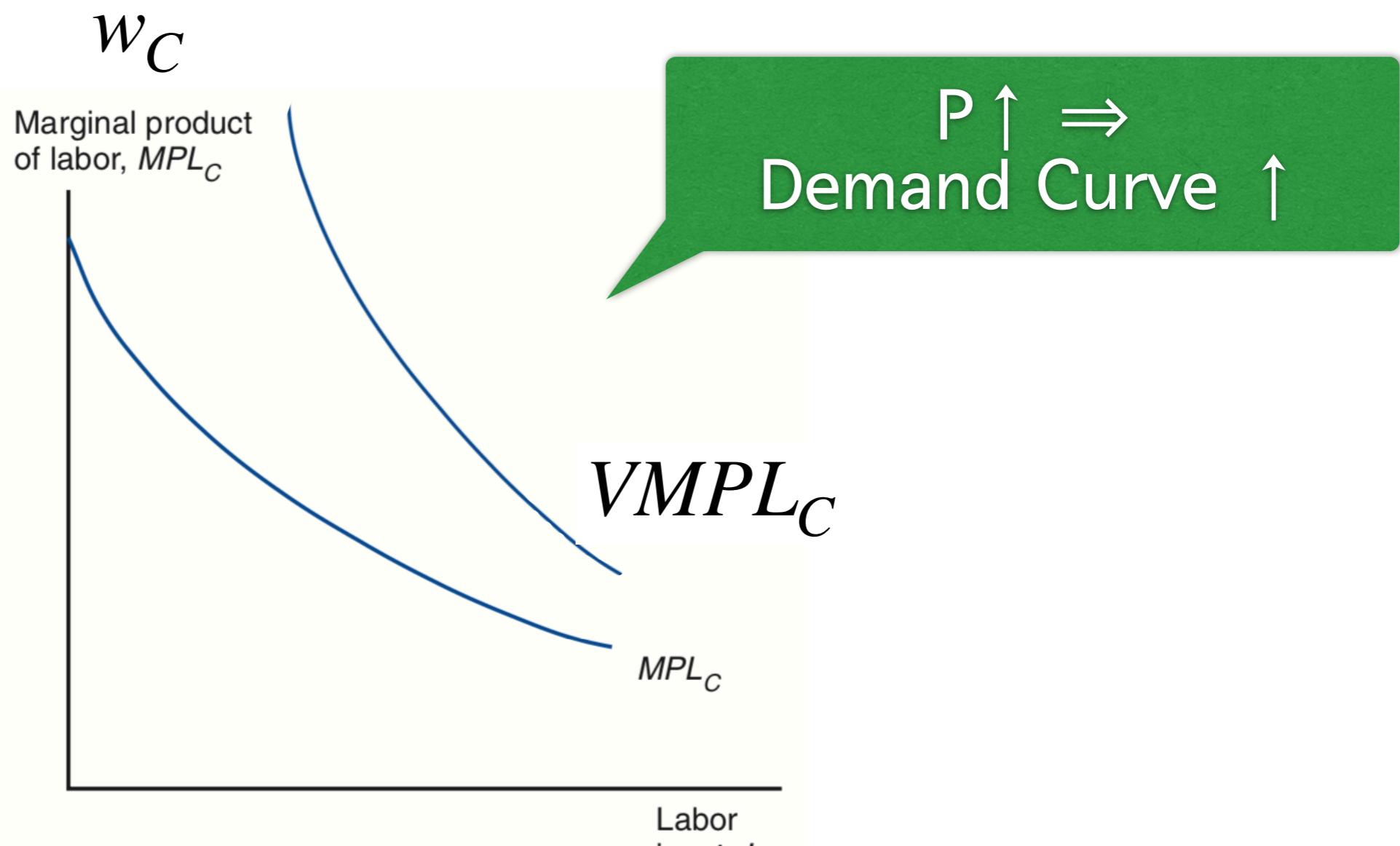
if $P_C = 2 \Rightarrow VMPL: MPL_C \times 2$
if $P_C = 3 \Rightarrow VMPL': MPL_C \times 3$



Price ↑ \Rightarrow VMPL ↑

if $P_C = 2 \Rightarrow$ VMPL: $MPL_C \times 2$

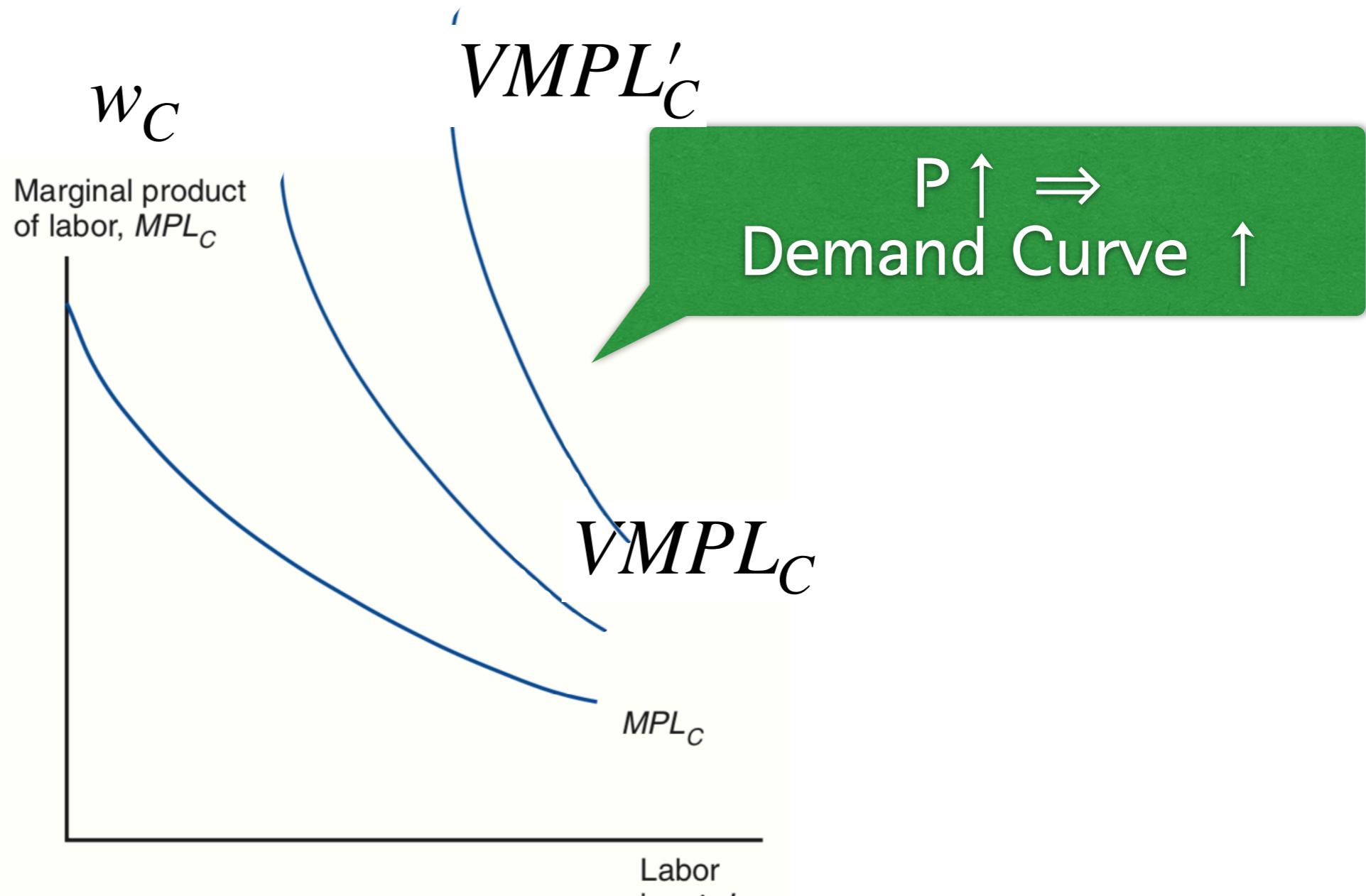
if $P_C = 3 \Rightarrow$ VMPL': $MPL_C \times 3$



Price ↑ \Rightarrow VMPL ↑

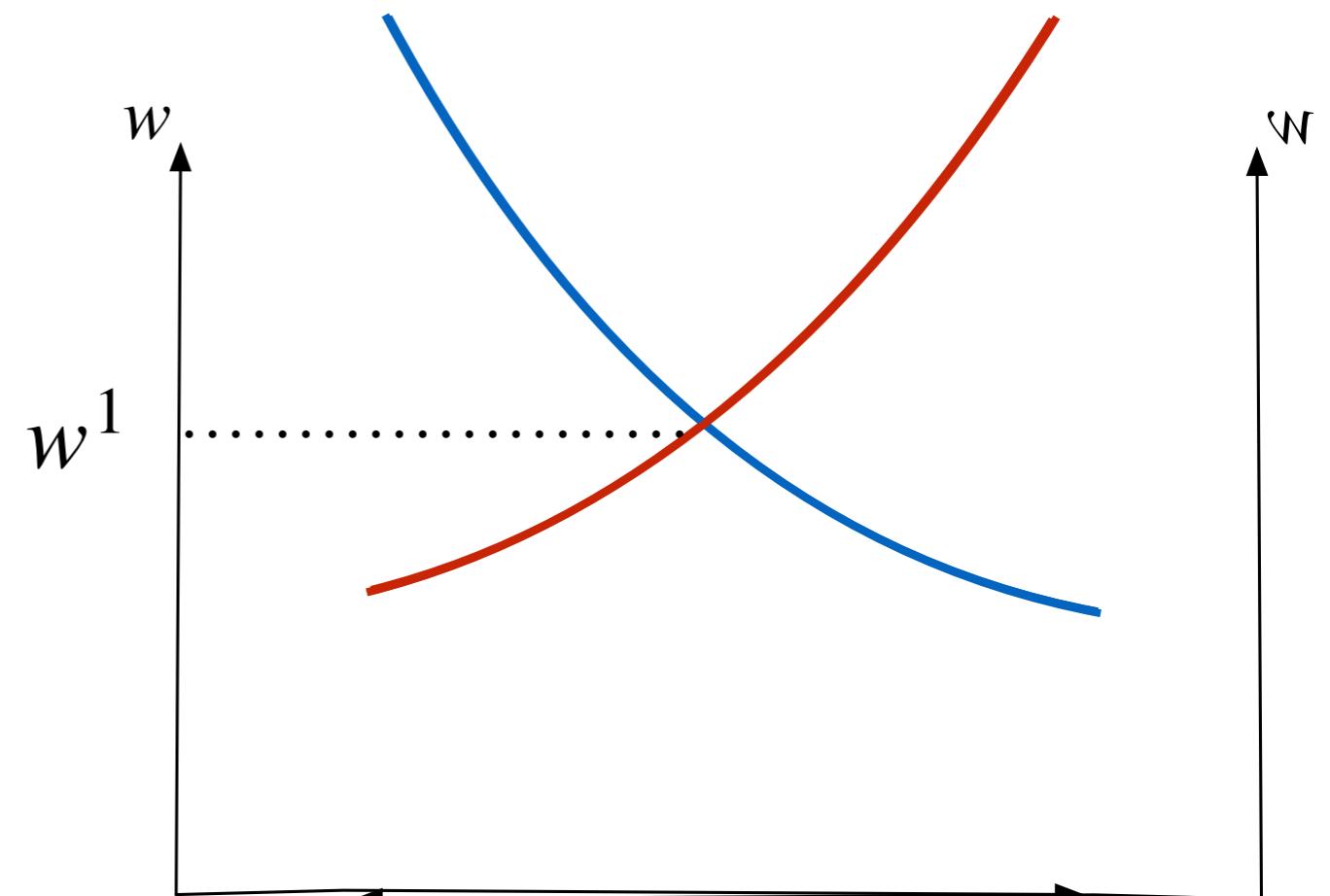
if $P_C = 2 \Rightarrow$ VMPL: $MPL_C \times 2$

if $P_C = 3 \Rightarrow$ VMPL': $MPL_C \times 3$



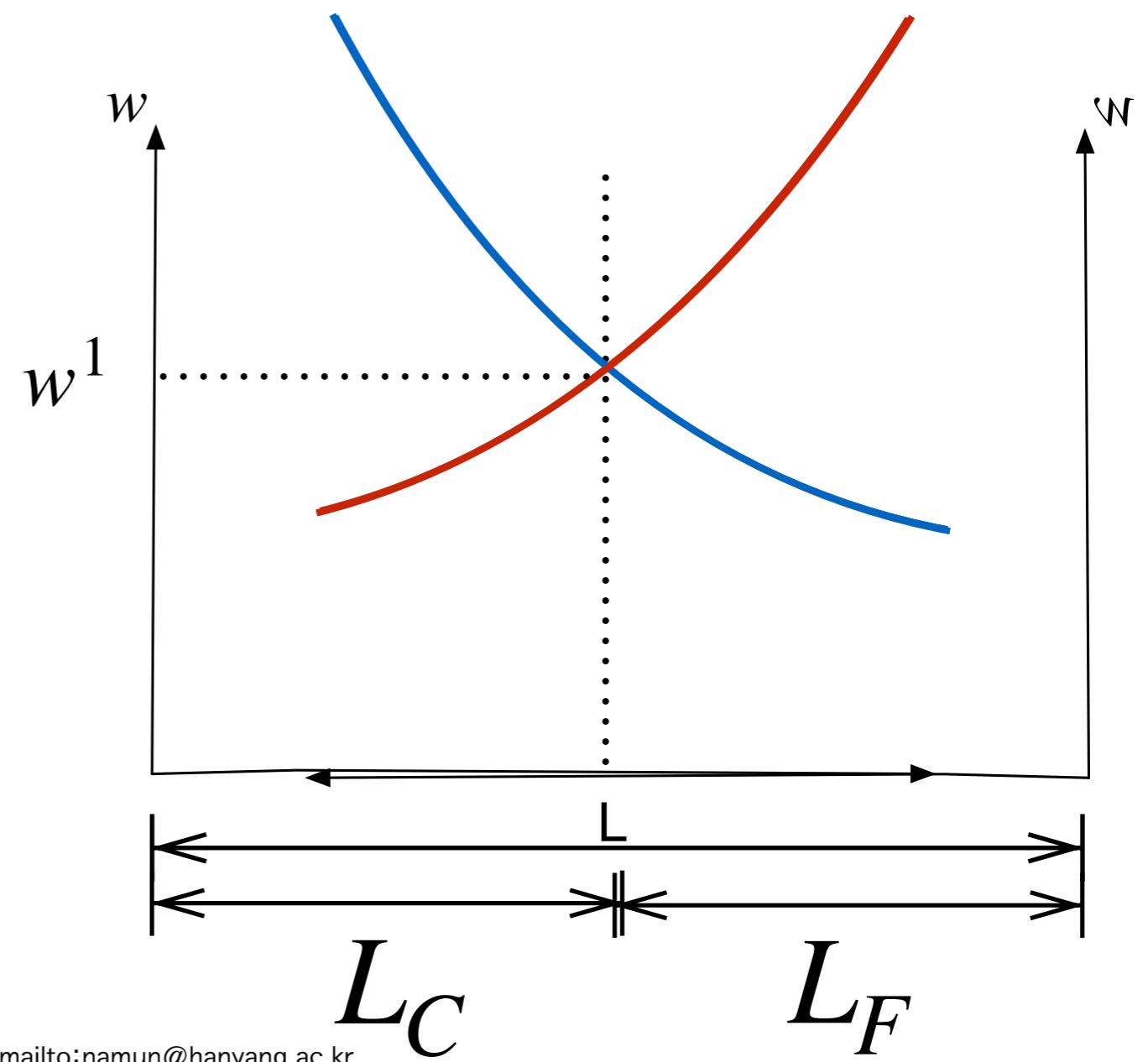
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



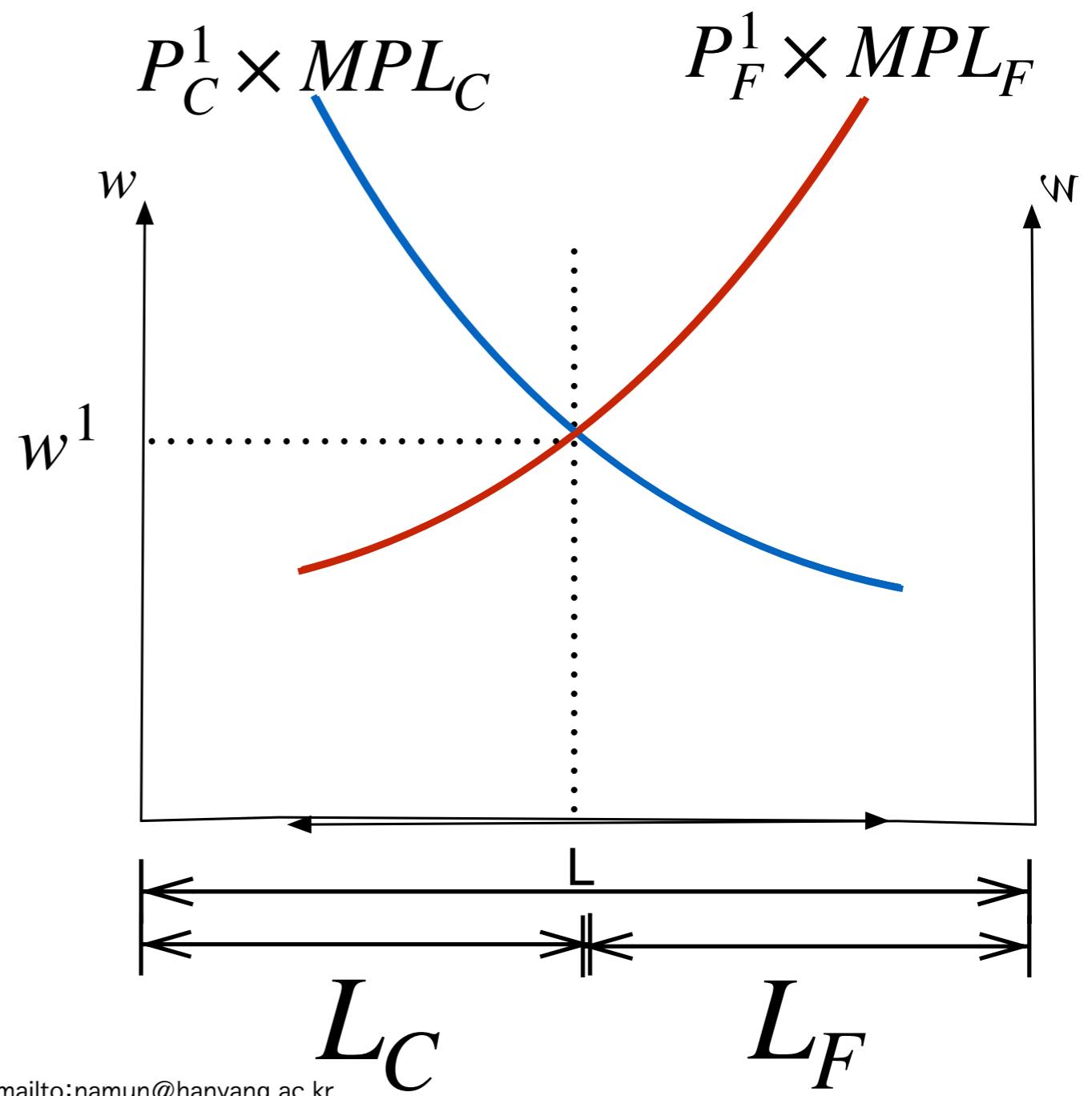
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



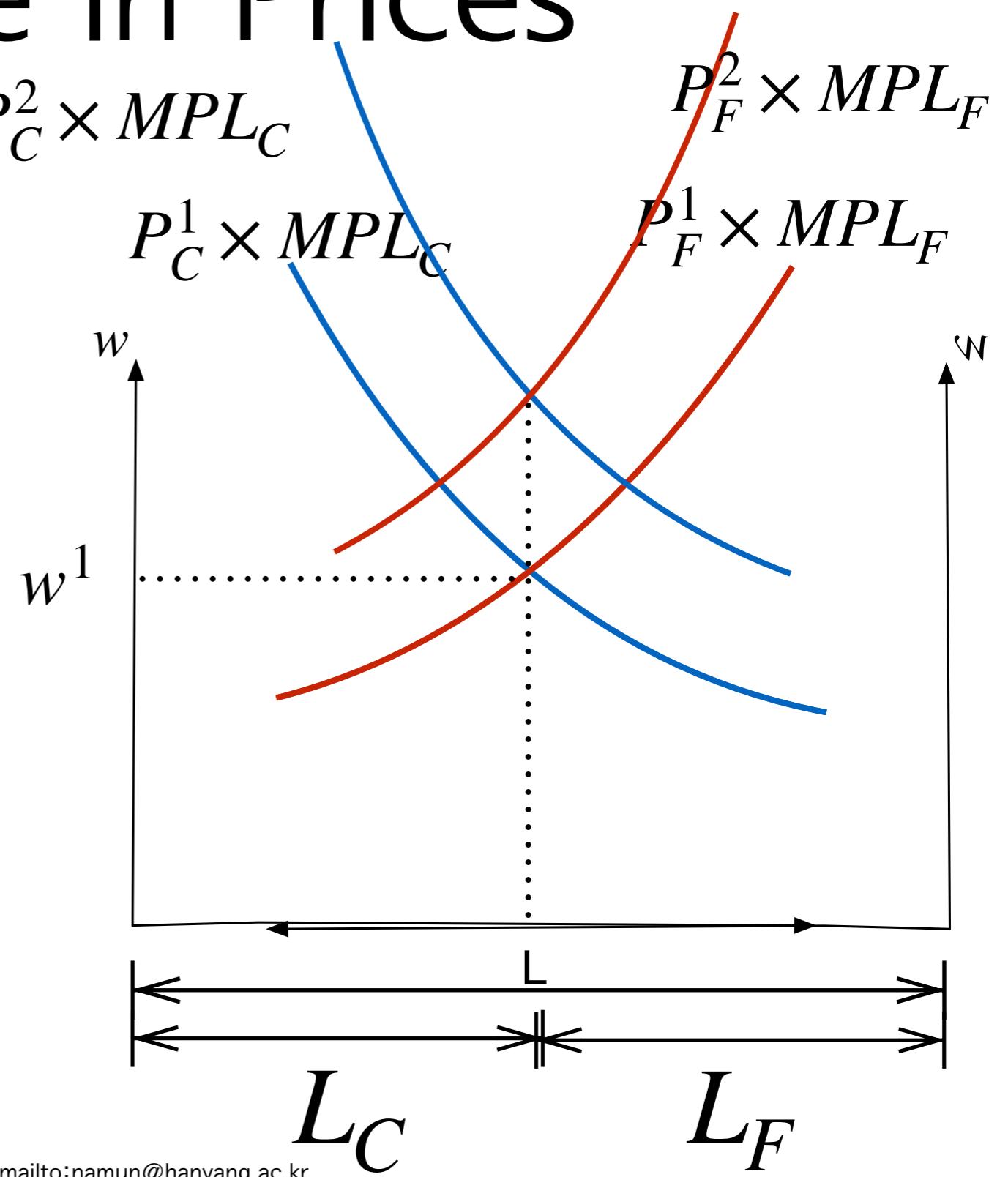
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



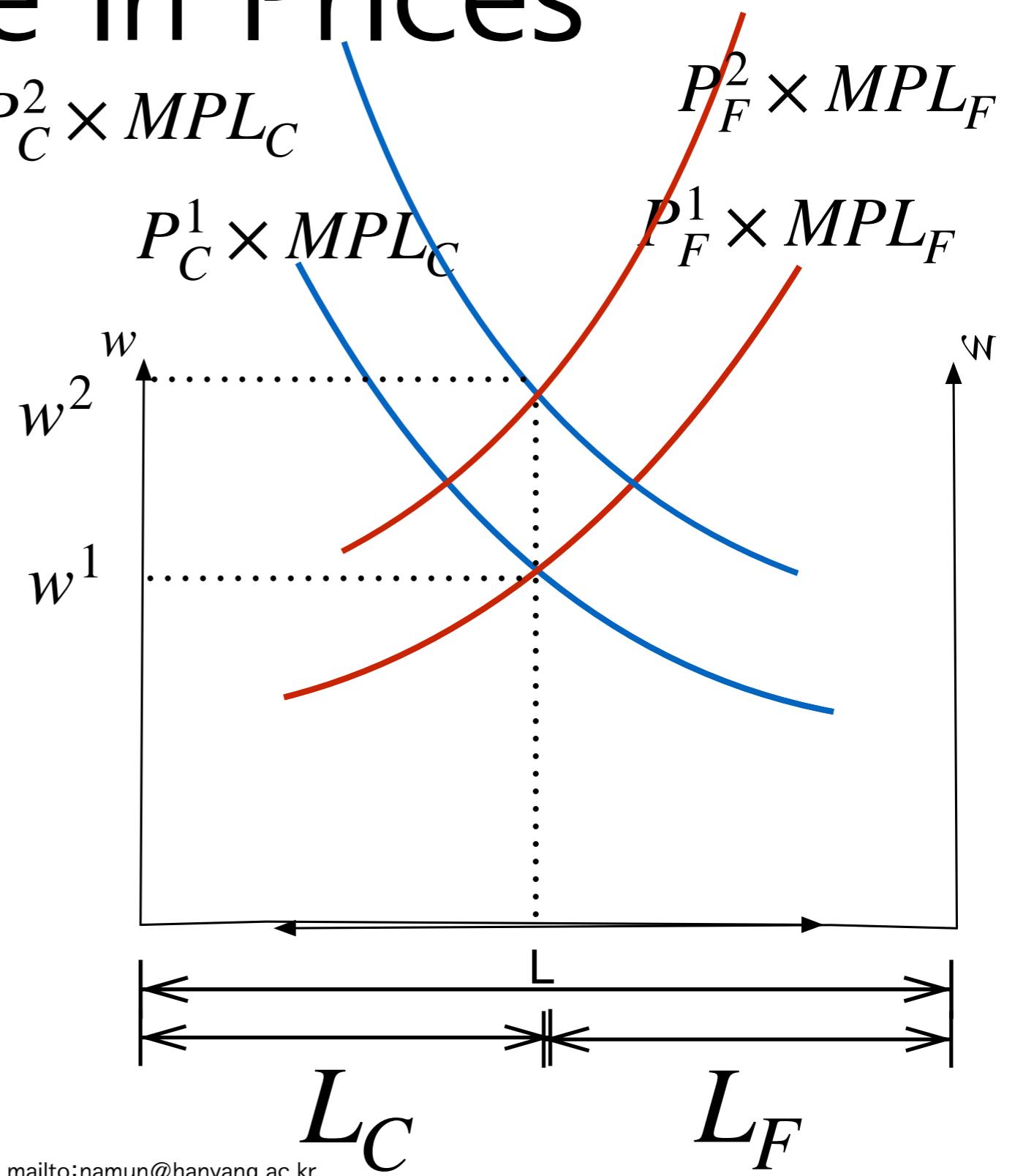
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



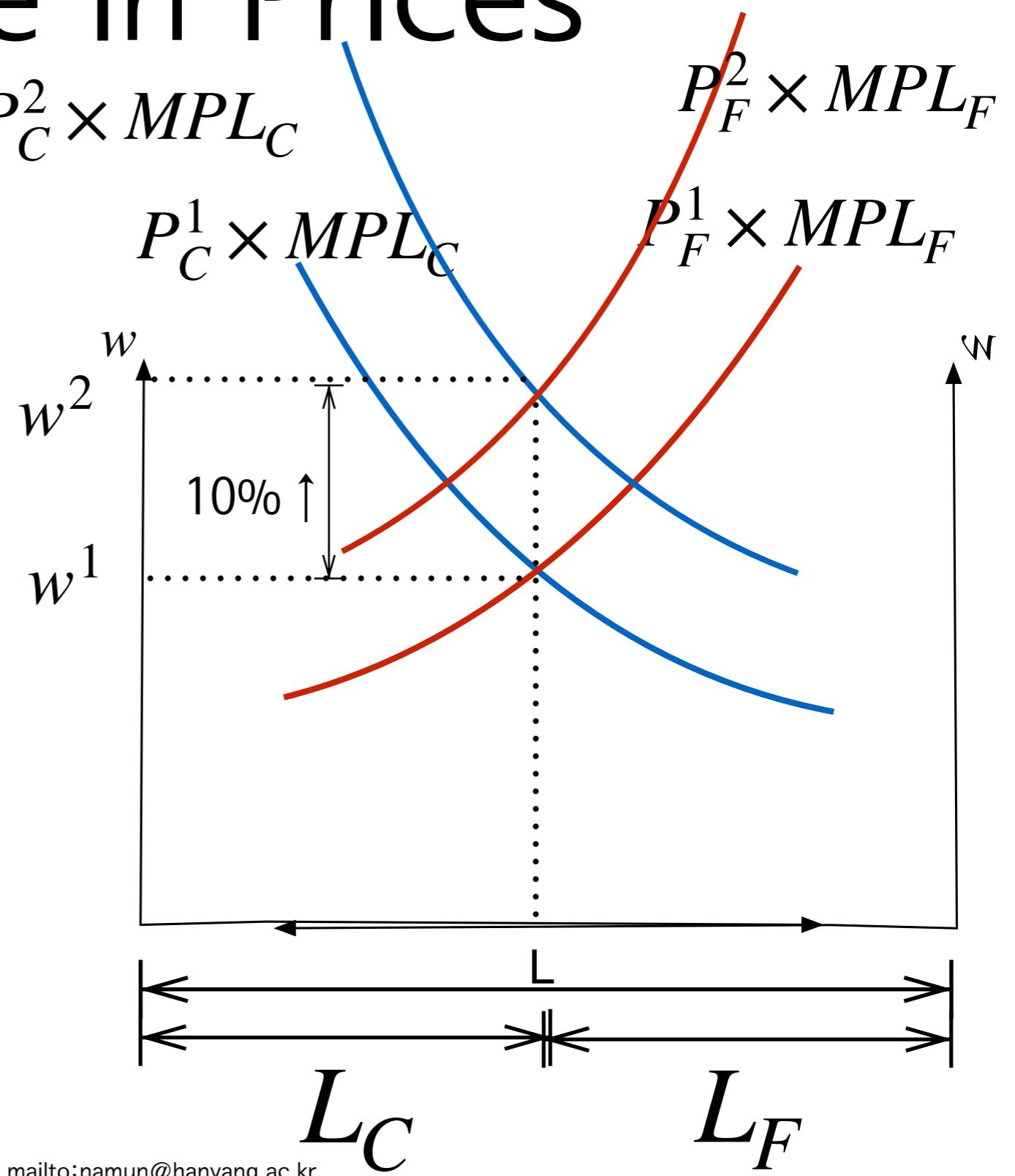
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



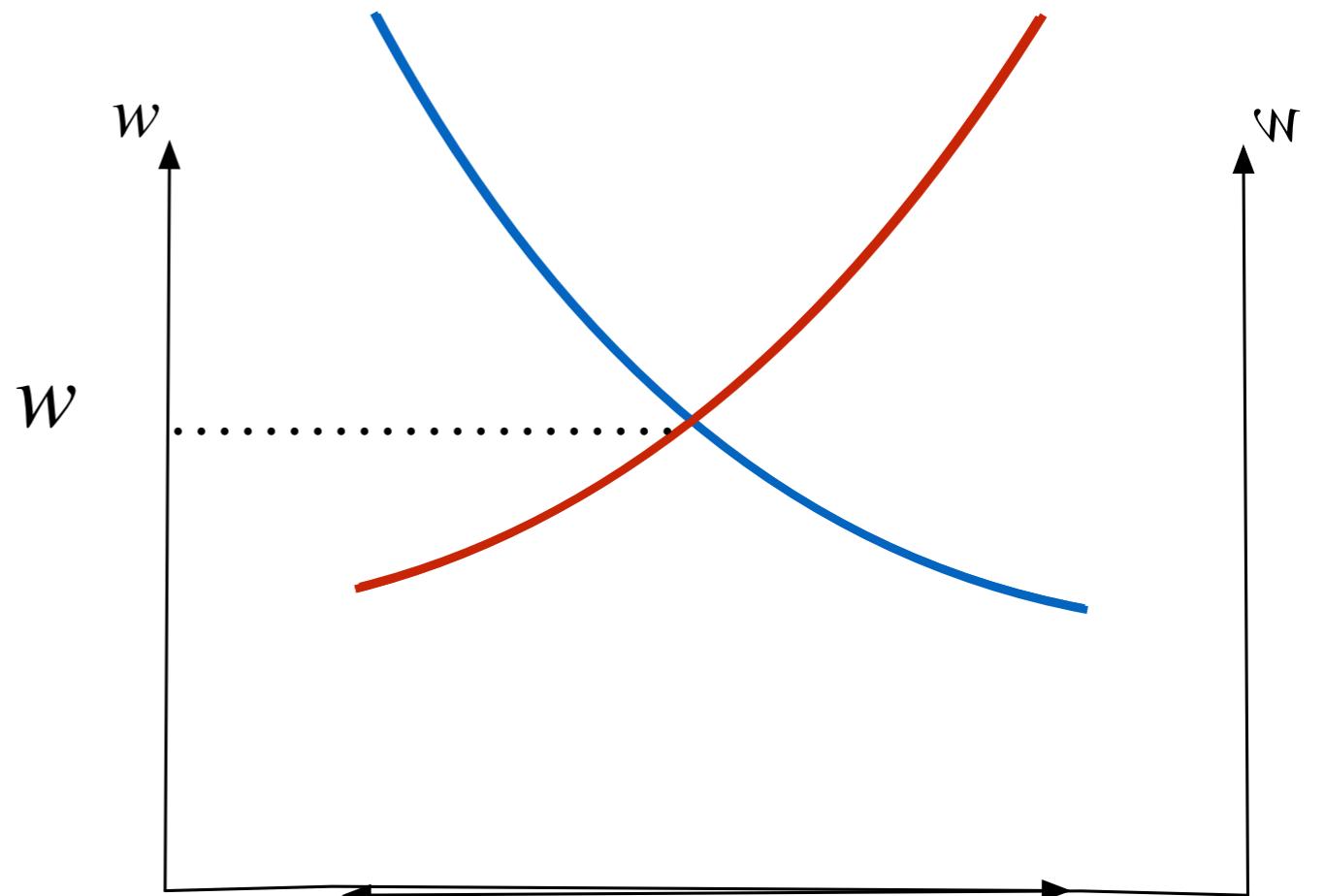
Case 1: Equal-Proportional Change in Prices

- $P_C : P_C^1 \xrightarrow{10\% \uparrow} P_C^2$
- $P_F : P_F^1 \xrightarrow{10\% \uparrow} P_F^2$
- $P_C^1/P_C^2 = P_F^1/P_F^2$
- No REAL change
- There is only nominal change



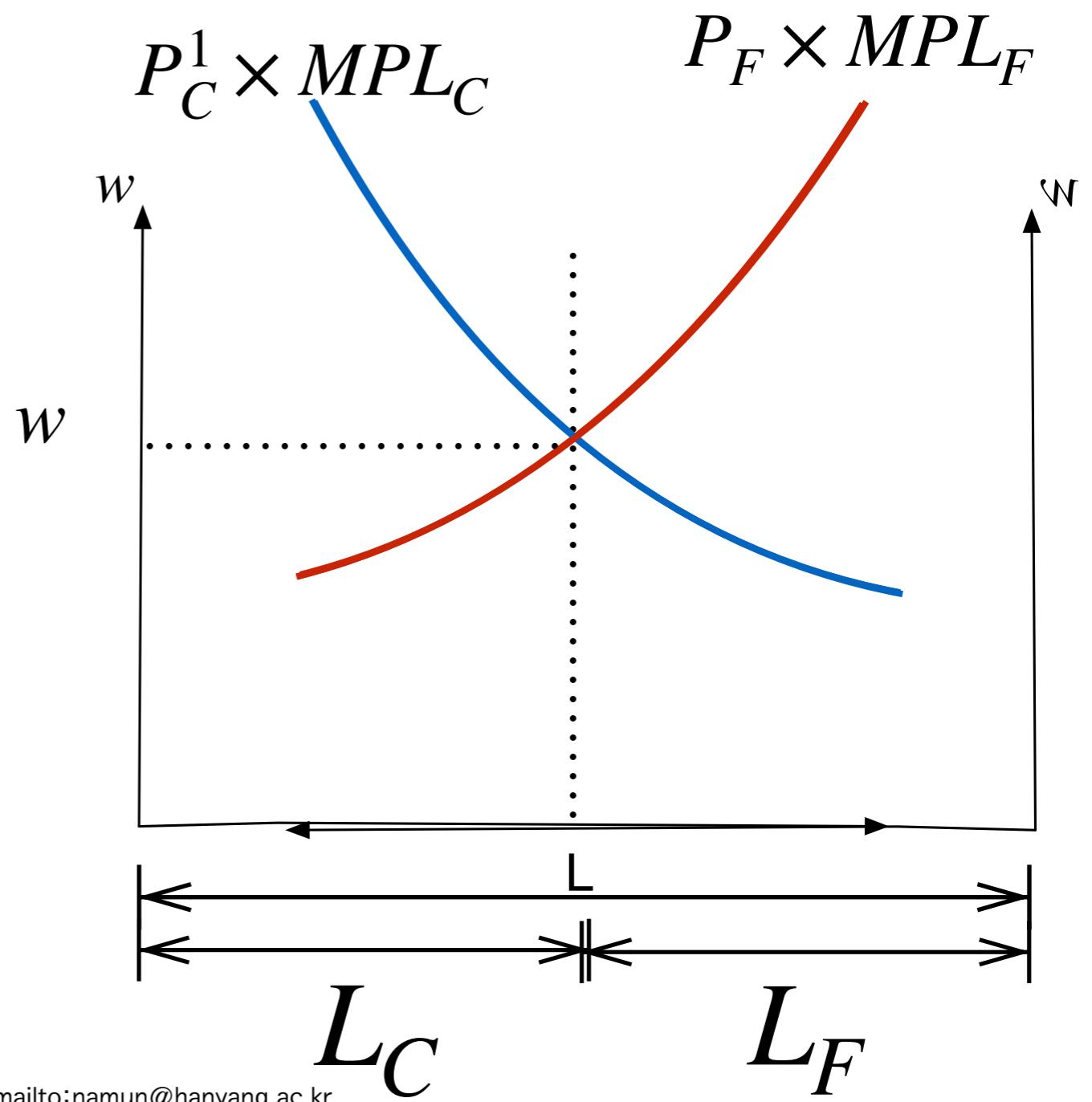
Case 2: Change in Relative Prices

- $P_C : P_C^1 \xrightarrow{7\% \uparrow} P_C^2$
- P_F : fixed (0% change)
- Change in Labor Allocation:
 - $w \uparrow (< 7\%)$
 - $L_C \uparrow$
 - $L_F \downarrow$



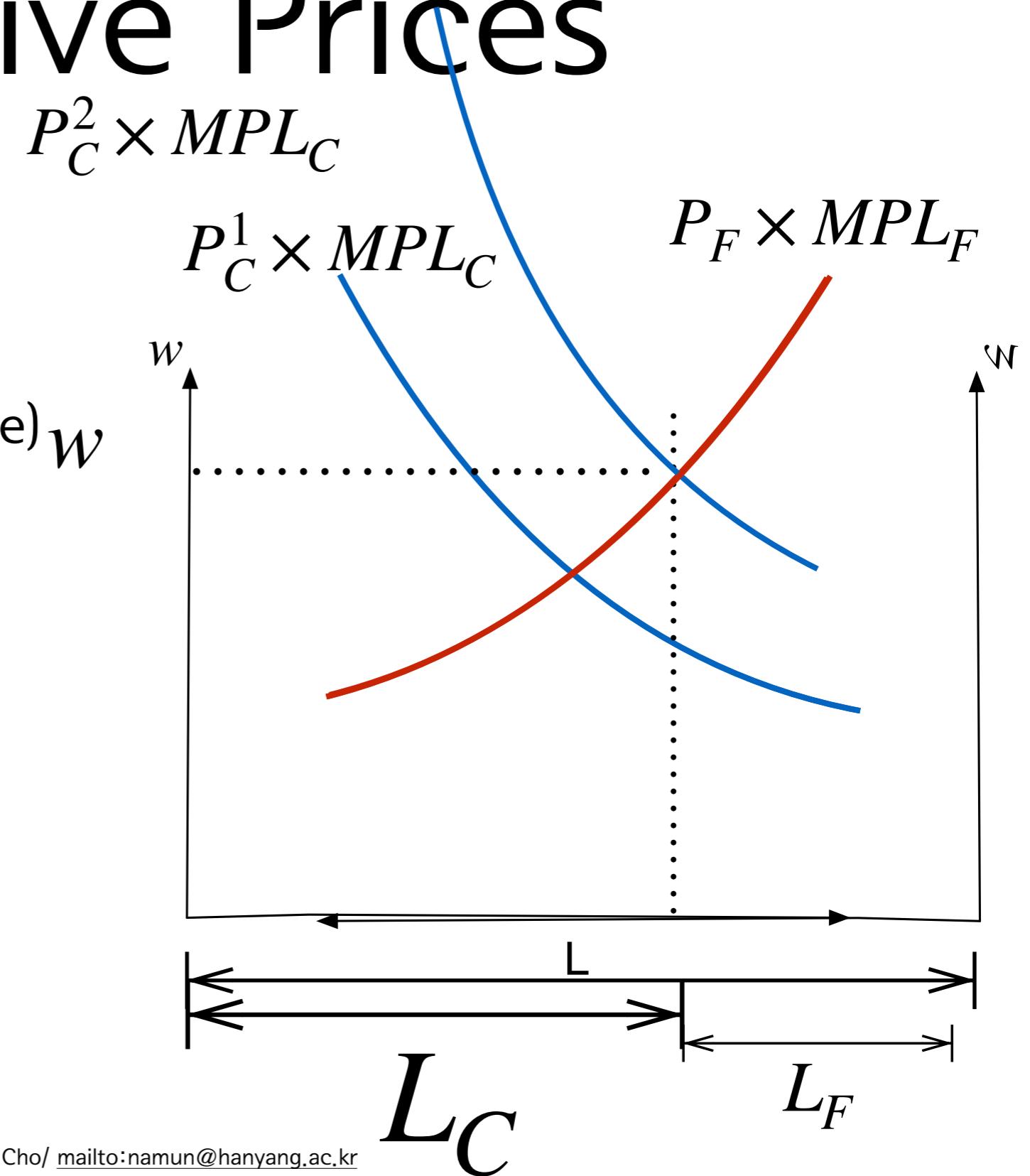
Case 2: Change in Relative Prices

- $P_C : P_C^1 \xrightarrow{7\% \uparrow} P_C^2$
- P_F : fixed (0% change)
- Change in Labor Allocation:
 - $w \uparrow (< 7\%)$
 - $L_C \uparrow$
 - $L_F \downarrow$



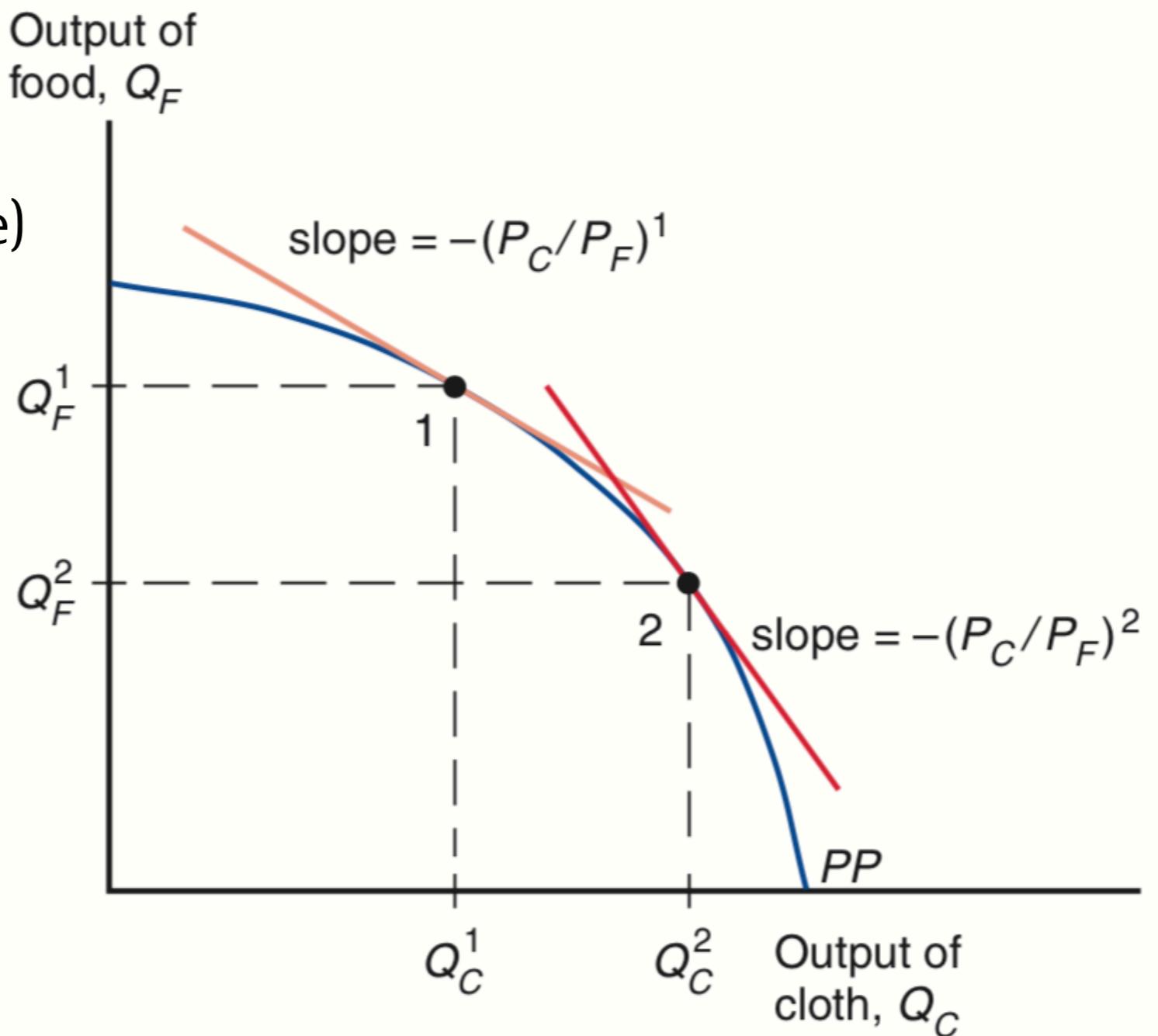
Case 2: Change in Relative Prices

- $P_C : P_C^1 \xrightarrow{7\% \uparrow} P_C^2$
- P_F : fixed (0% change)
- Change in Labor Allocation:
 - $w \uparrow (< 7\%)$
 - $L_C \uparrow$
 - $L_F \downarrow$



Case 2: Change in Relative Prices (PPF)

- $P_C : P_C^1 \xrightarrow{7\% \uparrow} P_C^2$
- P_F : fixed (0% change)
- $-P_C \uparrow / P_F$
 \Rightarrow stiffer tangent line
- State: 1 → 2
- Produce more Cloth
 - $Q_C \uparrow \Rightarrow L_C \uparrow$
- Produce less Food
 - $Q_F \downarrow \Rightarrow L_F \downarrow$



Relative Prices and the Distribution of Income

- Case 2: $P_C/P_F \uparrow$ ($P_C : P_C^1 \xrightarrow{x\% \uparrow} P_C^2$, P_F fixed)
- Worker (L)'s income change: uncertain
 - $\Rightarrow w \uparrow$, but less than $x\%$
 - $\Rightarrow w/P_C \downarrow$ (BAD), and $w/P_F \uparrow$. (GOOD)
- Capital (K) owner: income \uparrow
 - relative wage ($w/P_C \downarrow$), revenue \uparrow
- Land (T) owner: income \downarrow
 - relative wage ($w/P_F \uparrow$), revenue \downarrow

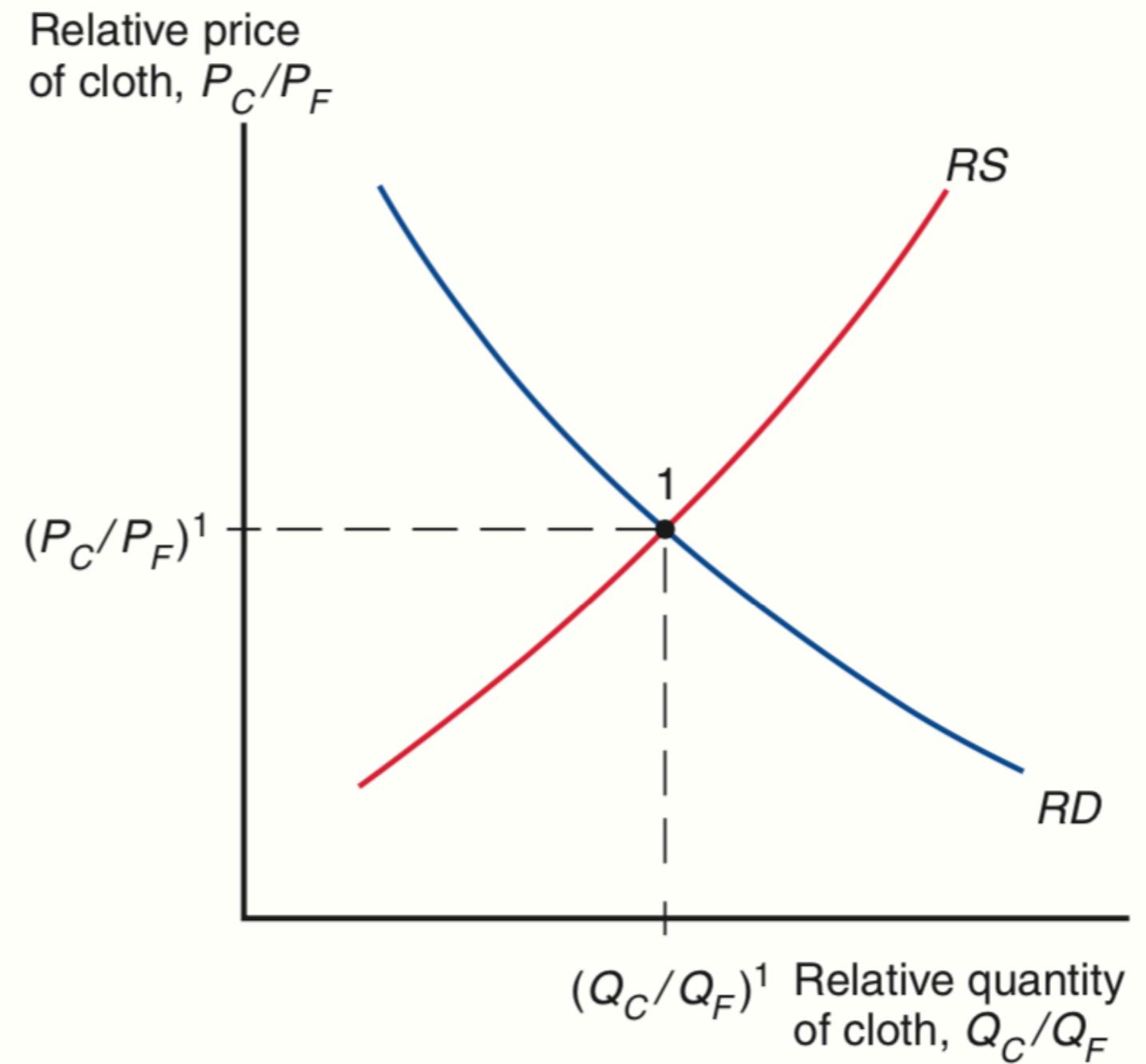
Effect of a Relative Price Change: Summary

- Winners: The factor specific to the sector whose relative price increases is definitely better off.
- Losers: The factor specific to the sector whose relative price decreases is definitely worse off.
- The change in welfare for the mobile factor is ambiguous.
- Law of supply: $P_C/P_F \uparrow \Rightarrow Q_C/Q_F \uparrow$

International Trade in the Specific Factors Model

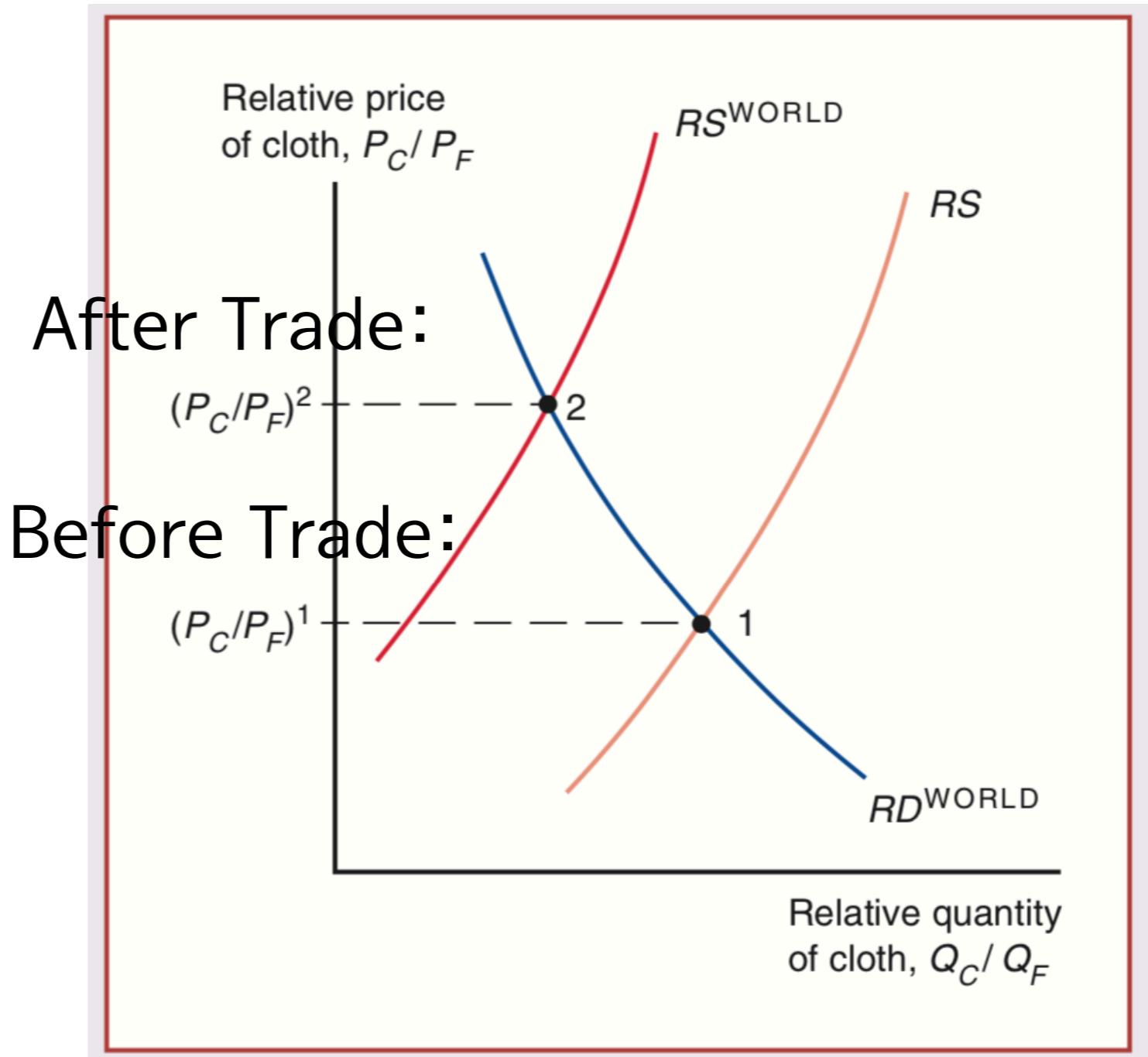
Relative Supply and Demand Curve

- Law of supply:
 $P_C/P_F \uparrow \Rightarrow Q_C/Q_F \uparrow$
 - RS curve
- Law of demand:
 $P_C/P_F \uparrow \Rightarrow D_C/D_F \downarrow$
 - RD curve



Trade and Relative Prices

- $P_C/P_F \uparrow$
 - \Rightarrow Make more Cloths
- Law of demand
 - $Q_C/Q_F \downarrow$
- Export Cloth
- Import Food
- An economy exports the good whose relative price has increased and imports the good whose relative price has decreased



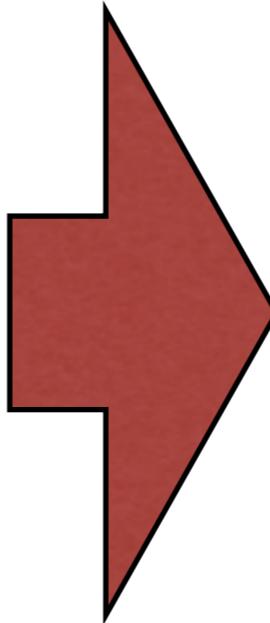
Income Distribution and the Gain from Trade

Main Question

- Who gains and who loses from international trade?

Redistribution from the Change in Relative Price

- **Winners:** The factor specific to the sector whose relative price increases is definitely better off.
- **Losers:** The factor specific to the sector whose relative price decreases is definitely worse off.
- The change in welfare for the mobile factor is ambiguous.



International trade benefits the factor specific to the export sector of each country but hurts the factor specific to the import-competing sectors, with ambiguous effects on mobile factors.

Next Question

- From international trade,
 - Gains > Losses ?
- Or,
 - Could those who gain from trade compensate those who lose and still be better off themselves?
- This question asks the existence of AGGREGATE GAINS from international trade

Supply and Demand in the Closed Economy

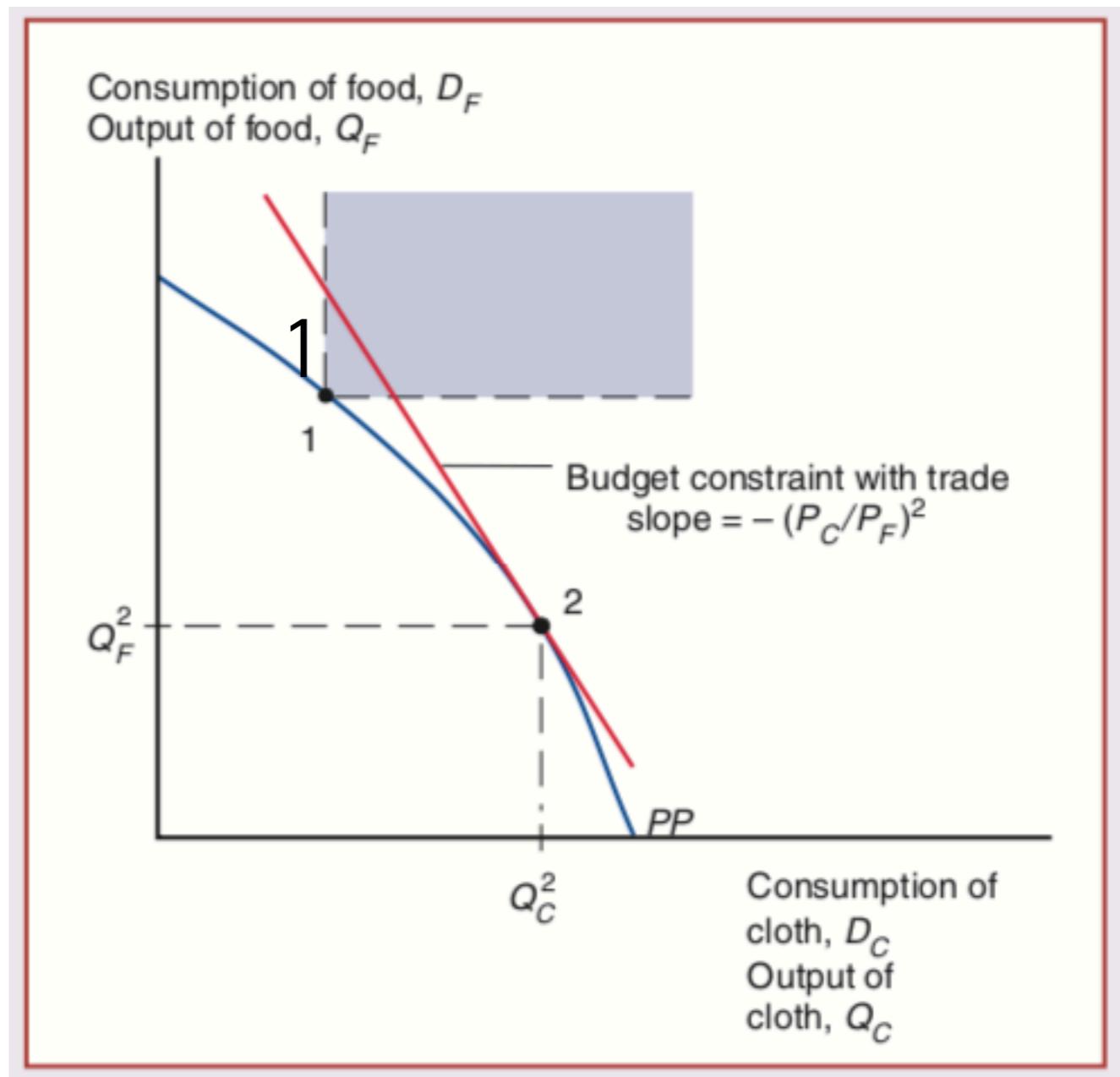
- D_C, D_F : consumption of cloth, food
 - Notation D is from 'Demand'
 - Then, Q_C, Q_F means the 'Supply' of cloth and food
- In the closed economy,
 - $D_C = Q_C, D_F = Q_F$
 - But in the open economy..

Budget Constraint in the International Trade

- The aggregated value of consumption must be equal to the aggregated value of production:
 - $P_C D_C + P_F D_F = P_C Q_C + P_F Q_F$. <eq4.7>
 - $\Rightarrow P_F(D_F - Q_F) = P_C(Q_C - D_C)$,
 - $\Rightarrow D_F - Q_F = (P_C/P_F)(Q_C - D_C)$. <eq4.8>
 - $D_F - Q_F$: Food imports,
 - $Q_C - D_C$: Cloth exports.
- <eq4.8> is a budget constraint with no international borrowing (cf. Ch.6)

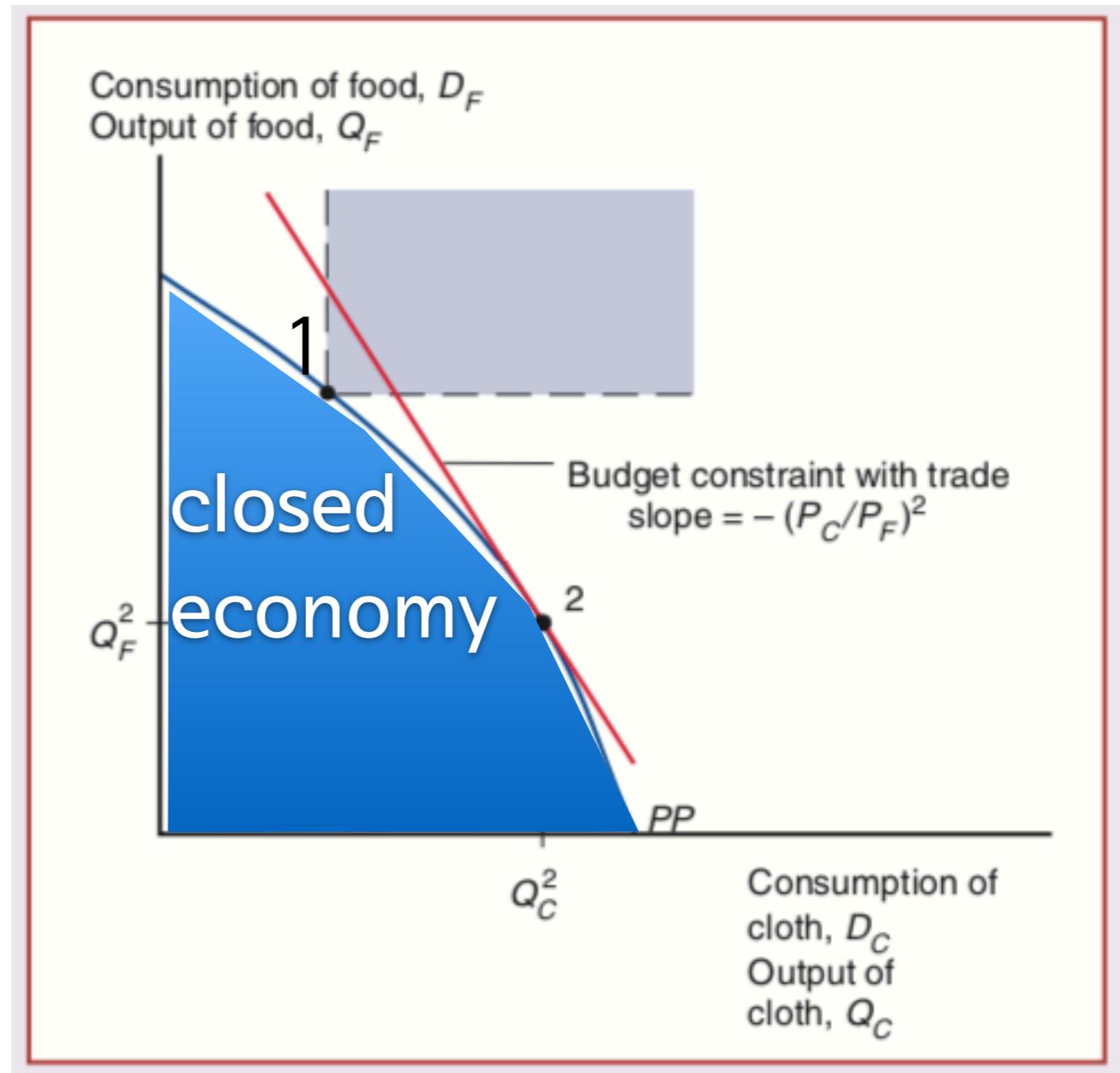
Gains from Trade

- If an economy is at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



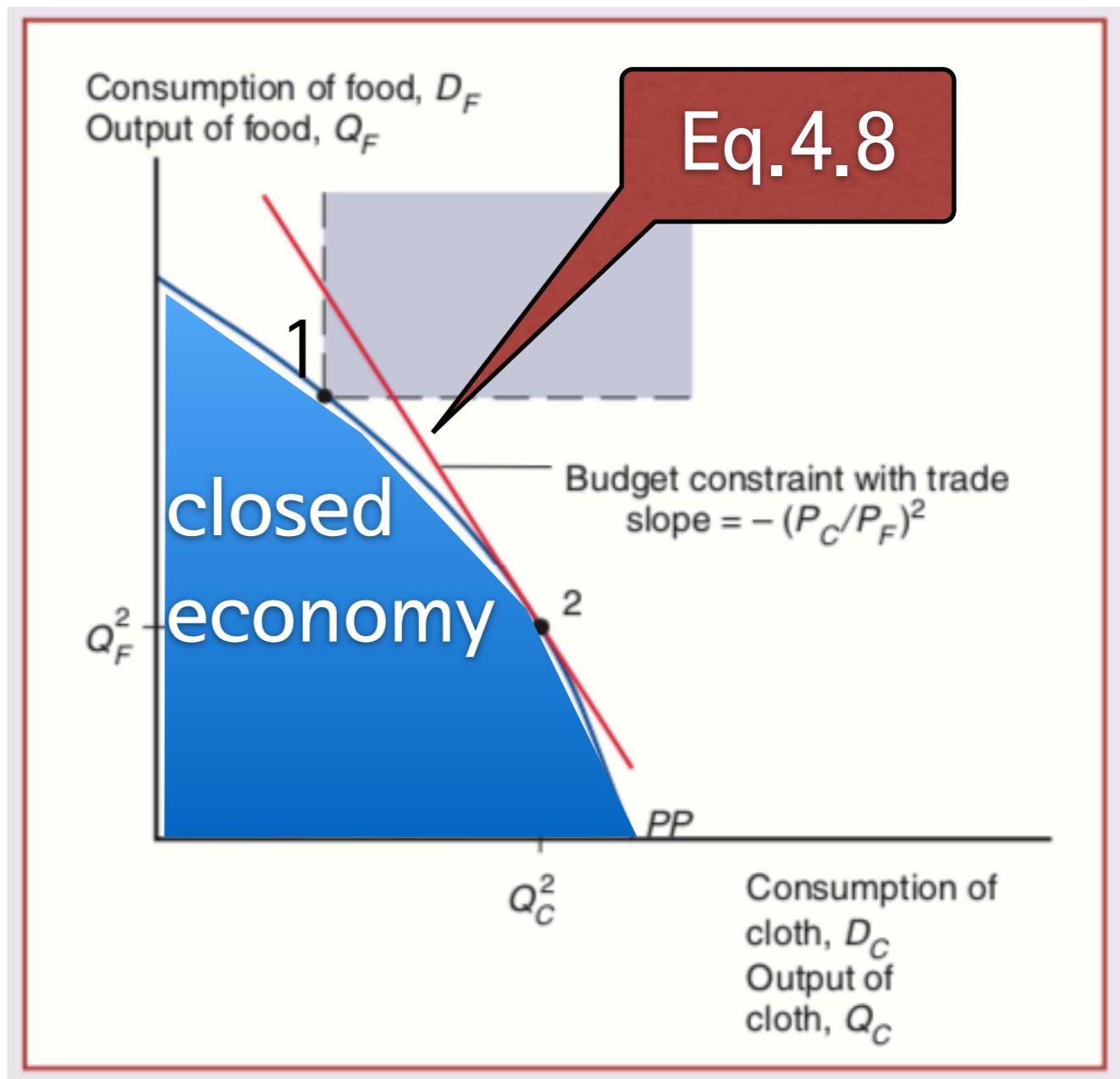
Gains from Trade

- If an economy is at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



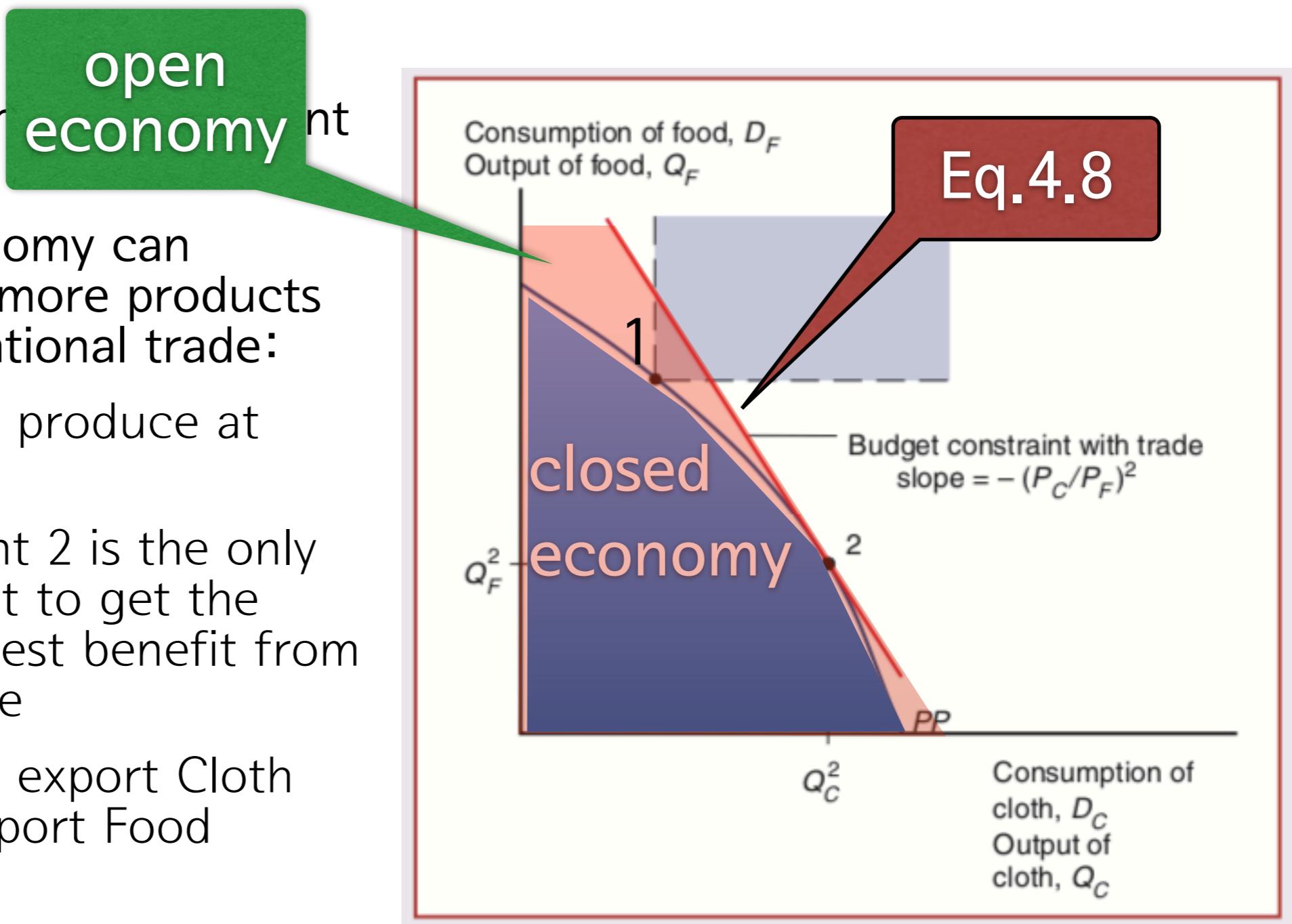
Gains from Trade

- If an economy is at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



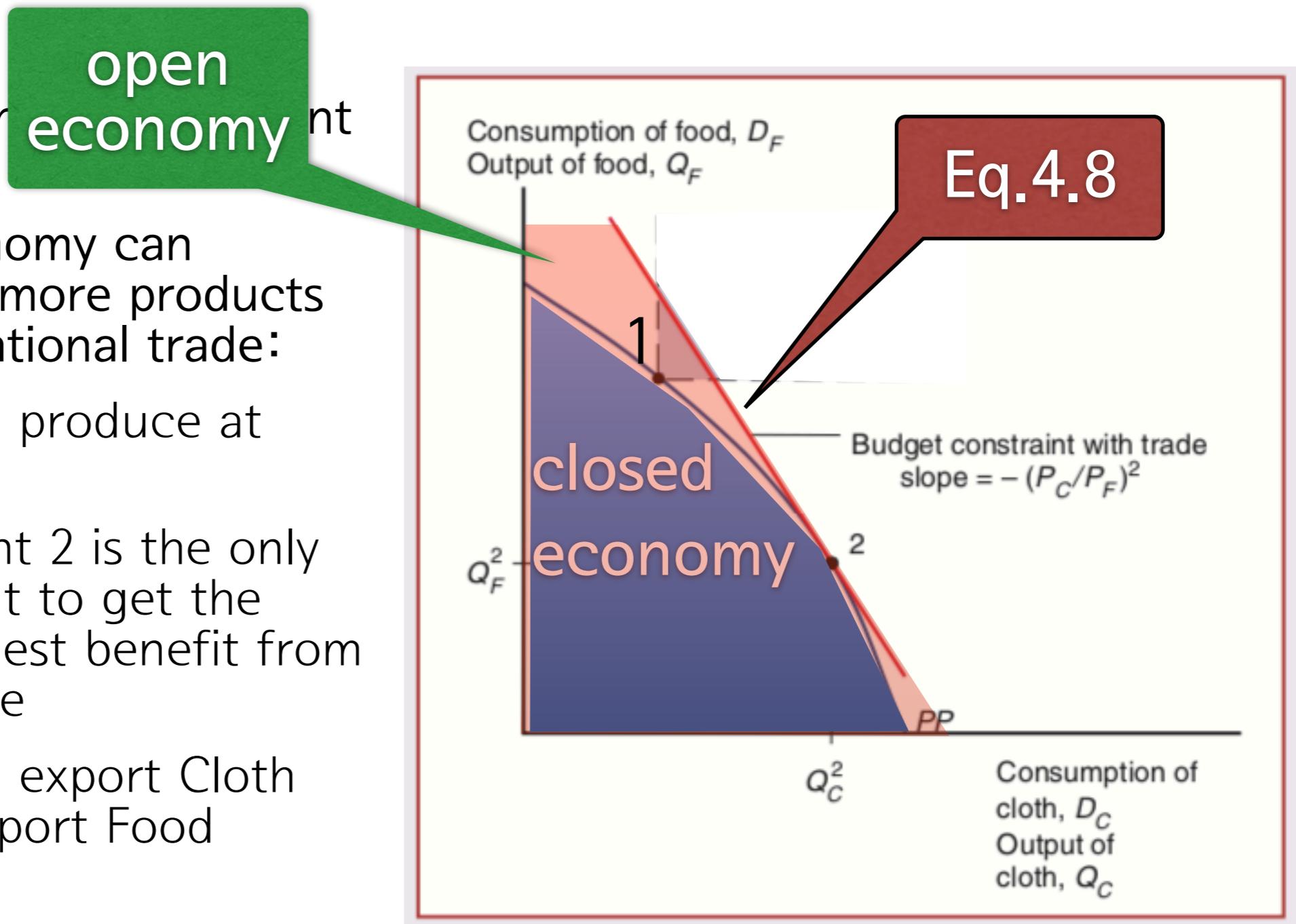
Gains from Trade

- If an economy is closed, it can produce at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



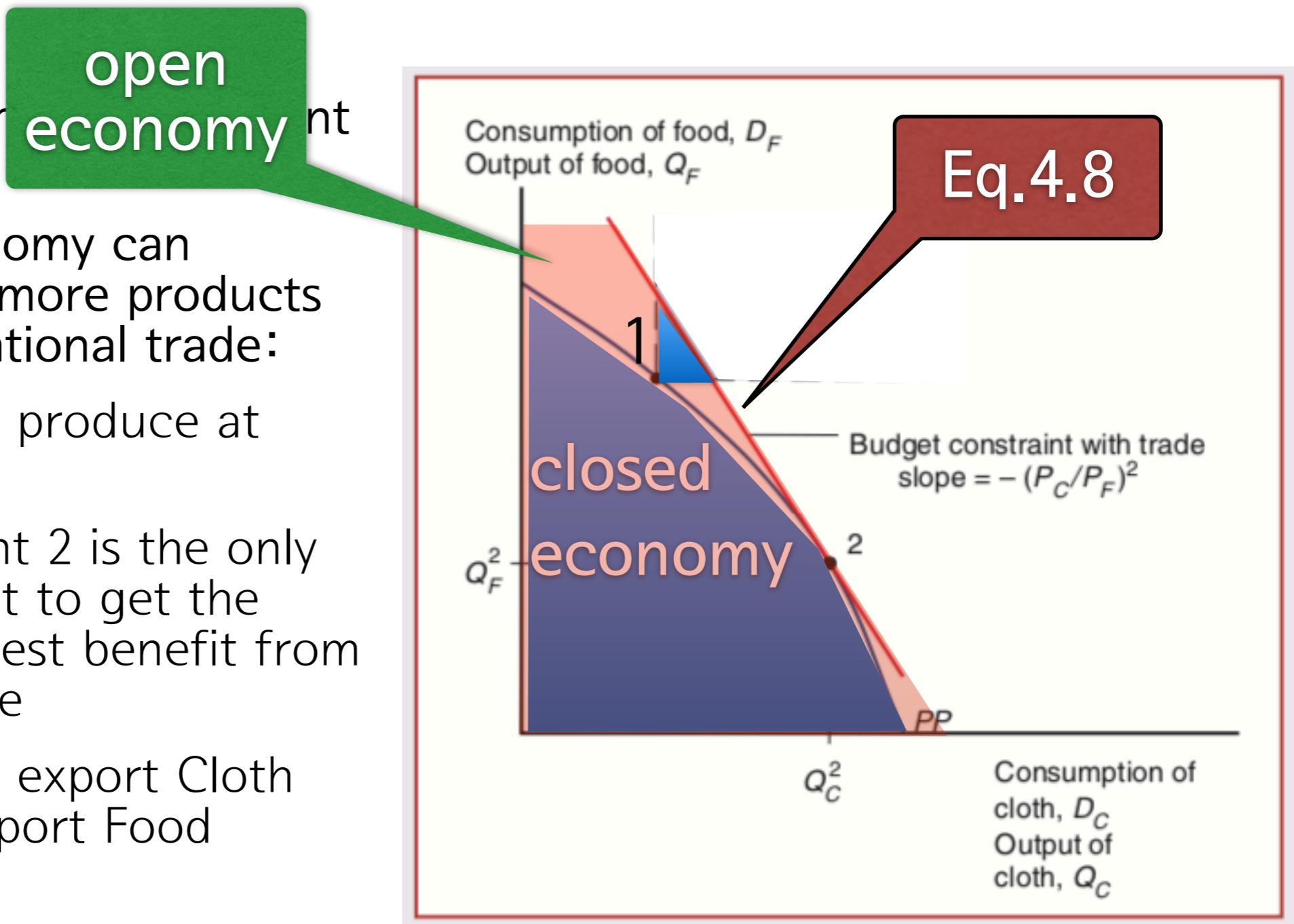
Gains from Trade

- If an economy is closed, it can produce at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



Gains from Trade

- If an economy is closed, it can produce at point 1,
- This economy can consume more products by international trade:
 - STEP1: produce at point 2
 - point 2 is the only point to get the highest benefit from trade
 - STEP2: export Cloth and import Food



Conclusion

- Good News:
 - Everyone could gain from international trade (theoretically).
- Bad News:
 - In the real world, there are losers.
 - This is very important reason why trade is not free

The Political Economy of Trade: A Preliminary View

Free Trade Advocacy

- In spite of the existence of the income distribution effect, most economists advocate free trade because:
 - Income distribution effects are not specific to international trade
 - It is better to allow trade and compensate losers of trade than to prohibit the trade
 - Those who stand to lose from trade are typically better organized than those who stand to gain

Income distribution effects are not specific to international trade

- Every change in a nation's economy affects income distribution.
 - Technological progress,
 - Shifting consumer preferences,
 - Exhaustion of old resources
 - Discovery of new resources
 - ...

It is better to allow trade and compensate losers of trade than to prohibit the trade

- Social safety net for the those who are hurt by trade
 - unemployment benefits
 - subsidizing retraining
 - relocation programs

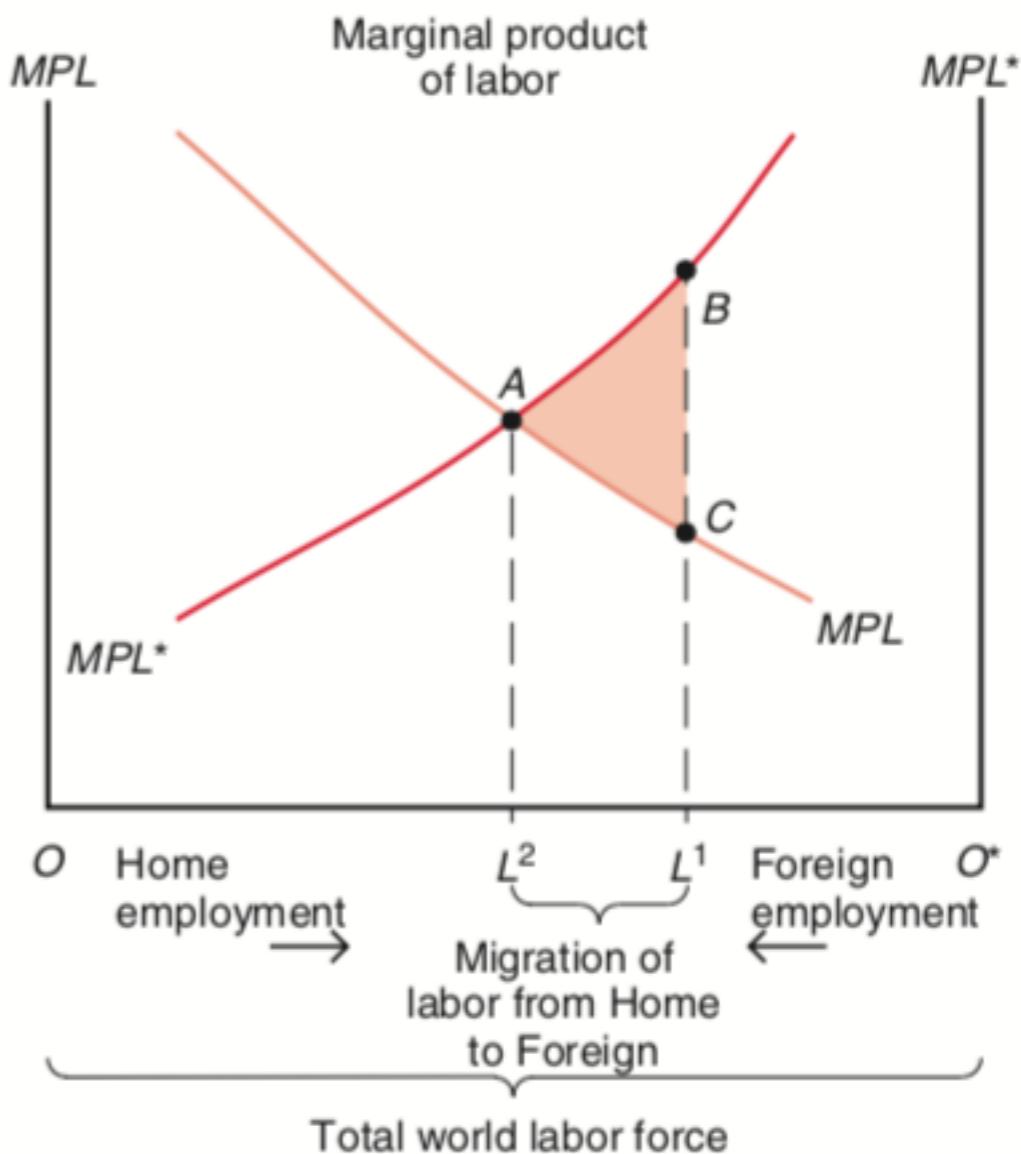
Those who stand to lose from trade are typically better organized than those who stand to gain

- This imbalance is a cause of a bias in the political decision process.
- A counterweight is required to get balanced

International Labor Mobility

Effects of International Labor Mobility

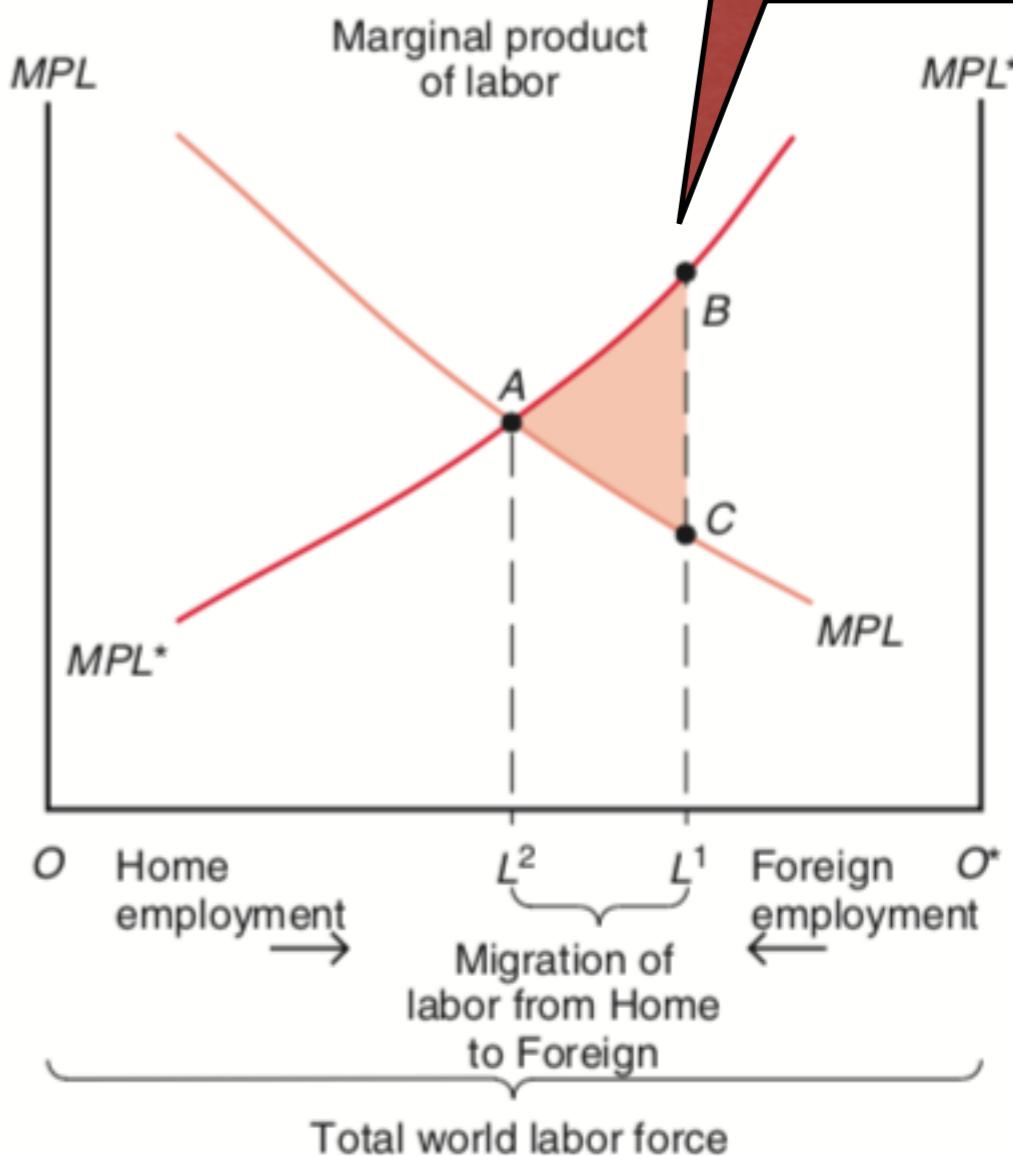
- Convergence of real wage rates
- Increase of the world's output as a whole
 - ΔABC is the size of the world output increase
- Workers of Home country: real wage \uparrow
- Workers of Foreign country: real wage \downarrow



Effects of International Labor Mobility

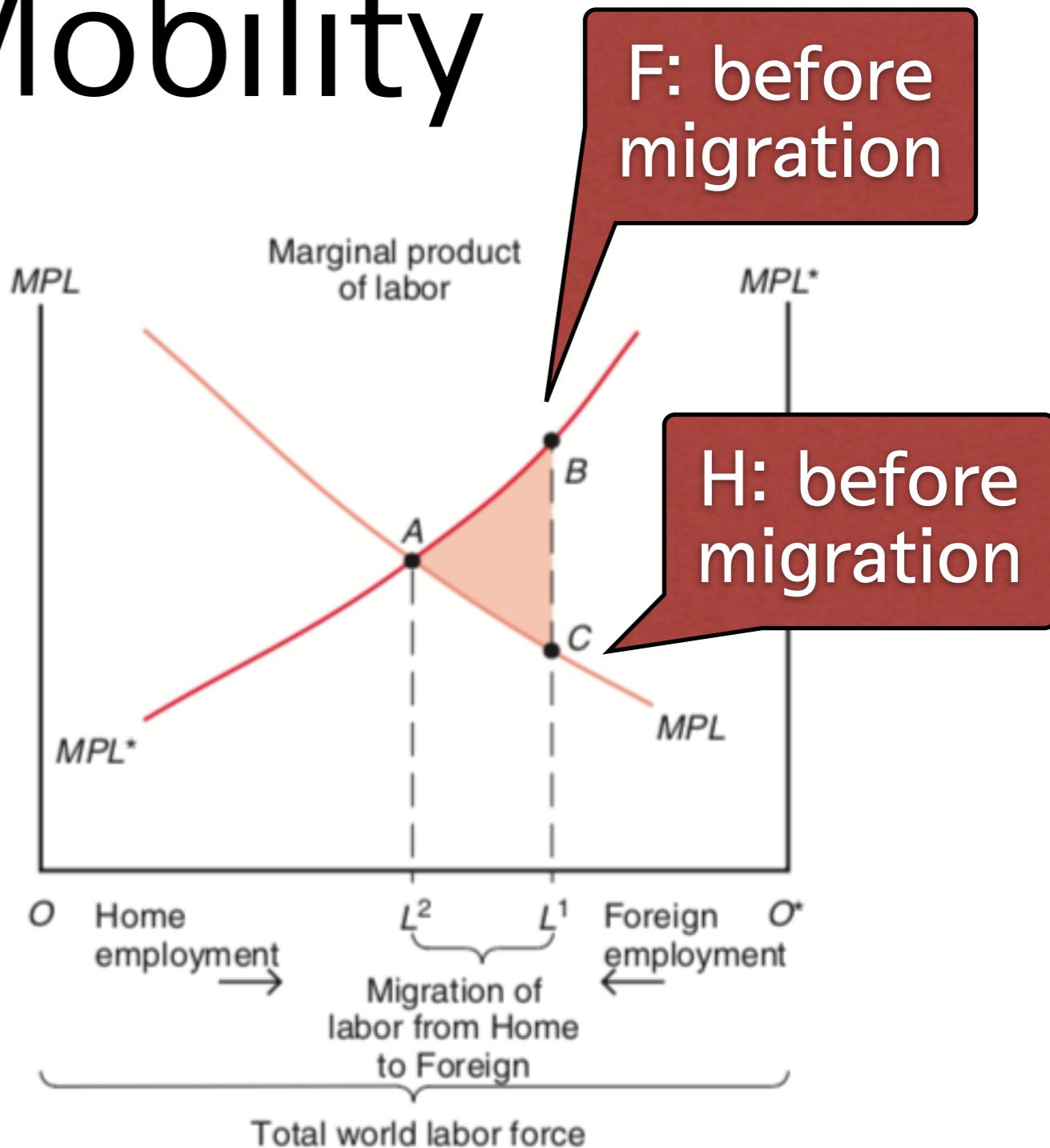
F: before migration

- Convergence of real wage rates
- Increase of the world's output as a whole
 - ΔABC is the size of the world output increase
- Workers of Home country: real wage \uparrow
- Workers of Foreign country: real wage \downarrow



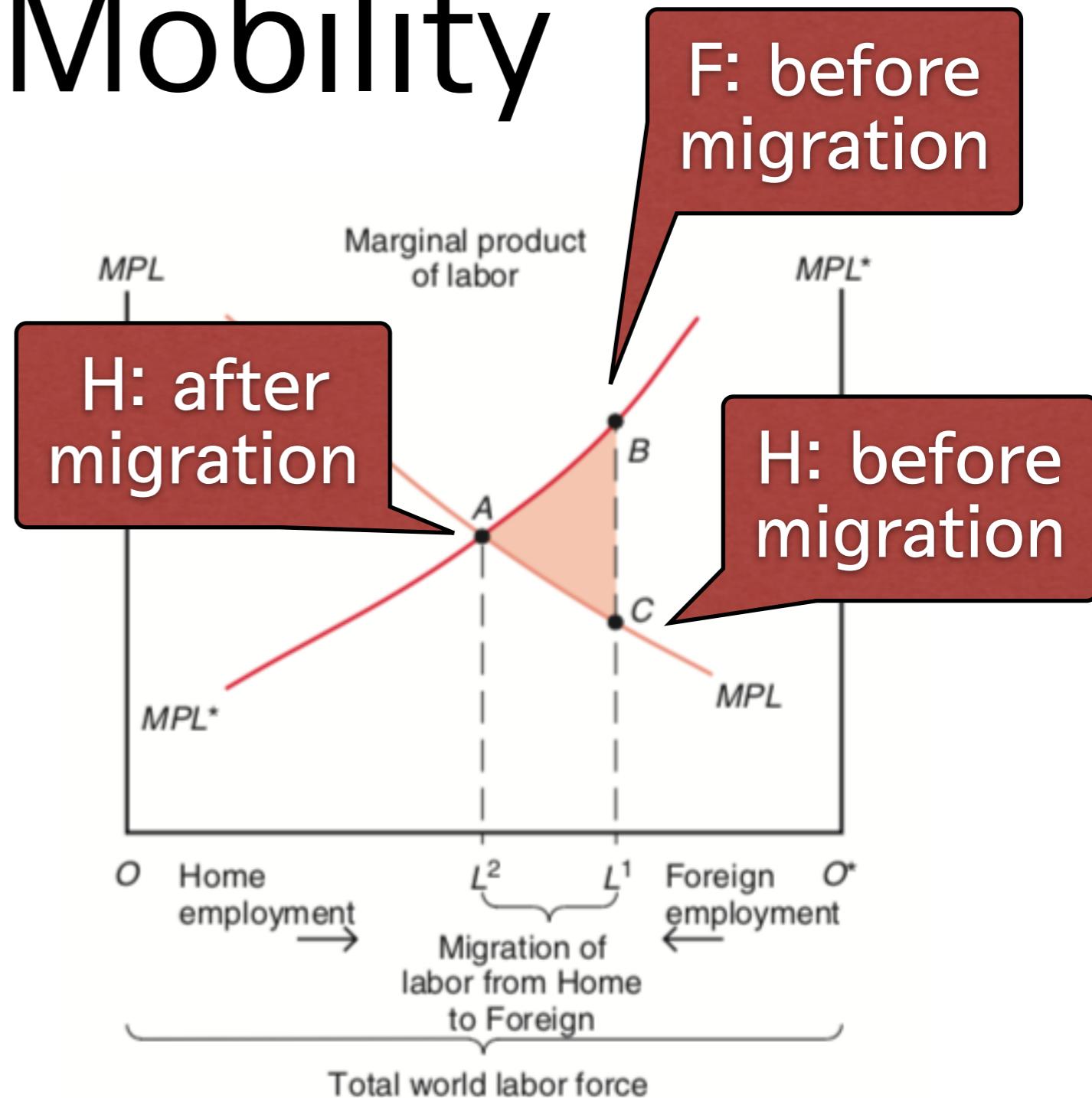
Effects of International Labor Mobility

- Convergence of real wage rates
- Increase of the world's output as a whole
 - ΔABC is the size of the world output increase
- Workers of Home country: real wage \uparrow
- Workers of Foreign country: real wage \downarrow



Effects of International Labor Mobility

- Convergence of real wage rates
- Increase of the world's output as a whole
 - ΔABC is the size of the world output increase
- Workers of Home country: real wage \uparrow
- Workers of Foreign country: real wage \downarrow

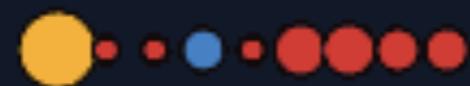


Next Topic

- Resources and Trade:
The Heckscher-Ohlin Model
 - Krugman Ch.5

Thank you!

Heliocentrism

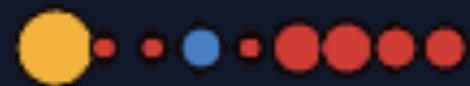


Geocentrism



Thank you!

Heliocentrism



Geocentrism

