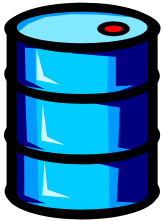


Webnote 104



PRODUCTION POSSIBILITIES CURVE (PPC)

(SOMETIMES REFERRED TO AS THE PPF (FRONTIER))



What is it?

The PPC is a diagram to show how scarcity and choice affects an individual, a household, a firm or an economy.

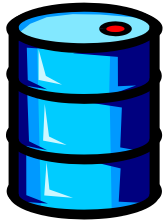


PPC

PRODUCTION POSSIBILITY CURVE

1. Scarcity
2. Choice
3. Opportunity cost
4. Efficiency (allocative efficiency)
5. Inefficiency
6. Economic growth
7. Economic development
8. Unemployed resources (unemployment)

Identify each of the items 1-8 in the slides below



PRODUCTION POSSIBILITIES CURVE (PPC)

PPC connects with the some of

the **9** concepts (Syllabus item 3):

- **Scarcity**
- **Choice**
- **Efficiency**
- **Equity (more development)**
- **Well being (economic growth)**
- Sustainability
- Change

Other key concepts:



SCARCITY-SECTION 1

RESOURCE ALLOCATION-SECION 2

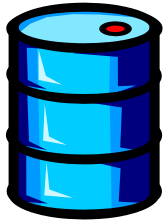
ECONOMIC EFFICIENCY-SECTION 2

GROWTH-SECTION 3-SEE SYLLABUS ITEM **105**

UNEMPLOYMENT-SECTION 3

DEVELOPMENT-SECTION 4 (SEE SYLLABUS ITEM **165**)





PRODUCTION POSSIBILITIES CURVE (PPC)

PPC connects with the some of the **9** concepts:

- Scarcity
- Choice
- Efficiency
- Equity (more development)
- Well being (economic growth)
- Sustainability
- Change

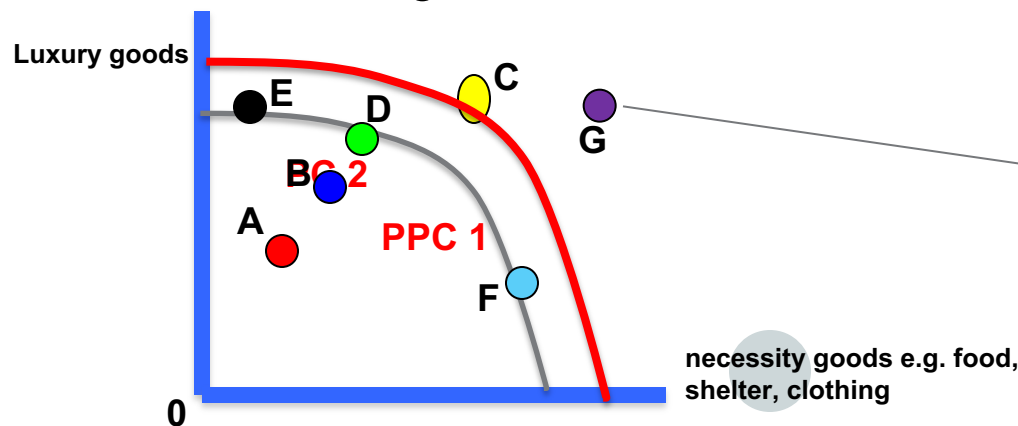


1. SCARCITY
2. CHOICE
3. OPPORTUNITY COST
4. EFFICIENCY (ALLOCATIVE EFFICIENCY)
5. INEFFICIENCY
6. ECONOMIC GROWTH
7. ECONOMIC DEVELOPMENT
8. UNEMPLOYED RESOURCES (UNEMPLOYMENT)



1) PPC: shows GROWTH

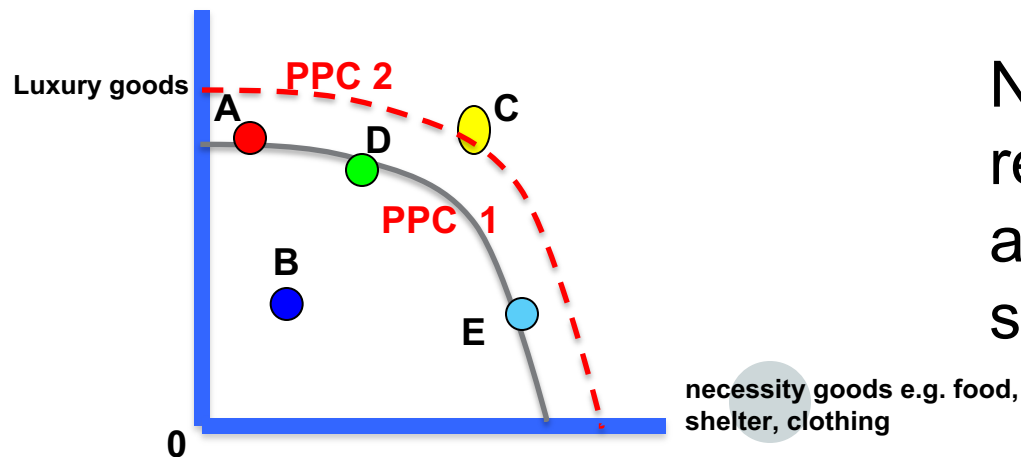
- PPC can show how f.o.p. (resources) result in growth
- **Actual** growth: A● to B● OR **Potential** growth D● to C●
- Allocation of scarce resources ● Yellow only possible if PPC 1 shifts to PPC 2.
- Is the allocation efficient ●● or not ●? Role for government (intervention?)



Note: G represents production impossibility (scarcity of resources i.e. L,L+C)

2) PPC: shows (In) Efficient Resource Allocation

- PPC can show how f.o.p. (resources) can be allocated most efficiently or optimal resource allocation
- See A[●], D[●] or E[●] or any point on the PPC = efficient resource allocation

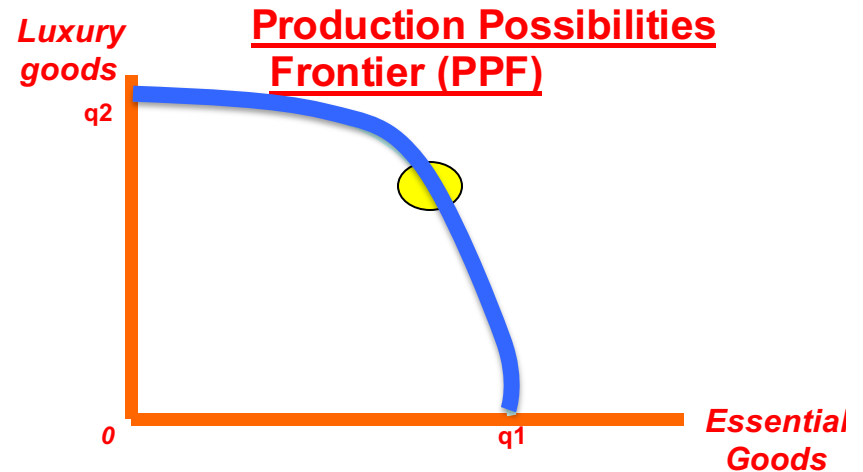


Note: Inefficient resource allocation can be seen at B ●

2) PPC: ALLOCATIVE EFFICIENCY

- PPC can be used to contrast allocative efficiency
- (later we will look at productive efficiency which can be illustrated on an average total cost curve – section 2.11).

● = allocative efficiency



2) PPC: INEFFICIENCY OF RESOURCE ALLOCATION E.G. UNEMPLOYMENT

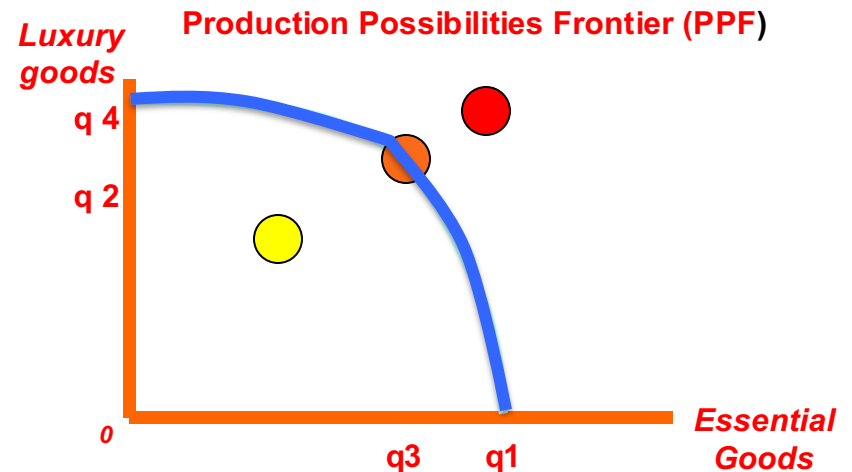
- Section 2: PPC could be used to show unemployed factors of production in an economy









- It can be used to show actual output which is most often below potential output

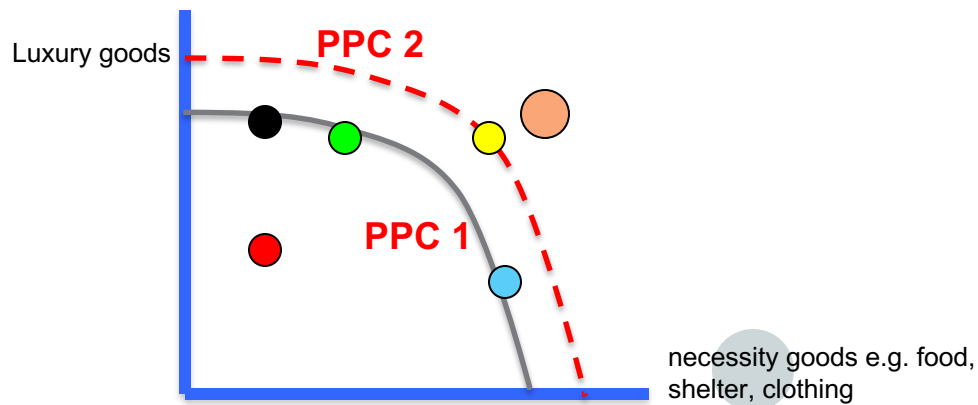


- Production impossibility

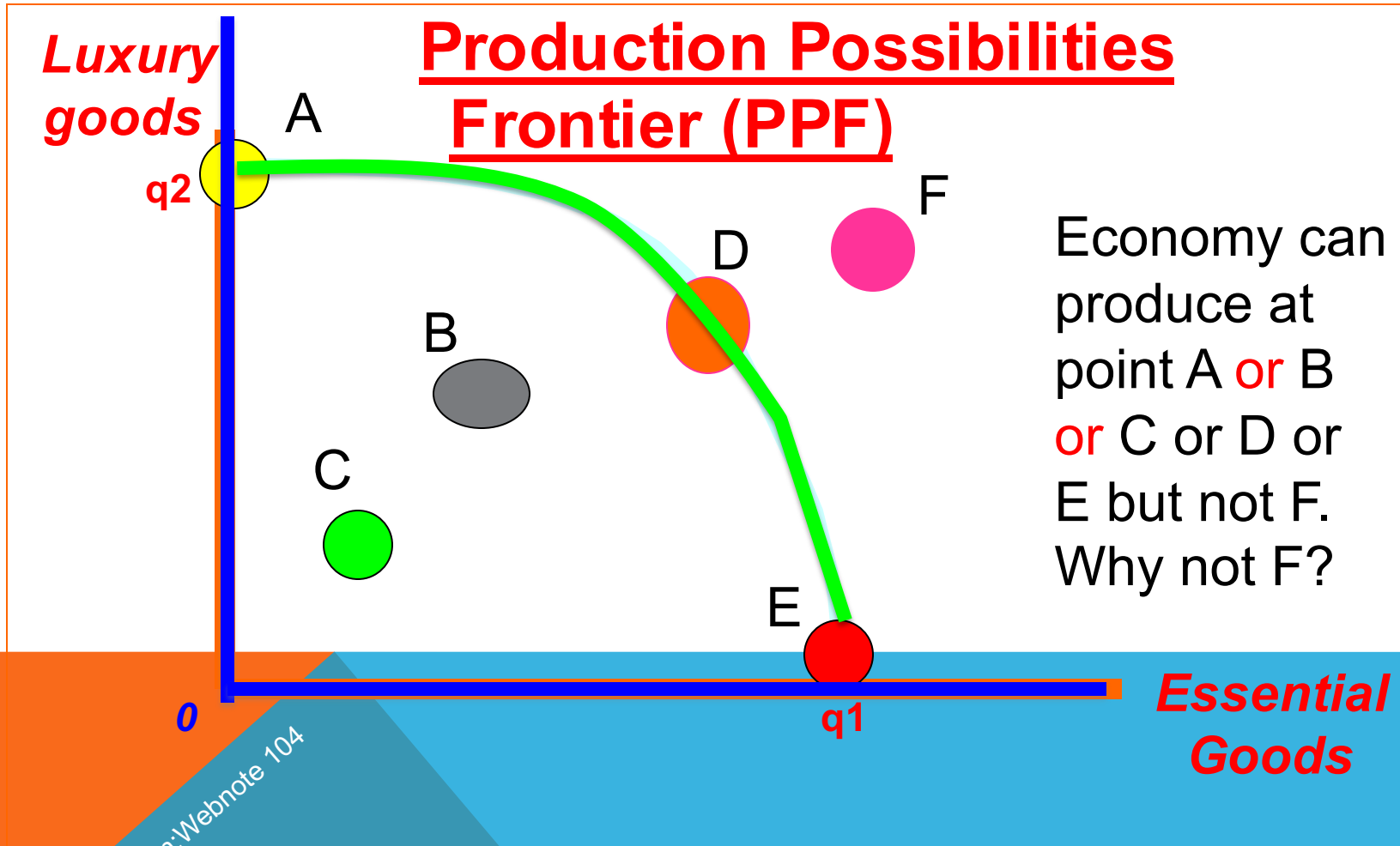


3) PPC: shows SCARCITY

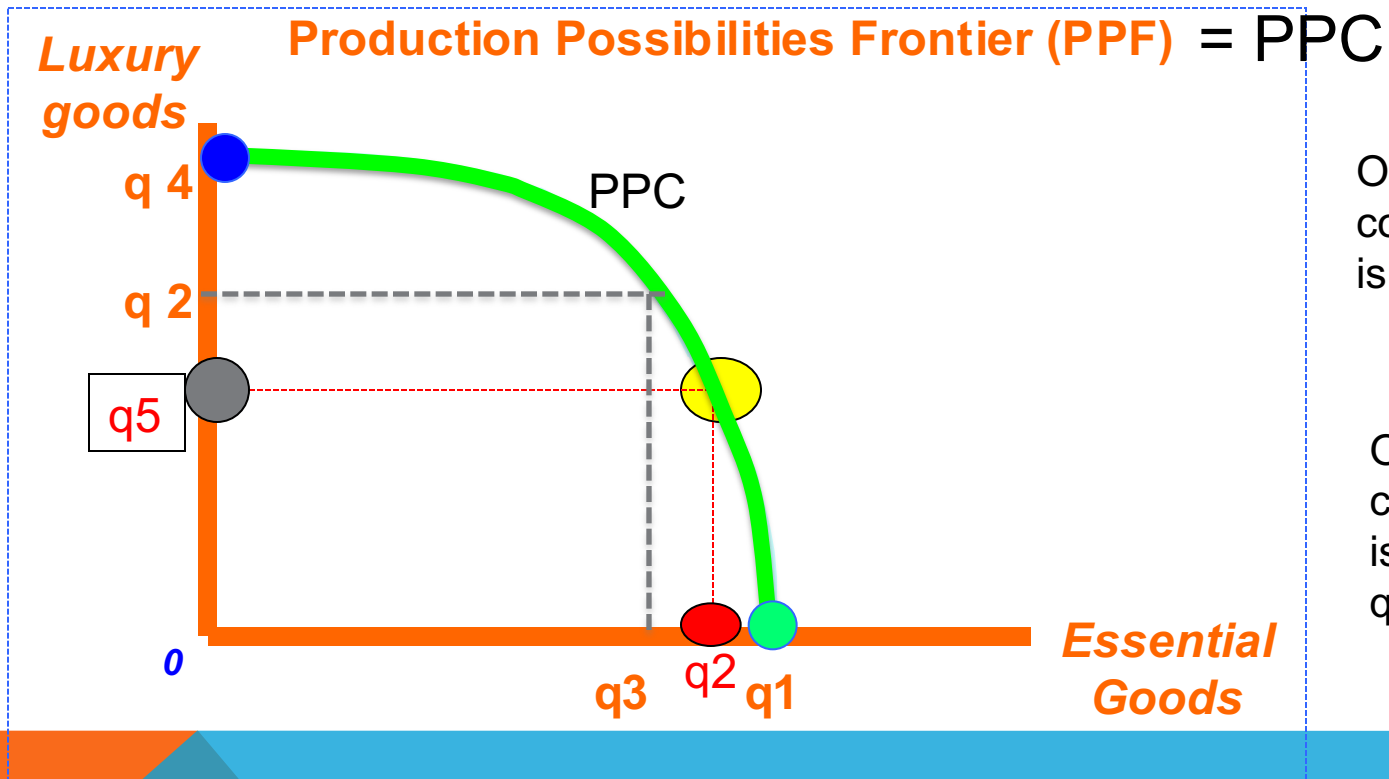
- Scarcity: limited f.o.p. (resources) Output of  not possible i.e. production impossibility.
- Choice: A  or B  on PPC 1
- Allocation of scarce resources **Yellow only possible if PPC 1 shifts to PPC 2.**
- Is the allocation efficient  or not  ? Role for government to improve efficiency / output? 



4) PPC: SHOWS CHOICE



5) PPC: SHOWS OPPORTUNITY COST

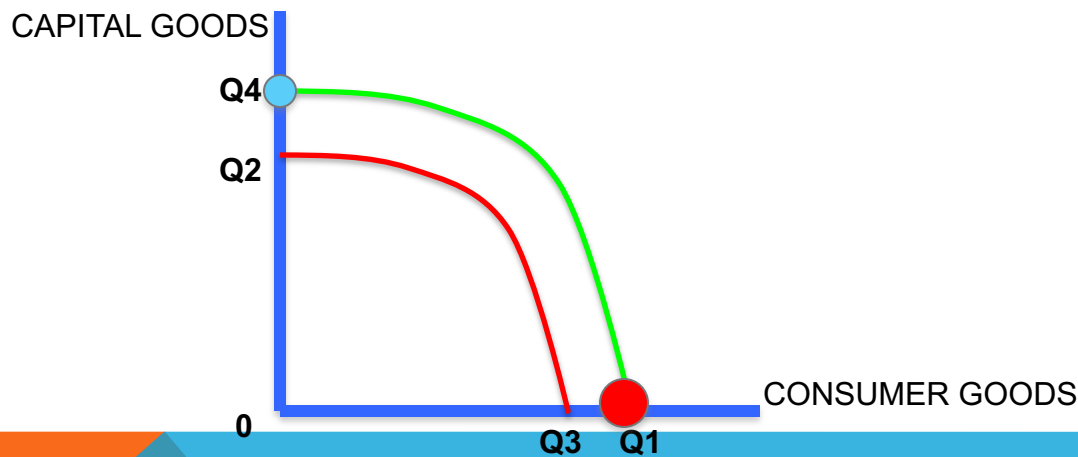


Opportunity cost of 0- q_4 is 0 - q_1

Opportunity cost of 0- q_5 is q_2 - q_1

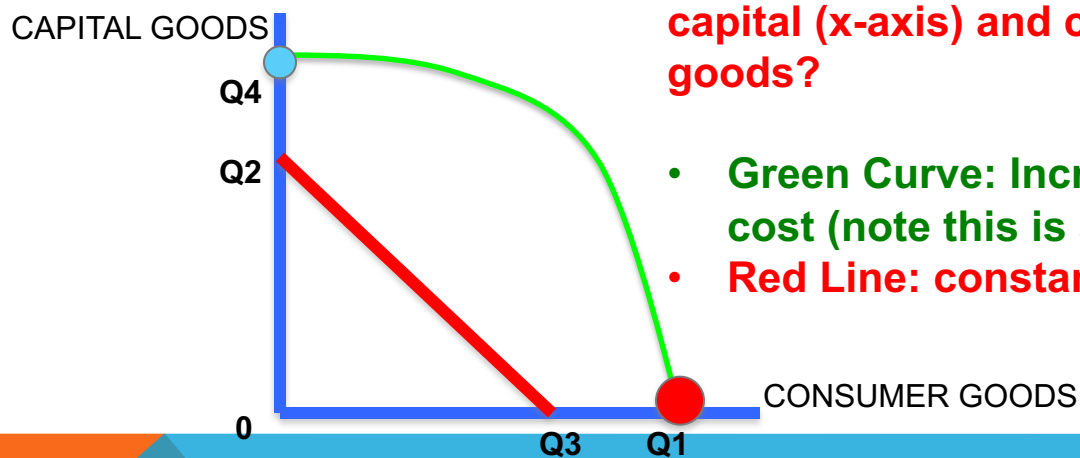
6) PPC: MEASUREMENT

Opportunity cost: can it be measured ? What is the opportunity cost of producing $0q_4$? What is the opportunity cost of producing $0q_2$?



6) PPC: MEASUREMENT

Opportunity cost: can increase, decrease or be constant? What does the red PPC show? What does the green PPC show?



What is the opportunity cost between capital (x-axis) and consumer (y-axis) goods?

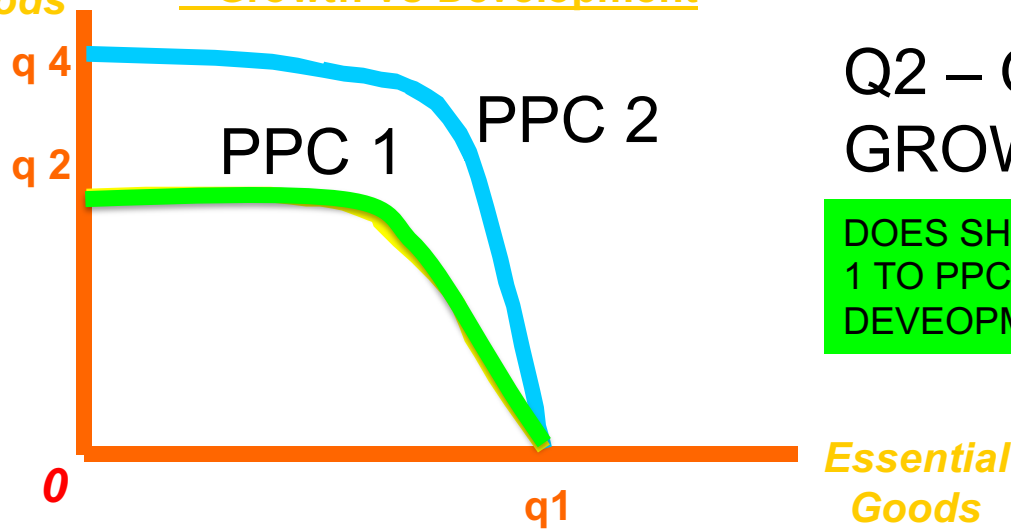
- **Green Curve:** Increasing opportunity cost (note this is a circle shape)
- **Red Line:** constant opportunity cost

7) PPC: GROWTH (MORE OUTPUT) + DEVELOPMENT (BETTER QUALITY OF LIFE)

Essential goods:

- Food
- Clothing
- shelter

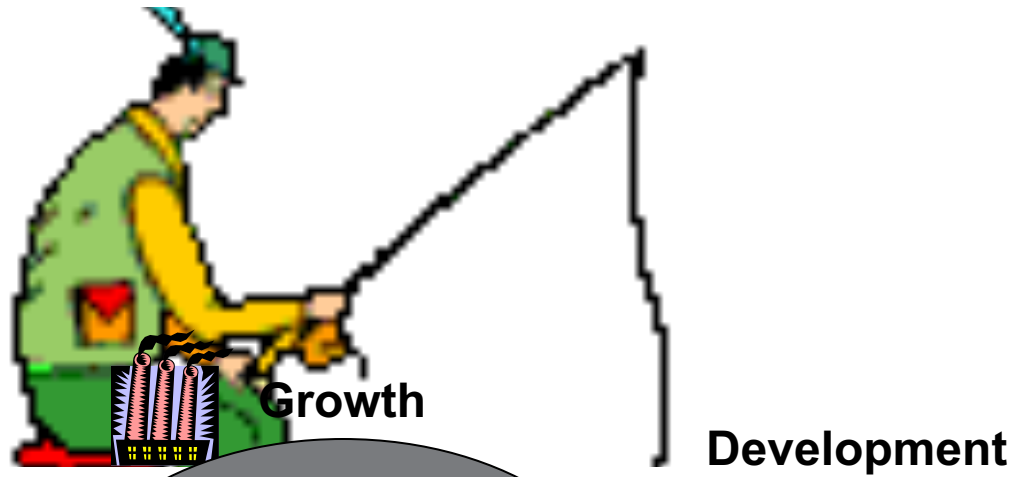
Capital goods
Production Possibilities Frontier (PPF)
+ Growth vs Development



Q2 – Q4
GROWTH

DOES SHIFT FROM PPC 1 TO PPC 2 RESULT IN DEVELOPMENT?

7) PPC: GROWTH + DEVELOPMENT

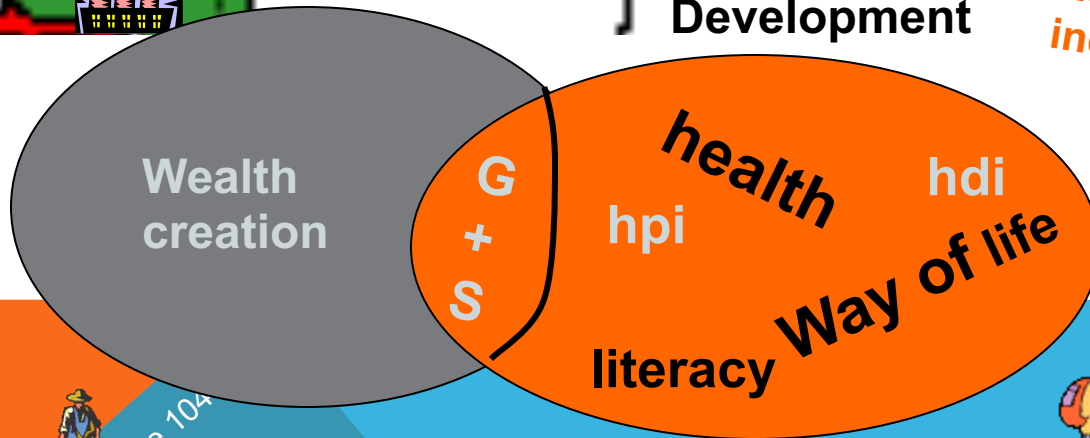


HOW TO MEASURE DEVELOPMENT?

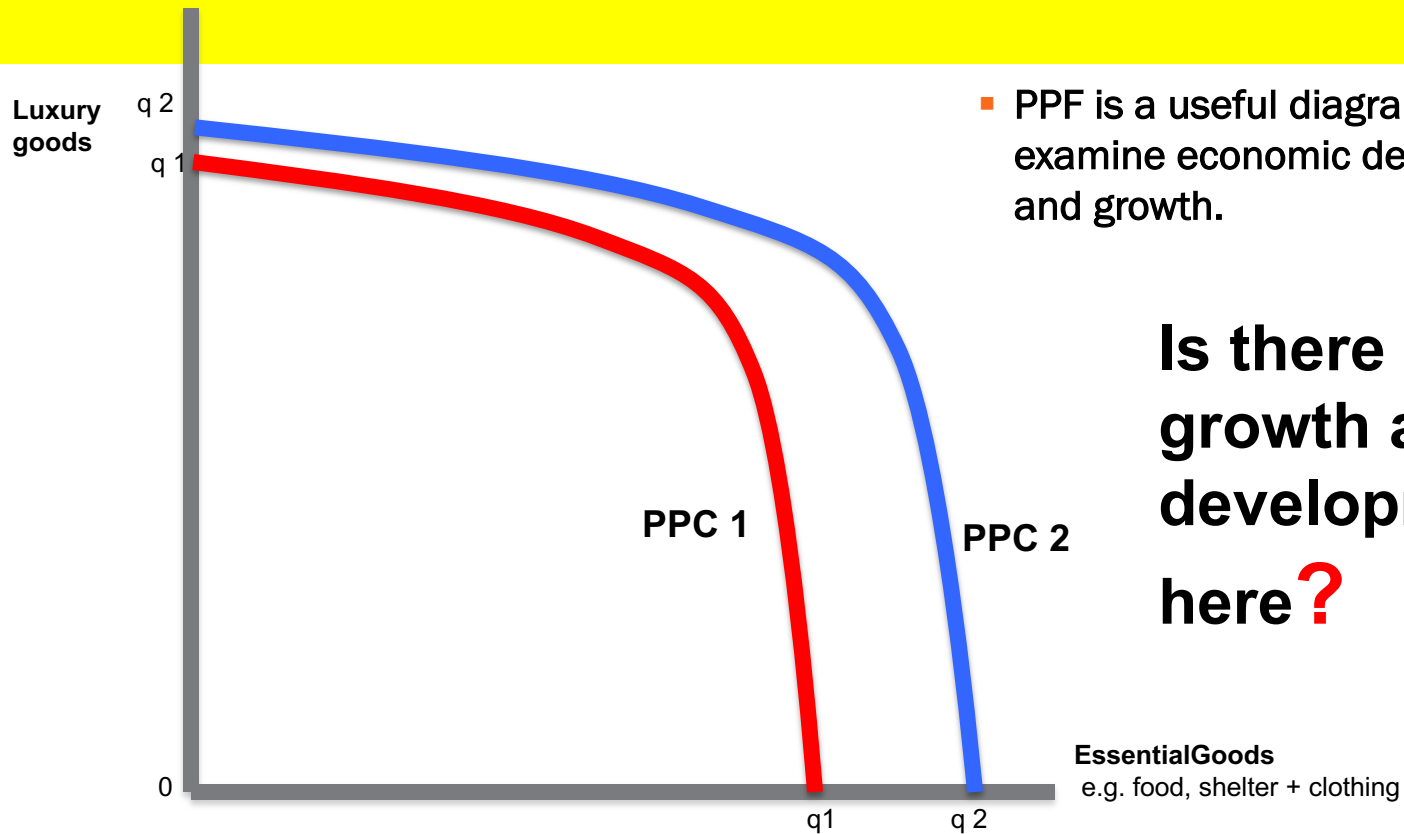
hdi = human development index

Hpi = human poverty index

Hsi = human suffering index



PPC GROWTH WITH DEVELOPMENT? YES OR NO?



- PPF is a useful diagram to examine economic development and growth.

**Is there
growth and
development
here?**

PPC SUMMARY

This diagram has multiple applications to the **syllabus** :

- Opportunity cost / scarcity / choice
- Economic / 'allocative' efficiency
- Growth + Development
- Unemployed resources (L,L+C)

EXAMPLE

Production Possibilities Frontier

PPF has multiple applications to the course: A detailed example.

- Section 1: Can be used to illustrate scarcity, choice and the idea of limited resources and therefore the need for effective resource allocation. It can clearly show allocative (in)efficiency. It can also be used to illustrate the concept of opportunity cost **e.g. the opportunity cost of is equal to the quantity of goods that are not produced as a result of a decision to produce something else**