HL IB Economics

Your notes

4.1 Benefits of International Trade

Contents

- 4.1.1 The Advantages of Free Trade
- 4.1.2 Absolute & Comparative Advantage

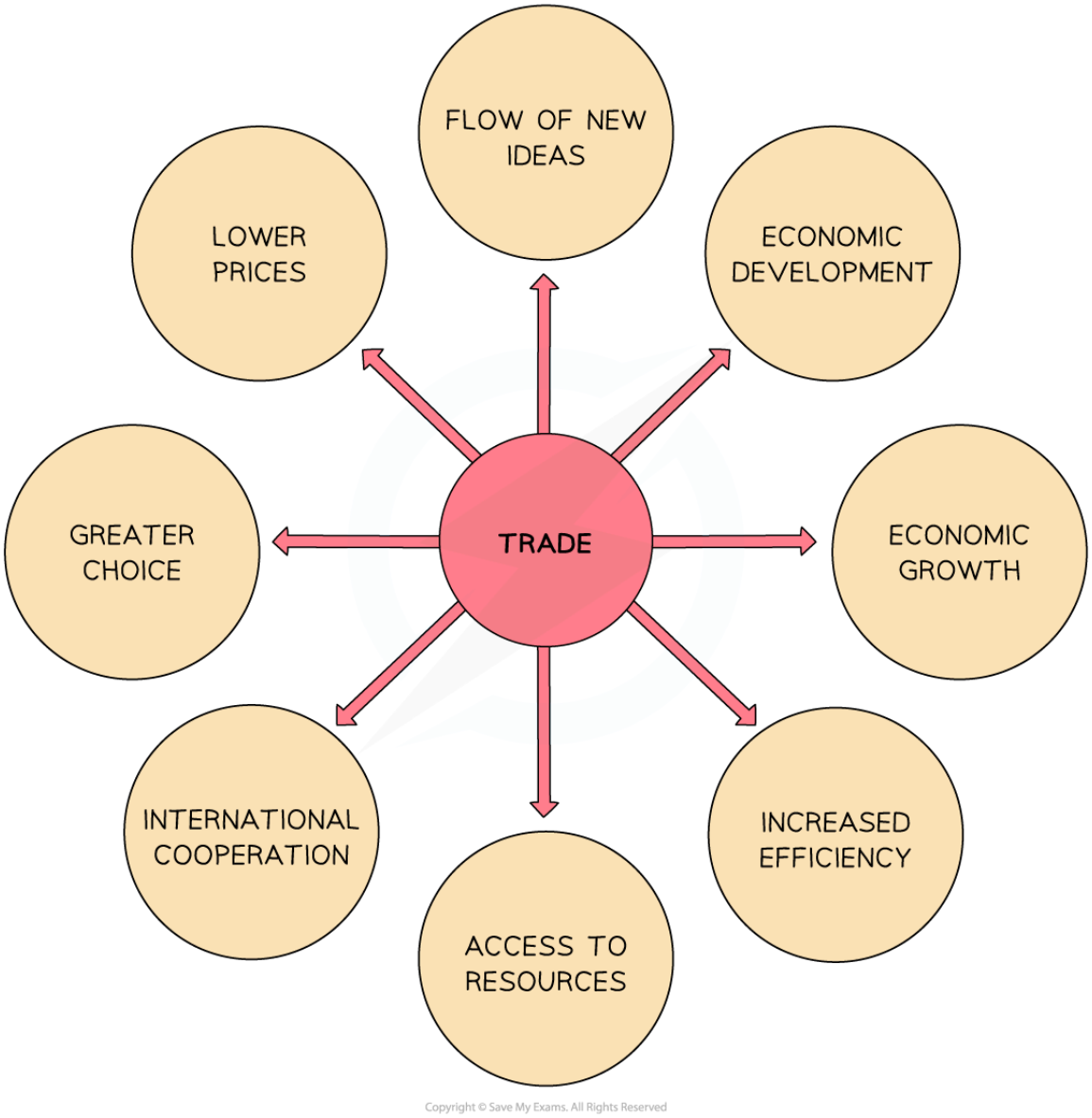
4.1.1 The Advantages of Free Trade


Your notes

The Benefits of International Trade

- International trade refers to the **exchange of goods and services** between countries
- International trade involves the exchange of goods/service through **exports** and **imports**
- **International trade** is 'free' when there is no government intervention (quotas, taxes etc.) to reduce or limit trade

Your notes



The benefits of free trade

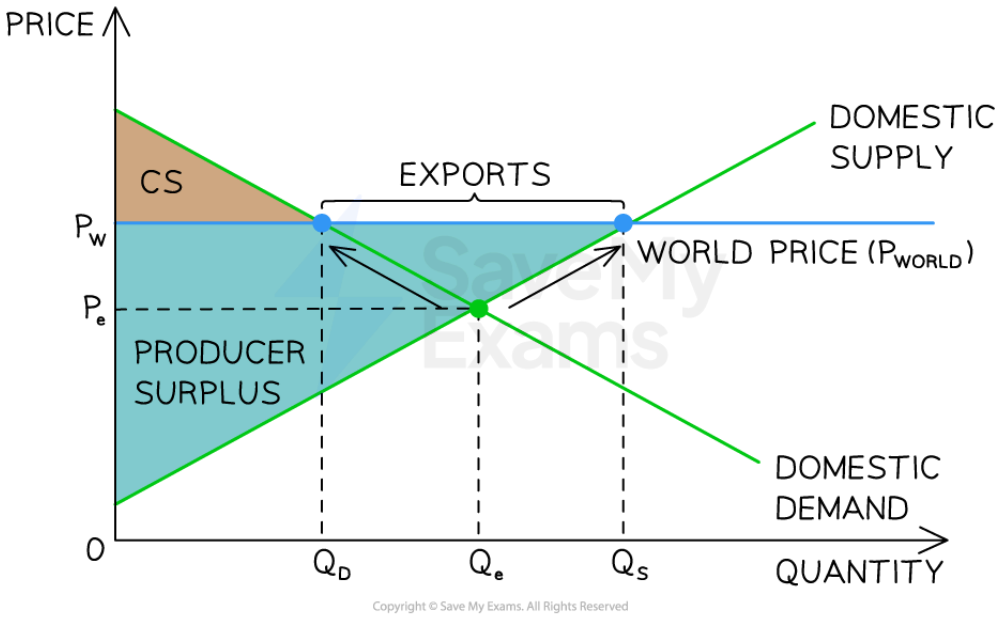
- **Greater choice:** with access to a wider variety of goods/services, the standard of living improves
- **Lower prices:** with international competition prices fall giving households the ability to buy more
- **International cooperation:** required for trade helps countries to build better relationships which leads to lower levels of hostilities

- **Flow of new ideas:** innovative ideas and technology can be shared between countries
- **Access to resources:** output can increase and costs of production can fall with increased access to raw materials
- **Increased efficiency:** international competition allows the most efficient firms to emerge and this improves the use of global resources
- **Economic growth:** exports are a key component of the gross domestic product of many countries and an increase in exports can lead to economic growth
- **Economic development:** Increased output leads to lower levels of unemployment which leads to higher incomes and a higher standard of living

Your notes

The Benefits of Free Trade When World Price is Above Domestic Price

- The **benefits of free trade** can be seen for a country where the world price for a good/service is above the domestic price thus allowing for **exports**



When the world price (W_P) is above the domestic equilibrium price (P_E), a country's firms are able to export the excess supply

Diagram Analysis

- The **domestic equilibrium** in the market for rice in Vietnam is at P_eQ_e

- The world price of rice is higher at P_w
- Vietnamese rice producers are **incentivised by the higher prices** to produce a higher level of output and domestic supply increases from Q_e to Q_s
- Vietnamese consumers now have to pay the world price for rice (Pw) and the domestic demand contracts from Q_e to Q_d
- The **excess domestic supply** (Q_s- Q_d) is now **available for export**

Your notes

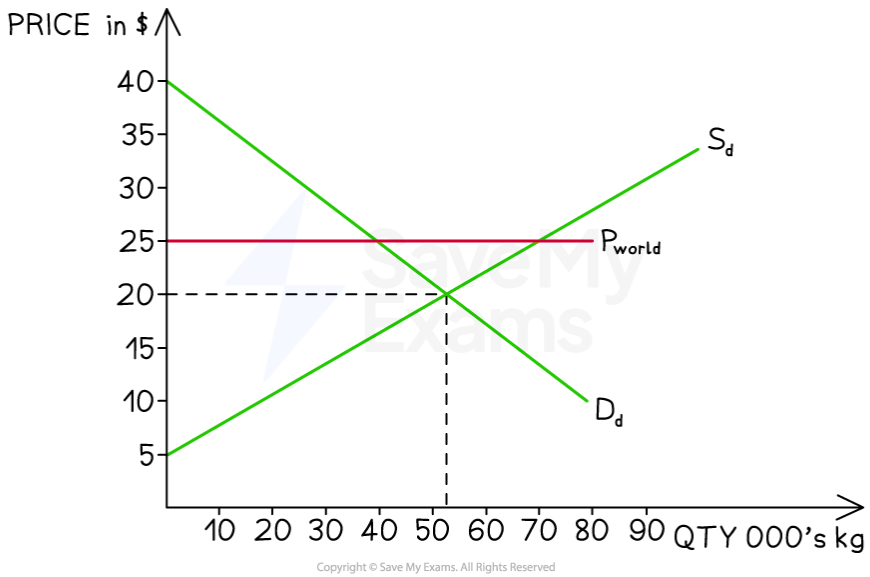
WORKED EXAMPLE

The Ukraine is one of the world's largest grain producers and due to their **comparative advantage**, their domestic price is below the world price.

From the diagram below

a) Calculate the quantity of exports [2]

b) Calculate the export revenue received [2]



Answer:

a) Calculate the quantity of exports

Step 1: Determine Ukraine's excess supply to be exported

- Domestic prices will rise to the world price. At this price the quantity demanded (Q_d) is 40,000 kg's and the quantity supplied is 70,000 kg's **[1 mark]**

- The quantity of exports = 70,000 - 40,000 = 30,000 kg's **[1 mark]**

Your notes

b) Calculate the export revenue received

Step 1: Substitute figures into the sales revenue equation

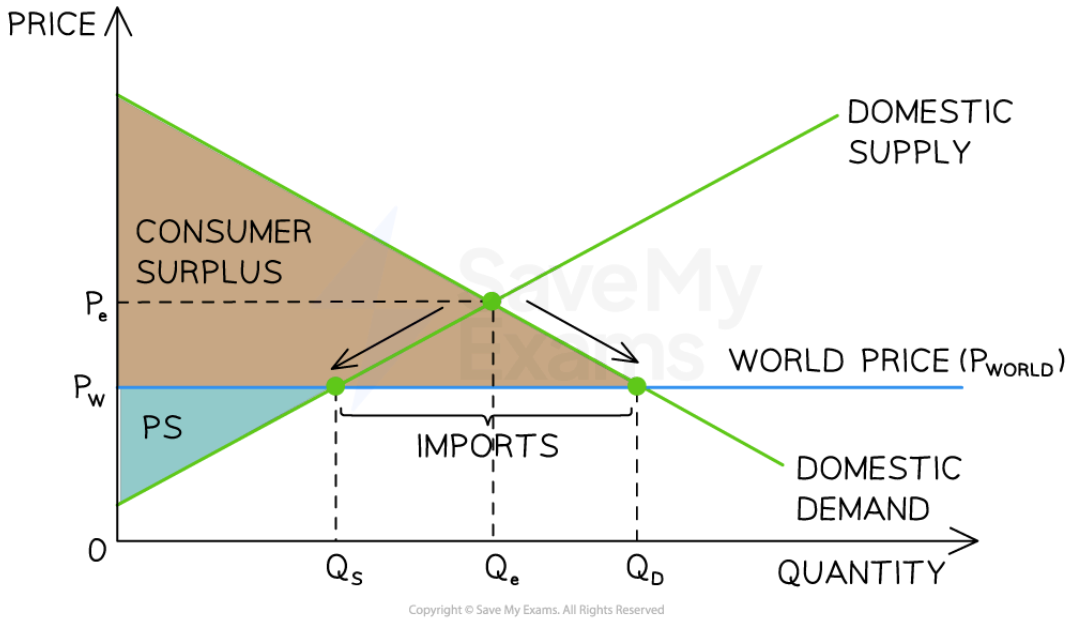
$$\text{Export sales revenue} = \text{price x quantity}$$

$$\text{Export sales revenue} = \$\,25 \text{ x } 30{,}000 \quad [2 \text{ marks}]$$

$$\text{Export sales revenue} = \$\,750{,}000$$

The Benefits of Free Trade When World Price is Below Domestic Price

- The **benefits of free trade** can be seen for a country where the world price for a good/service is below the domestic price thus allowing for **imports**



When the world price (Pw) is below the domestic equilibrium price (Pe), households and firms are incentivised to increase their imports

Diagram Analysis

- The **domestic equilibrium** in the market for bananas in Sri Lanka is at P_eQ_e
- The world price of bananas is lower at P_w
- Some of Sri Lanka's firms cannot compete with the **lower prices** and domestic supply contracts from Q_e to Q_s
- Sri Lanka consumers benefit from the lower world price (Pw) and the domestic demand extends from Q_e to Q_d
- The **excess domestic demand** (Q_d- Q_s) is now **met through imports**

Your notes

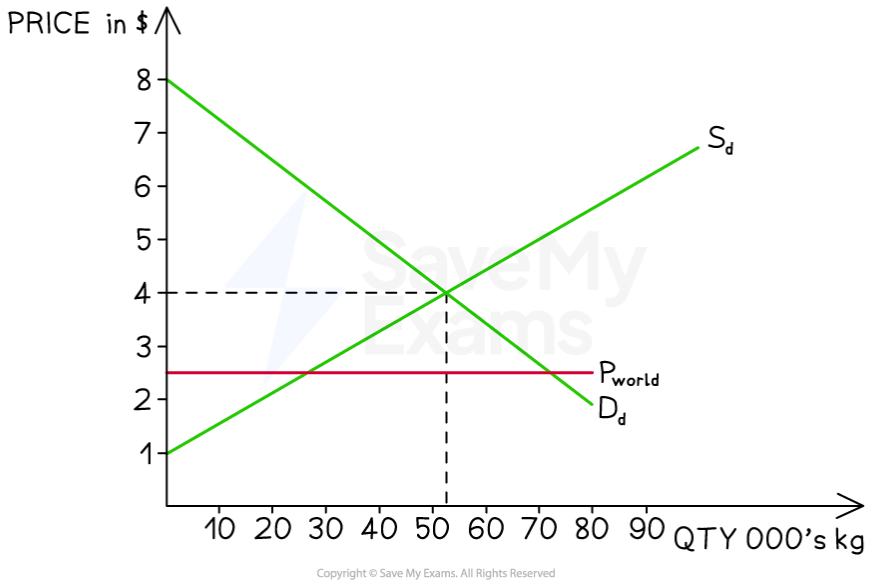
WORKED EXAMPLE

Sri Lanka consumers enjoy their bananas. Many bananas are grown locally, however their domestic price is higher than the world price creating an incentive to import bananas. Many bananas are imported from India.

From the diagram below

a) Calculate the quantity of imports [2]

b) Calculate the import expenditure [2]



Answers:

a) Calculate the quantity of imports

Step 1: Determine Sri Lanka's excess demand to be imported

- Domestic prices will fall to the world price of $2.50. At this price the quantity supplied (Q_s) is 25,000 kg's and the quantity demanded (Q_d) is 73,000 kg's **[1 mark]**
- The quantity of imports = 73,000 - 25,000 = 48,000 kg's **[1 mark]**

b) Calculate the import expenditure

Step 1: Calculate consumer expenditure on imports

$$\text{Consumer import expenditure} = \text{price x quantity}$$

$$\text{Consumer import expenditure} = \$2.50 \text{ x } 48{,}000 \quad [2 \text{ marks}]$$

$$\text{Consumer import expenditure} = \$120{,}000$$

Your notes

4.1.2 Absolute & Comparative Advantage

Your notes

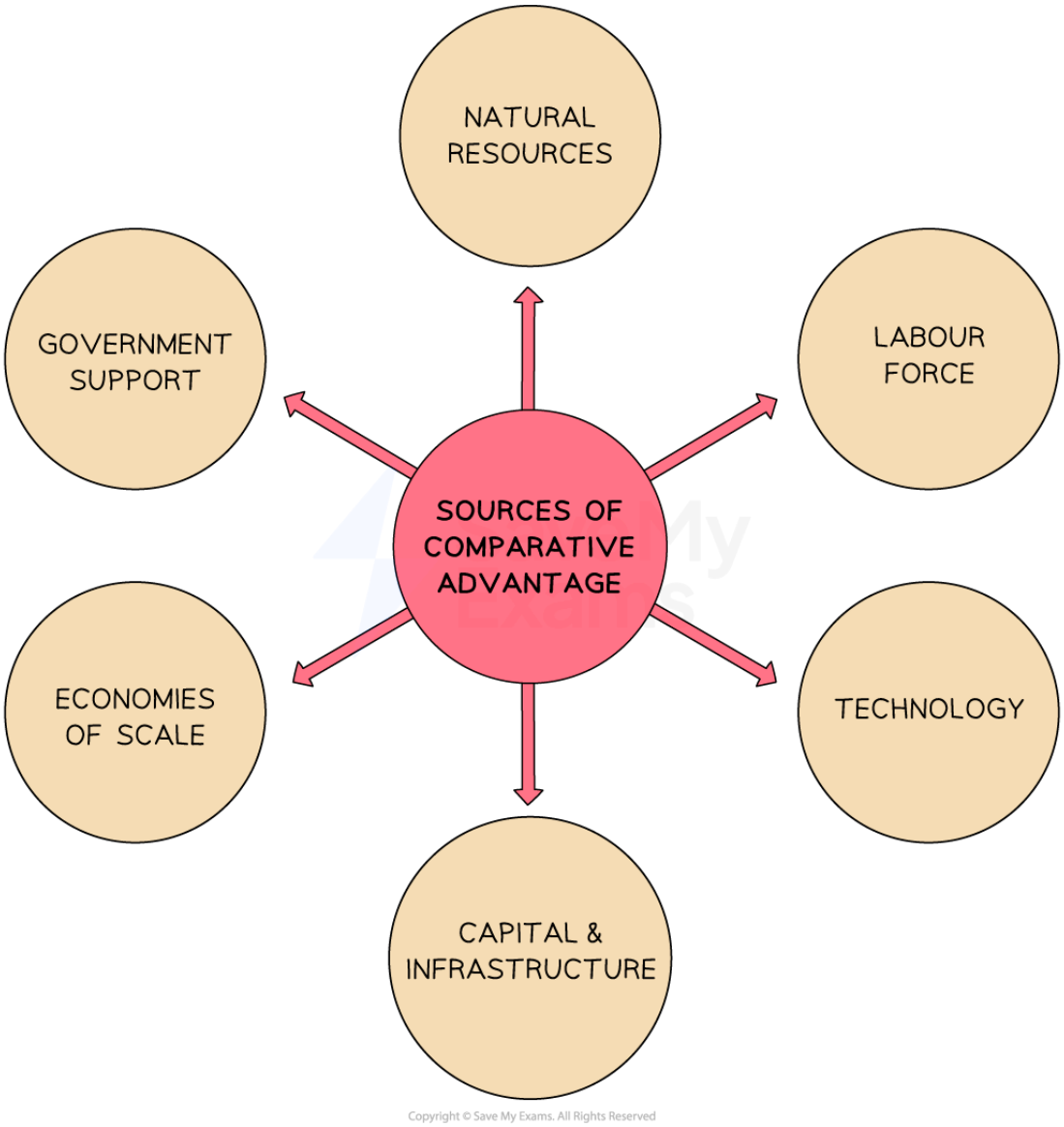
Absolute & Comparative Advantage

- International trade **decreases prices** and increases the **variety** of goods/services available to a nation
  - This results in a **higher standard of living**
- **Comparative advantage** is the theory developed by David Ricardo in 1817 which states that a country should **specialise** in the goods/services that it can produce at the lowest **opportunity cost**
  - By specialising, the **volume of production increases**
  - Excess production can be **exported**
  - Goods/services which are not produced in the country can be **imported**
- **Absolute advantage** occurs when a country is able to produce a product using fewer **factors of production** than another country
  - A country may well have **absolute advantage** but still not have **comparative advantage**
    - It should produce goods/services in which it has **comparative advantage**

The Sources of Comparative Advantage

- The sources of comparative advantage **can vary from country to country,** but some common factors include

Your notes



Common sources of comparative advantage

Natural Resources

- Countries with abundant natural resources, such as **minerals, energy sources, fertile land, or water bodies**, may have a comparative advantage in industries that utilise these resources
  - E.g. The Ukraine has very fertile farm field and a climate conducive to growing grain


Your notes

Labor Force

- The **quality, skills, and cost of labor** can be a significant source of comparative advantage
  - Countries with a **skilled workforce** in specific industries, such as technology, **engineering**, or manufacturing, may have a competitive edge in those sectors
  - Countries with **lower labor costs** may have a comparative advantage in labor-intensive industries

Technology

- Access to **advanced technology, innovation, and research capabilities** can create a comparative advantage

Capital and Infrastructure

- The availability and quality of capital and infrastructure, such as **transportation networks, communication systems, and reliable utilities**, can contribute to a comparative advantage
  - Well-developed infrastructure **facilitates efficient production, distribution, and connectivity,** giving countries an edge in international trade

Economies of Scale

- Companies or countries that can achieve **economies of scale** in production have a comparative advantage
  - Spreading fixed costs over a larger output, **reduces per-unit costs** and allows firms to offer competitive prices in the global market

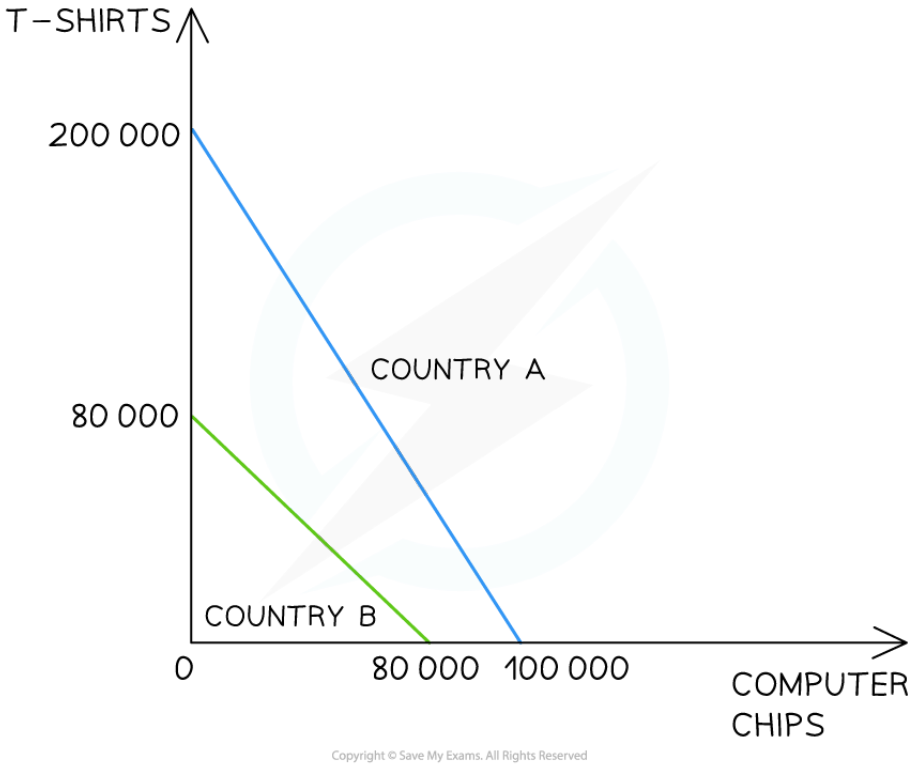
Government Policies and Support

- Government policies, such as **trade agreements, subsidies, tax incentives, and intellectual property protections**, can influence a country's comparative advantage
  - Strategic government support **can help industries develop and compete** in the global market

Using PPC to Illustrate the Gains from Trade

- **Production possibility frontiers** can be used to illustrate these concepts and the gains from international trade

Your notes



The production possibility frontiers for 2 countries who both produce t-shirts & computer chips

Diagram Analysis

- Country A has an **absolute advantage** as it can produce **more of both products**
- **Country A** can produce either **200,000 t-shirts** or **100,000 computer chips**
  - To produce 100,000 computer chips, **it gives up** production of 200,000 t-shirts
  - The **opportunity cost** of producing 1 computer chip is $\frac{\text{t-shirts}}{\text{computer chips}} = \frac{200,000}{100,000} = 2$ **t-shirts**
  - The **opportunity cost** of producing 1 t-shirt is $\frac{\text{computer chips}}{\text{t-shirts}} = \frac{100,000}{200,000} = 0.5$ **computer chip**
- **Country B** can produce either **80,000 t-shirts** or **80,000 computer chips**
  - To produce 80,000 computer chips **it gives up** production of 80,000 t-shirts

Your notes

- The **opportunity cost** of producing 1 computer chip is $\frac{\text{t-shirts}}{\text{computer chips}} = \frac{80,000}{80,000} = 1$ **t-shirts**
- The **opportunity cost** of producing 1 t-shirt is $\frac{\text{computer chips}}{\text{t-shirts}} = \frac{80,000}{80,000} = 1$ **computer chip**
- To produce 1 computer chip **Country A gives up** 2 t-shirts and **Country B gives up** 1 t-shirt
  - **Country B has a comparative advantage in producing computer chips** as it is giving up fewer t-shirts and so it should specialise in **computer chip production**
- To produce 1 t-shirt **Country A gives up** 0.5 computer chips and **Country B gives up** 1 computer chip
  - **Country A has a comparative advantage in producing t-shirts** as it is giving up fewer computer chips and so it should specialise in **t-shirt production**

The Gains from Trade

- By specialising, the **volume of production increases**
- Excess production can be **exported** (Country A exports T-shirts and Country B exports computer chips)
- Goods/services which are not produced in the country can be **imported** (Country A imports computer chips and Country B imports T-shirts)

WORKED EXAMPLE

Using information from the table below, explain which country should specialise in producing T-shirts and which country should specialise in producing computer chips [2]

	T-Shirts	Computer Chips
Country A	200,000	100,000
Country B	80,000	80,000

Answer:

Method A

Step1: Cross Multiply and identify highest output

80,000 x 100,000 = 8,000,000

200,000 x 80,000 = 16,000,000 **[1 mark]**

Your notes

Step 2: Using highest output, state who has comparative advantage

Country A should specialise in producing T-shirts (200,000)

Country B should specialise in producing computer chips (80,000)

WORKED EXAMPLE

Using information from the table below, calculate which country should specialise in producing T-shirts and which country should specialise in producing computer chips [3]

	T-Shirts	Computer Chips
Country A	200,000	100,000
Country B	80,000	80,000

Answer:

Method B

Step 1: Calculate the opportunity costs for Country A

- The **opportunity cost** of producing 1 computer chip is $\frac{\text{t-shirts}}{\text{computer chips}} = \frac{200,000}{100,000} = 2$ **t-shirts**
- The **opportunity cost** of producing 1 t-shirt is $\frac{\text{computer chips}}{\text{t-shirts}} = \frac{100,000}{200,000} = 0.5$ **computer chip**

Step 2: Calculate the opportunity costs for Country B

- The **opportunity cost** of producing 1 computer chip is $\frac{\text{t-shirts}}{\text{computer chips}} = \frac{80,000}{80,000} = 1$ **t-shirts**
- The **opportunity cost** of producing 1 t-shirt is $\frac{\text{computer chips}}{\text{t-shirts}} = \frac{80,000}{80,000} = 1$ **computer chip**

Step 3: State who has comparative advantage in each product

- **Country B has a comparative advantage in producing computer chips** as it is giving up fewer t-shirts (1 as opposed to 2) and so it should specialise in **computer chip production**
- **Country A has a comparative advantage in producing t-shirts** as it is giving up fewer computer chips (0.5 as opposed to 1) and so it should specialise in **t-shirt production**

[2 marks for any correct working and 1 mark for the correct answer]

Your notes

Limitations to the Theory of Comparative Advantage

- Comparative advantage does **drives a nation's manufacturing in a global economy**, but the theory has several limitations

The Limitations of Comparative Advantage Theory

Limitation	Explanation
Over-dependence	▪ Specialisation creates a **dependence** on other countries which generates vulnerability e.g. receiving gas supplies from Russia works well when relations are good but has proven otherwise in an unexpected time of war. There has been an **over-dependence** on Russian gas
Environmental Damage	▪ The impact of **negative externalities of production** is not considered by the theory & these can significantly worsen the quality of life in towns, cities & countries
Distribution of Income	▪ The **GDP/capita** is likely to increase, however the **distribution of the extra income** is likely to be uneven with the wealthier sections of the population gaining more
Structural Unemployment	▪ Although there should be a net increase in employment, as countries specialise **certain industries are likely to shut down** resulting in unemployment for some workers. These workers may not be able to move into other occupations & if so the number of **long-term unemployed** will rise
Flawed Assumptions	▪ As with any **economic model**, there are underlying assumptions to the theory of comparative advantage 1. **Transport costs are zero:** it does not account for moving the goods/services between countries. Depending on a nation's location this is more or less of a problem 2. **There is perfect knowledge:** each country knows what it has a comparative advantage in and also the comparative advantages of other countries - this is

	not always true 3. **Factor substitution is easily achieved:** economies can quickly adjust to changing global market conditions by switching from capital to labour - and vice versa. This is idealistic 4. **Constant costs of production:** the theory does not take into account the **economies of scale** that can be achieved with an increase in output


Your notes