

 **SL IB Economics**

Your notes

4.2 Types of Trade Protection

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4.2.1 Tariffs



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An Introduction to Protectionism

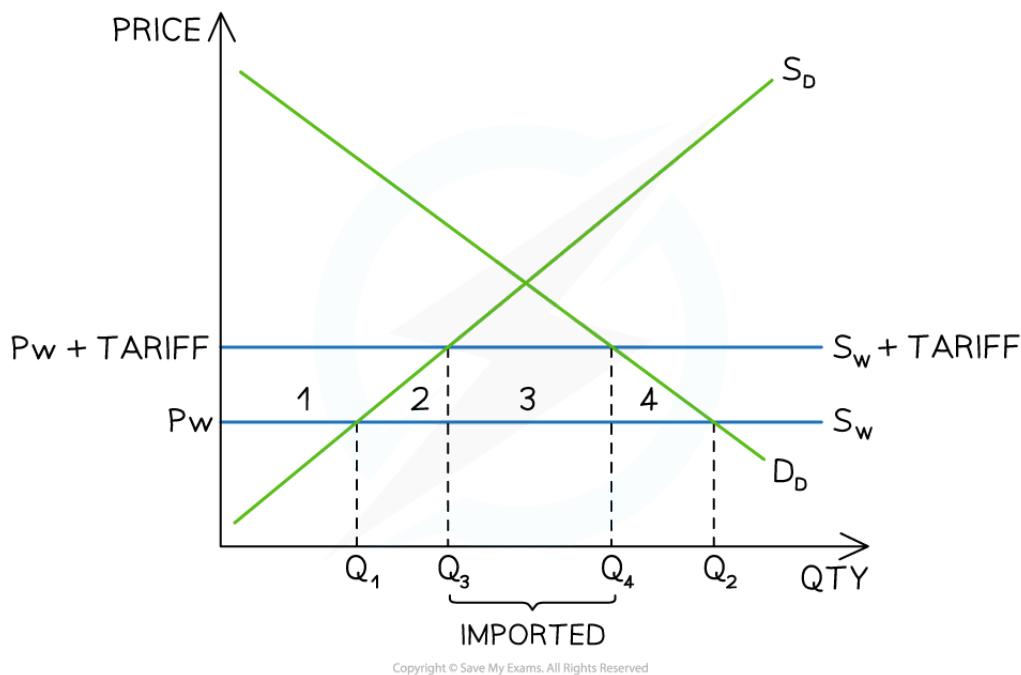
- Free trade aims to maximise global output through **national specialisation**
- However, there are numerous **reasons** why countries would seek to **limit free trade** in order to protect themselves from certain outcomes
- This is called protectionism and may take the form of import tariffs, export subsidies, the use of quotas or embargoes



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An Explanation of Tariffs

- The most commonly used forms of **trade protectionism** include tariffs, subsidies, quotas and administrative barriers
- **A tariff is a tax on imported goods/services (customs duty)**
 - The tax raises the selling price of the good/service within the country
- The higher price allows more **inefficient domestic firms** to increase their production and market share
 - More efficient global competitors reduce their output due to the tariff
 - With increased domestic output, **employment** may increase



A tariff raises the price of the world supply from P_W to $P_W + \text{Tariff}$. This reduces the quantity of imports from Q_1Q_2 to Q_3Q_4

Diagram Analysis

- **World supply (S_W)** is considered to be infinite and this supply curve is included with the domestic demand (D_D) and supply (S_D) curves
- The **pre-tariff** market equilibrium is seen at P_WQ_2
 - Domestic firms supply up to Q_1 at a price of P_W
 - Foreign firms supply the difference equal to Q_1Q_2 at a price of P_W (imports)

- **After the tariff** is imposed, the world price increases from P_w to $P_w + \text{tariff}$
- The **new market equilibrium** is seen at $P_w + \text{tariff}$ and Q_4
 - Following the law of demand, the **quantity demanded contracts** from Q_2 to Q_4
 - Following the law of supply, the **quantity supplied** by domestic firms **extends** from Q_1 to Q_3
 - The level of **imports is reduced** from Q_1Q_2 to Q_3Q_4



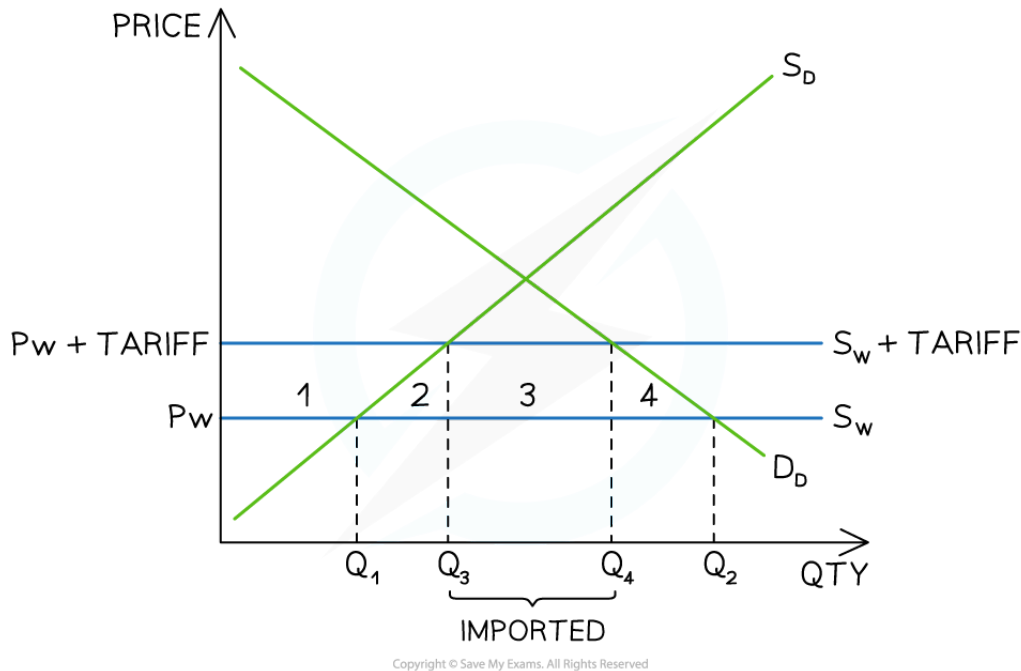
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An Evaluation of Tariffs

- The best way to consider the **impact of a tariff** on stakeholders is to explain it using a diagram



Your notes



A tariff impacts domestic producers, consumers, foreign producers and the government

The Impact of Tariffs on Stakeholders

Stakeholder	Explanation of Impact
Domestic Producers	<ul style="list-style-type: none"> Before the tariff domestic producers produced output equal to $0Q_1$ and their revenue was equal to $P_W \times Q_1$ After the tariff was imposed domestic producers produced $0Q_3$ and their revenue was equal to $P_{W+tariff} \times Q_3$ Domestic producer surplus has increased by area 1
Foreign Producers	<ul style="list-style-type: none"> Before the tariff foreign producers sold output equal to Q_1Q_2 and their revenue was equal to $P_W \times (Q_2 - Q_1)$ After the tariff was imposed foreign producers sold output equal to Q_3Q_4 and their revenue was equal to $P_W \times (Q_4 - Q_3)$ Foreign producer surplus has decreased by the areas underneath 2 and 4



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Domestic Consumers	<ul style="list-style-type: none"> ▪ Before the tariff domestic consumers consumed Q_2 products at a price of P_w ▪ After the tariff domestic consumers consumed fewer products (Q_4) at a higher price of $P_w + \text{tariff}$ ▪ Domestic consumer surplus has decreased by areas 1, 2, 3 and 4 ▪ Some consumers have been priced out of the market (contraction of quantity demanded from $Q_2 \rightarrow Q_4$)
The Government	<ul style="list-style-type: none"> ▪ After the tariff is imposed the government receives tax revenue equal to $((P_w + \text{tariff}) - P_w) \times (Q_4 - Q_3)$ <ul style="list-style-type: none"> ▪ This is equal to area 3
Downstream Producers	<ul style="list-style-type: none"> ▪ Other producers who rely on the imported product as a raw material in their own production process, now have to pay more for it as prices are higher ▪ This increases their costs of production ▪ They may have to reduce output which could impact unemployment levels and government tax receipts in their industry
Society (welfare loss)	<ul style="list-style-type: none"> ▪ Less efficient domestic firms are now producing at the expense of more efficient foreign producers - there is a welfare loss equal to area 2 ▪ Consumers are frustrated with the higher prices and there is no longer allocative efficiency - there is a welfare loss equal to area 2 ▪ The net welfare loss is equal to areas 2 and 4

Examiner Tip

Tariffs are one of the most frequently examined sub-topics in Paper 2. When evaluating their use, consider how many jobs are protected (or created) in the industry that is targeted by the tariff as opposed to jobs which may be lost in multiple downstream industries due to higher prices.

For example, a tariff on solar panel imports protects a few firms who manufacture solar panels. However, the higher prices can cause a significant fall in the quantity demanded leading to the possible loss of thousands of jobs for installation experts.

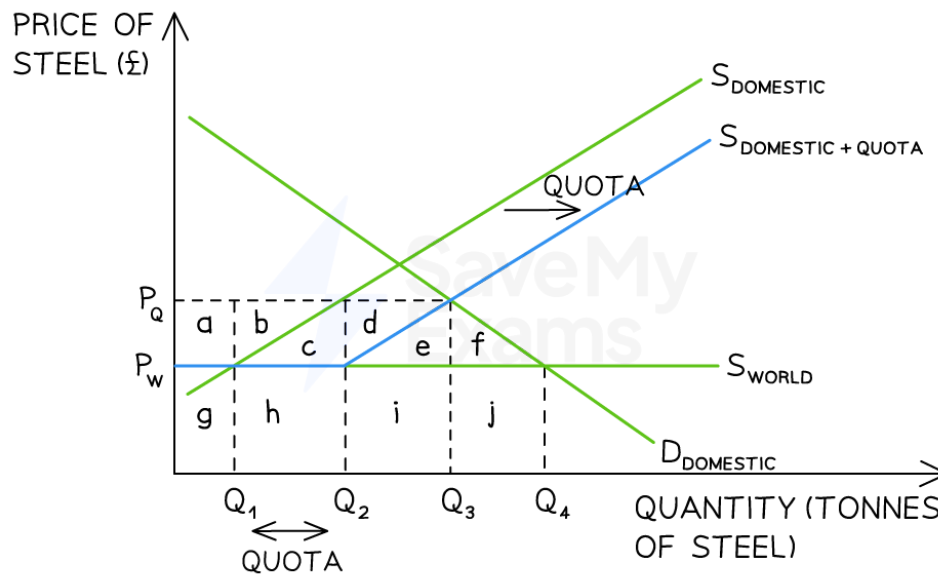


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4.2.2 Quotas

An Explanation of Quotas

- A **quota is a physical limit on imports** e.g. in June 2022 the UK extended its quota on **steel imports** for a further two years in order to protect employment in the domestic steel industry
- This limit is usually set **below the free market level of imports**
 - As cheaper imports are limited, a quota **raises the market price**
 - As cheaper imports are limited a quota **may create shortages**
- Some domestic firms benefit as they are able to **supply more** due to the lower level of imports
 - This may increase the level of employment for domestic firms



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A quota on steel imports reduces the equilibrium quantity from $Q_4 \rightarrow Q_3$ and raises the market price from $P_w \rightarrow P_q$

Diagram Analysis

- The initial **market equilibrium** is at $P_w Q_4$
 - Domestic firms supply up to Q_1 and $Q_4 - Q_1$ is imported
- To support the domestic steel industry, the UK government **limits the amount of imports** by instituting a quota

- The **domestic supply curve (S_d)** shifts to the right by the size of the quota ($Q_2 - Q_1$)
 - Where this curve crosses the domestic demand curve (D_d) it forms the **new market equilibrium at $P_q Q_3$**
 - The quota has raised prices and reduced total output from $Q_4 \rightarrow Q_3$
 - Domestic producers supply up to Q_1 **PLUS** $Q_3 - Q_2$
 - Foreign producers supply $Q_2 - Q_1$ (the quota)
-
- Once governments **announce the quota level**, the market automatically prices in the reduced output
 - This means that each unit of output is sold at the quota price (P_q)
 - Both domestic producers and foreign producers receive a higher price for their steel



Your notes

Examiner Tip

One of the main reasons that the quota diagram is confusing is because it appears that domestic producers supply up to Q_1 , then take a holiday while the imports flood in until Q_2 is reached, after which they continue to supply up until Q_3 . This is not how it works in reality.

1. The government announces the quota for the next 12 months
2. The market factors in the reduced supply and a new market price is established
3. Even while domestic firms are selling their products, importers continue to import the foreign product for as long as there is any quota allowance left
4. The government keeps track of the level of imports and once the quota level is reached, they will not allow any more imports of that product to enter the country



Your notes

An Evaluation of Quotas

- Quotas can be beneficial in that they are a **less confrontational method of protectionism** than tariffs as there is less of a penalty for trading partners

The Impact of Quotas on Stakeholders

Stakeholder	Explanation of Impact
Domestic Producers	<ul style="list-style-type: none"> Before the quota, the domestic revenue was area g After the quota, domestic revenue is greater covering areas a+g+d+e+i
Foreign Producers	<ul style="list-style-type: none"> Before the quota, foreign producer revenue was area h+i+j After the quota, foreign producer revenue is less covering areas b+c+h Under the quota, they receive a higher price for all units sold at P_q but they sell fewer products
Domestic Consumers	<ul style="list-style-type: none"> Consumers pay a higher price (P_q) than previously (P_w) which reduces their disposable income Some consumers leave the market as they cannot afford the higher price (contraction from $Q_4 \rightarrow Q_3$)
The Government	<ul style="list-style-type: none"> They gain some favour with the industry they are protecting This policy may create jobs in the industry being protected and reduce the level of unemployment benefits required The government does not receive tax revenue as they do when using a tariff
Downstream Producers	<ul style="list-style-type: none"> Other producers who rely on the imported product as a raw material in their own production process, now have to pay more for it as prices are higher This increases their costs of production They may have to reduce output which could impact unemployment levels and government tax receipts in their industry
Efficiency	<ul style="list-style-type: none"> Global efficiency has worsened as less efficient domestic producers are producing at the expense of more efficient foreign producers (area e+f)

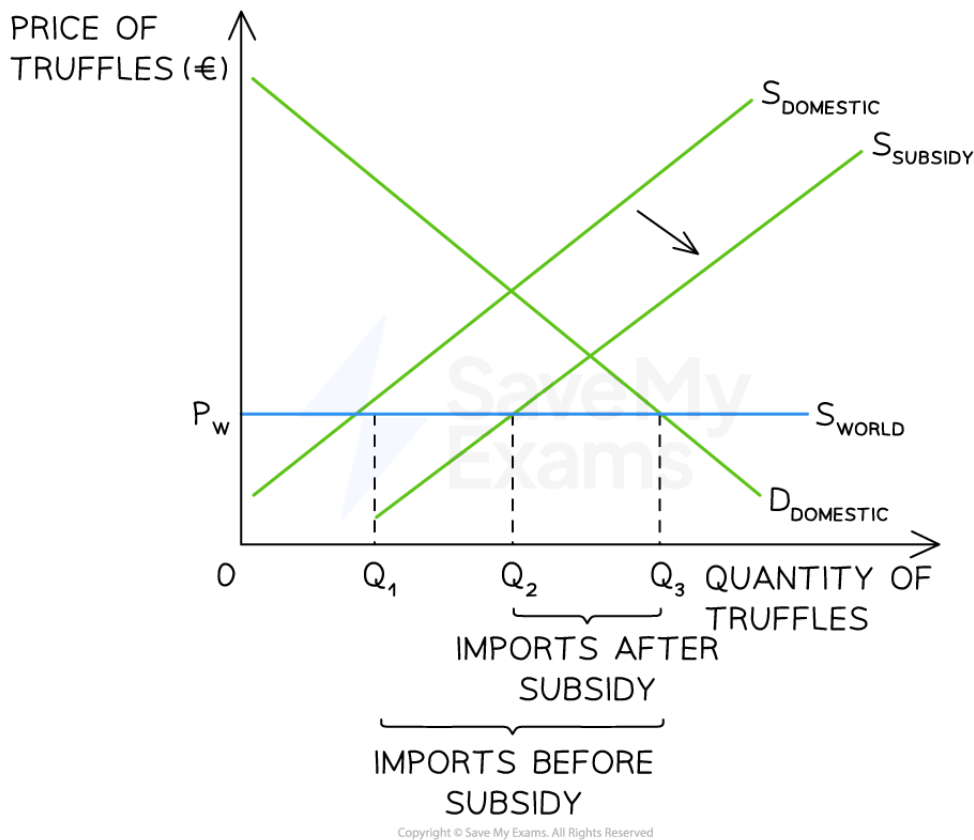


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4.2.3 Export Subsidies

An Explanation of Export Subsidies

- Both subsidies and export subsidies lower the cost of production for **domestic firms**
 - They can increase output and **lower prices**
 - With lower prices their goods/services are **more competitive** internationally
 - If firms are able to meet all of the domestic demand (D_d) then the excess supply may be exported
 - Otherwise, the level of **imports will decrease**
 - The increased output may result in **increased domestic employment**
- Following the 2nd World War, the **European Union** subsidised food production and this has continued ever since
 - Once food security had been established within Europe, countries were able to start **exporting the excess supply** that subsidies generate



European Union subsidies for truffle producers shift the domestic supply curve to the right which decreases the level of truffle imports required from Q_1Q_3 to Q_2Q_3



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Diagram Analysis

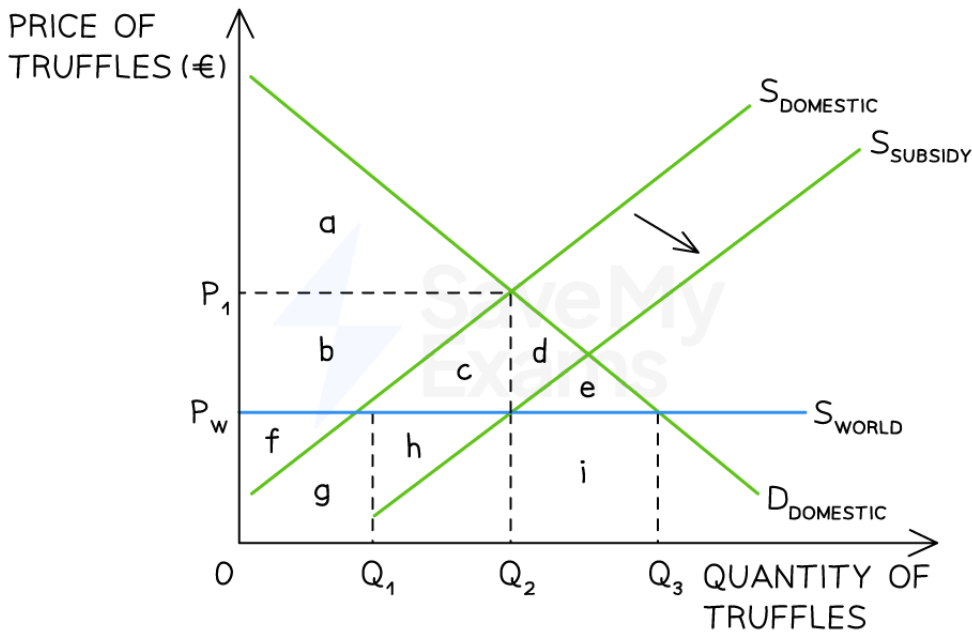
- The domestic market for truffles in the EU was initially in **equilibrium at $P_w Q_3$**
 - Domestic firms supplied up to Q_1 , while $Q_2 - Q_1$ was imported into the EU
- The implementation of the subsidy **lowered firms costs of production**, shifting the domestic supply curve from S_d to $S_{d+subsidy}$
 - Domestic firms increase output and market share from $Q_1 \rightarrow Q_2$
 - Imports reduce from $Q_1 Q_3 \rightarrow Q_2 Q_3$



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An Evaluation of Subsidies

- An evaluation of the **effectiveness of the use of subsidies** as a form of protectionism is best done by considering the impact on all of the relevant stakeholders



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The effect on different stakeholders can be considered by analysing each area of the international subsidy diagram

- The stakeholders affected are domestic and foreign producers, consumers, government, and society (welfare)

An Evaluation of the use of Subsidies to Protect Domestic Firms

Stakeholder	Explanation
Domestic Producers	<ul style="list-style-type: none"> Decreases costs of production Increases output from $Q_1 \rightarrow Q_2$ Revenue before subsidy was $f+g$ Revenue after subsidy is $b+c+f+g+h$ Increases international competitiveness



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Foreign Producers	<ul style="list-style-type: none"> ▪ Makes it harder for them to compete with domestic firms ▪ Their exports reduce from $Q_3 - Q_1 \rightarrow Q_3 - Q_2$ ▪ Revenue for foreign firms before the subsidy was $h+i$ ▪ Revenue after the subsidy is only i
Consumers	<ul style="list-style-type: none"> ▪ Consumers already benefitted from the lower world price and receive no further benefit
Government	<ul style="list-style-type: none"> ▪ This costs the government the amount of the subsidy - area $b+c$ ▪ There is an opportunity cost associated with every subsidy provided
Society (Welfare)	<ul style="list-style-type: none"> ▪ There is a welfare loss (area c) as more inefficient domestic producers are now producing at the expense of more efficient global producers

Examiner Tip

When evaluating the use of subsidies in essay responses, it is worthwhile considering both the length of time that the subsidy has been in place, along with the size of the subsidy.

If the subsidy is large and has been in place for a long time, the industry is likely to be a global monopoly such as the USA cotton industry. Their price is effectively the world price.

This is one reason why the WTO aims to limit export subsidies. They put small-scale farmers in developing nations out of business, often decimating the industry and thus increasing unemployment. Compared to fifty years ago, very few African countries now produce cotton. This is entirely down to the size and longevity of the subsidies in the USA.

4.2.4 Administrative Barriers



Your notes

An Explanation of Administrative Barriers

- There are many strategies that can be used to **create barriers to trade** using less obvious methods than tariffs, quotas and subsidies
 - **Health and safety regulations** e.g. in 2017 the EU put a new health regulation in place regarding the permitted level of *aflotoxins* in nuts. *Aflotoxin* levels are naturally higher in southern hemisphere countries and it effectively blocked the import of southern hemisphere nuts
 - **Product specifications** e.g. Canada specified that all jam imported into Canada needed to be in a certain size of the jar. Many countries do not usually manufacture jars in the required size
 - **Environmental regulations** e.g. in November 2021 new regulations were put in place in the EU and the USA to limit the amount of imports of 'dirty steel' - predominantly this is steel produced using coal-fired power stations which are prevalent in China
 - **Product labelling** can be expensive for firms to apply and may limit their desire to sell into certain markets
 - **Inefficient administrative systems** e.g. many border crossings in Africa still require physical paper copies to be submitted at each crossing with some companies claiming they have to provide in excess of 10,000 documents for a single journey