International Economics – Tutorials 2

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Bretton Woods Institutions: International Monetary Fund (IMF)

- Three main objectives:

- ➢ to promote international monetary cooperation;
- ➢ to facilitate the expansion of international trade;
- ➢ to promote exchange rate stability.

IMF

- The primary role of the IMF is providing short- and medium-term financial assistance to the members that have temporary problems with a balance-of-payments equilibrium.

- The resources for the IMF credits come from quota subscriptions paid by the members.

IMF

- Each member country pays the amount of money proportionate to its economic size that is measured by national income and trade volume.

- The size of quota is adjusted to the economic power of a country at intervals of 5 years.
- A 25% of quota is paid in SDRs (Special Drawing Rights) or in international currencies. The remaining 75% a country pays in its own currency.

IMF

- The quota determines the voting power of a country. In result the members of the Fund do not have an equal voice. The largest shareholders have big influences on the IMF’s decisions.
- In 2016 the major shareholders were **United States** (17.46 per cent of the total IMF quotas), **Japan** (6.48%), **China** (6.41%), **Germany** (5.60%), **France** (4.24%), **United Kingdom** (4.24%), **Italy** (3.17%), **India** (2.76%), **Russia** (2.71%), and **Saudi Arabia** (2.10%).

- Canada (2.32%), Spain (2.01%), Turkey (0.98%), Sweden (0.93%), Poland (0.86%), Azerbaijan (0.08%), Sudan (0.04%)

World Bank (WB)

- Main objective initially was to assist in the reconstruction and development of damaged economies by facilitating the investment of capital for productive purposes.

- Responsible for providing finance and advice to countries for the purposes of economic development and poverty reduction, and for encouraging and safeguarding international investments.

World Bank (WB) - group of five international organizations

1. **International Bank for Reconstruction and Development (IBRD)** lends to governments of middle-income and creditworthy low-income countries.
2. **International Development Association (IDA)** provides interest-free loans and grants to governments of the poorest countries.
3. **International Finance Corporation (IFC)** helps developing countries to achieve growth by financing investment, mobilizing capital in international financial markets and providing advisory services to business and governments.

World Bank (WB) - group of five international organizations

4. **Multilateral Investment Guarantee Agency (MIGA)** offers political risk insurance (guarantees) to investors and lenders.
5. **International Centre for the Settlement of Investment Disputes (ICSID)** provides international facilities for conciliation and arbitration of investment disputes.

International Monetary Fund	World Bank
• oversees the international monetary system	• seeks to promote the economic development of the world's poorer countries
• promotes exchange stability and orderly exchange relations among its member countries	• assists developing countries through long-term financing of development projects and programs
• assists all members – both industrial and developing countries – that find themselves in temporary balance of payments difficulties, by providing short- to medium-term credits	• provides to the poorest developing countries whose per capita GNP is less than $1,165 (2018) a year special financial assistance through the International Development Association (IDA)

International Monetary Fund	World Bank
• supplements the currency reserves of its members through the allocation of SDRs (special drawing rights)	• encourages private enterprises in developing countries through its affiliate, the International Finance Corporation (IFC)
• draws its financial resources principally from the quota subscriptions of its member countries	• acquires most of its financial resources by borrowing on the international bond market
• employs about 2,400 staff, 189 member countries	• has a staff of 9,000 from more than 170 member countries, 189 member countries

The General Agreement on Tariffs and Trade (GATT)

- The objectives of the GATT (1947) were to establish an orderly and transparent framework within which barriers to trade could be gradually reduced and international trade expanded.

- The principal mechanism for progress on trade liberalisation within the GATT has been periodic multilateral negotiating rounds.

- The primary focus of the GATT rounds has been the promotion of multilateral tariff reductions, and the extension of the agreed reductions to all members.

GATT/WTO

- The GATT was a set of rules, a multilateral agreement, with no institutional foundation, only a small associated secretariat.

- The World Trade Organization (WTO) came into being in 1995. It is the successor to the GATT.

- The WTO is the international organization dealing with the global rules of trade between nations.

- The WTO has **164** (July 2016) members accounting for over 95% of world trade. Over 20 others are negotiating membership.

GATT/WTO – Observers (22)

- Algeria, Andorra, **Azerbaijan**, Bahamas, Belarus, Bhutan, Bosnia and Herzegovina, Comoros, Equatorial Guinea, Ethiopia, Vatican, Iran, Iraq, Lebanese Rep., Libya, Sao Tome and Principe, Serbia, Somalia, **Sudan**, Syria, Timor-Leste, Uzbekistan.

Principles of the WTO's trading system

1. Trade without discrimination
2. Freer trade: gradually, through negotiation
3. Predictability: through binding and transparency
4. Promoting fair competition
5. Encouraging development and economic reform

Principles of the WTO's trading system

Trade without discrimination

- **Most-favoured-nation (MFN):** treating other countries equally. Countries cannot normally discriminate between their trade partners. If a country grants someone a special favour (such as a lower customs duty rate for one of their product) it has to do the same for all other GATT/WTO members.

- **National treatment policy**: treating foreigners and locals equally. Imported and locally produced goods should be treated equally - at least after the foreign goods have entered the market.

Principles of the WTO’s trading system

Freer trade: gradually, through negotiation

- Trade barriers coming down through negotiation.

Predictability: through binding and transparency

- Foreign companies, investors and governments should be confident that trade barriers (including tariffs and non-tariff barriers) should not be raised arbitrarily; tariff rates and market-opening commitments are “bound” in the WTO.

Promoting fair competition

- Discouraging “unfair” practices such as export subsidies and dumping products at below cost to gain market share.

Principles of the WTO's trading system
Encouraging development and economic reform

- The trading system should be more beneficial for less developed countries - giving them more time to adjust, greater flexibility, and special privileges.

- Decisions in WTO are typically taken by consensus among all member countries and they are ratified by members' parliaments.

- Trade friction is channelled into the WTO's dispute settlement process where the focus is on interpreting agreements and commitments, and how to ensure that countries' trade policies conform with them.

Principal forum for trade liberalisation

- Eight rounds of multilateral trade negotiations under the General Agreement on Tariffs and Trade (GATT) have significantly decreased trade barriers.

- Successive GATT rounds cut tariffs and liberalised trade.

GATT/WTO Trade Rounds, 1947-2010

Name of round	Period and number of parties	Subjects and modalities
Geneva	1947 (23 countries)	Tariffs: item-by-item offer-request negotiations
Annecy	1949 (33 countries)	Tariffs: item-by-item offer-request negotiations
Torquay	1950-1951 (34 countries)	Tariffs: item-by-item offer-request negotiations
Geneva	1956 (22 countries)	Tariffs: item-by-item offer-request negotiations
Dillon Round	1961-62 (45 countries)	Tariffs: item-by-item offer-request negotiations motivated in part by need to rebalance concessions following creation of the EEC (European Economic Community)
Kennedy Round	1964-67 (48 countries)	Tariffs: formula approach (linear cut) and item-by-item talks. Non-tariff measures: antidumping, customs valuation

GATT/WTO Trade Rounds, 1947-2010

Name of round	Period and number of parties	Subjects and modalities
Tokyo Round	1973-79 (99 countries)	Tariffs: formula approach with exceptions Non-tariff measures: antidumping, customs valuation, subsidies and countervail, government procurement, import licence, product standards, safeguards, special and differential treatment of developing countries.
Uruguay Round	1986-94 (103 countries in 1986, 117 as of end -1993)	Tariffs: formula approach and item-by-item negotiations. Non-tariff measures: all issues, plus services, intellectual property, preshipment inspection, rules of origin, trade-related investment measures, dispute settlement, transparency and surveillance of trade policies.
Doha Round	2001- (150 countries as of beginning 2007)	Tariffs: formula approach and item-by-item negotiations. Non-tariff measures: trade facilitation, rules, services, environment.

Tariffs

- A tariff is a tax imposed on goods when they are moved across a political boundary.

- Tariff rates vary across goods and services as well over time.

- **Import tariff** – levied on imports.

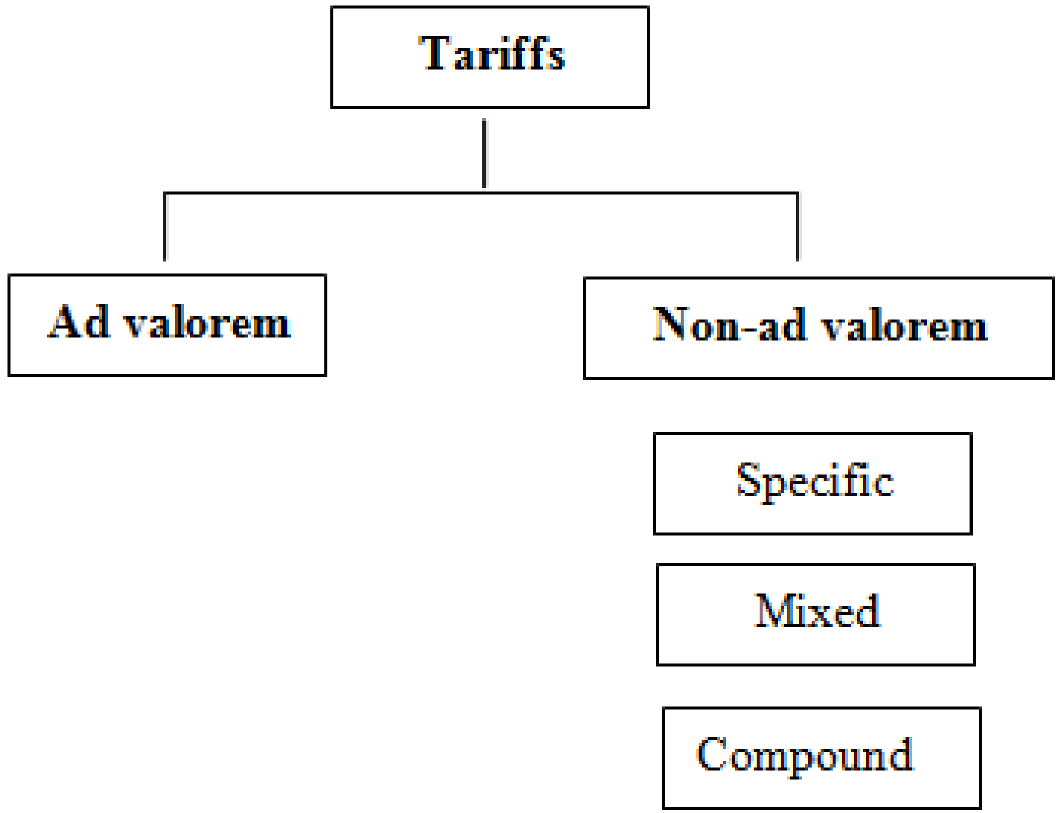
- **Export tariff** – levied on exported goods as they leave the country.

Why impose tariff?

- to raise revenue (a **revenue tariff** – a tariff imposed to generate public revenue),

- to protect domestic industries (a **protective tariff** is intended to artificially inflate prices of imports and "protect" domestic industries from foreign competition),

- to discourage consumption and imports (special case a **prohibitive tariff** – so high that no one imports any of the item) – prohibitive tariffs on used vehicles


Tariffs
Ad valorem
Non-ad valorem
Specific
Mixed
Compound

Different technical methods of assessing customs duties

- **ad valorem** – percentage of the value of the imported goods, e.g. 10 per cent of the value,

- **specific** – based on weight or volume of goods, e.g. 2 dollars per kilogram,

- **mixed** – ad valorem or specific – whichever is higher/lower,

- **compound** – ad valorem and specific, e.g. 10 per cent plus 2 dollars per kilogram or on another basis (technical tariff) e.g. according to percentage content of a product component (e.g. sugar or alcohol).

- For customs duties that are not ad valorem – **ad valorem equivalents** (AVEs) are calculated.

- An ad valorem equivalent is the equivalent in percentage terms of a specific, mixed, compound or other duty containing a specific element.

- AVEs can be calculated by two ways:

– the income method – custom revenues/commodities' values

– unit value method – specific tariff/value average

Effective rate of protection

- **Nominal tariff rate** is the rate of duty charged on the gross value of a given product.

- The impact of a tariff is often different from its stated amount.

- **Effective rate of protection -** the effective protection reflected in a tariff rate is the sum of the protection for the component parts of the final manufactured unit.

Effective rate of protection

- This concept implies that the "nominal" tariff rate of the finished good significantly understates the de facto protection for the value added in the production process.

- When tariff rates are low on raw materials and components, but high on finished goods, the effective tariff rate on finished goods is actually much higher than it appears from the nominal rate.

Example 1. (Effective rate of protection)

Ad valorem tariff on final good	40%	40%	40%	40%	40%
Ad valorem tariff on input	10%	10%	0%	10%	5%
Value of input as a % of the value of final good	40%	60%	60%	70%	90%
Effective rate of protection	**60%**	**85%**	**100%**	**110%**	**355%**

The protective effect of tariff based on the value added

$$ERP = \frac{v_T - v_W}{v_W}$$

where

v_T - value added after ad valorem tariff,

v_W - value added under free trade,

$$ERP = \frac{t_F - t_i \cdot a_i}{1 - a_i}$$

where

t_F - ad valorem tariff on final good,

t_i - ad valorem tariff on input,

a_i - value of input as a % of the value of final good.

Note: $v_W = p_F - p_i \cdot a_{Fi}$, $v_T = p_F(1+t_F) - p_i(1+t_i)a_{Fi}$

p_F - world price of good, p_i - world price of input,

a_{Fi} - number of units of input used in production of final good

$$ERP = \frac{p_F \cdot t_F - a_{Fi} \cdot p_i \cdot t_i}{p_F - a_{Fi} \cdot p_i} = \frac{t_F - a_{Fi} \cdot \frac{p_i}{p_F} \cdot t_i}{1 - a_{Fi} \cdot \frac{p_i}{p_F}} = \frac{t_F - t_i \cdot a_i}{1 - a_i}$$

where $a_i = \dfrac{a_{Fi} p_i}{p_F}$

Perfect Competition (Perfect Market)

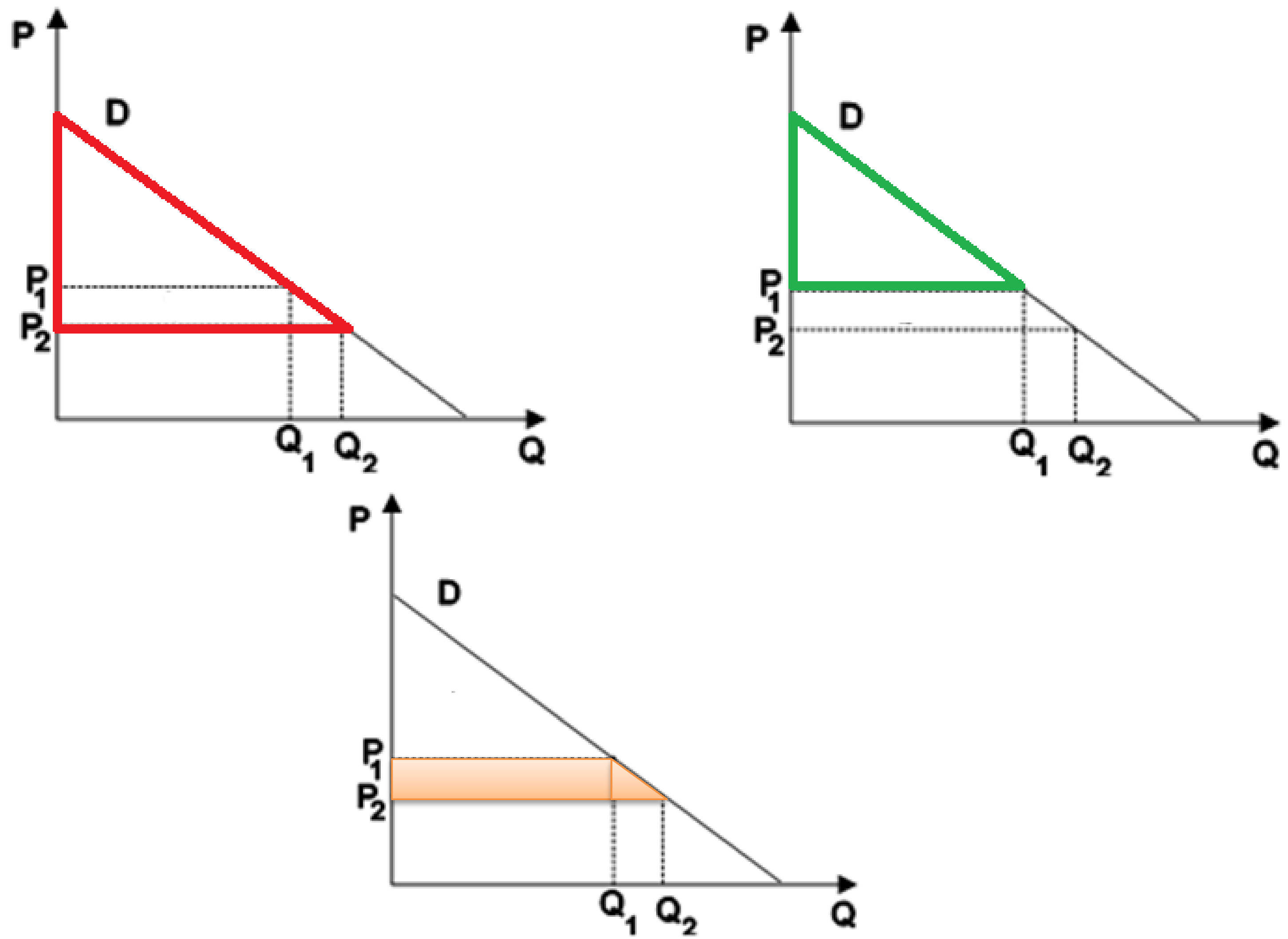
- Perfect competition describes a market in which there are many small firms, all producing homogeneous goods.
- Equal access to production technology.
- Firms aim to maximize profits.
- No firms with market power to set prices.
- The firm takes prices as a given in both its output and factor markets.
- No entry/exit barriers.
- Perfect market information.

Consumer surplus

- Consumer surplus – the monetary gain obtained by consumers when they can purchase a good for a price that is less than the highest price that they would be willing to pay.

- A reasonable approximation to theoretically ideal welfare measure.

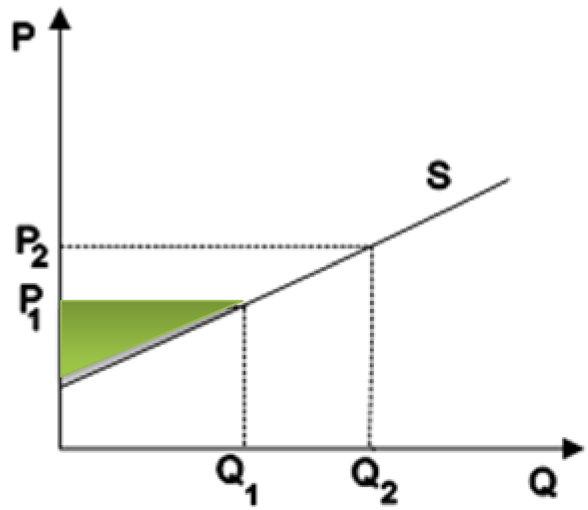
Consumers' surplus

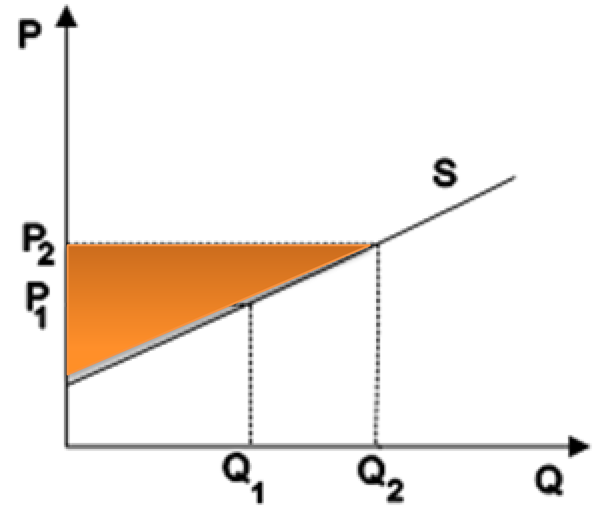


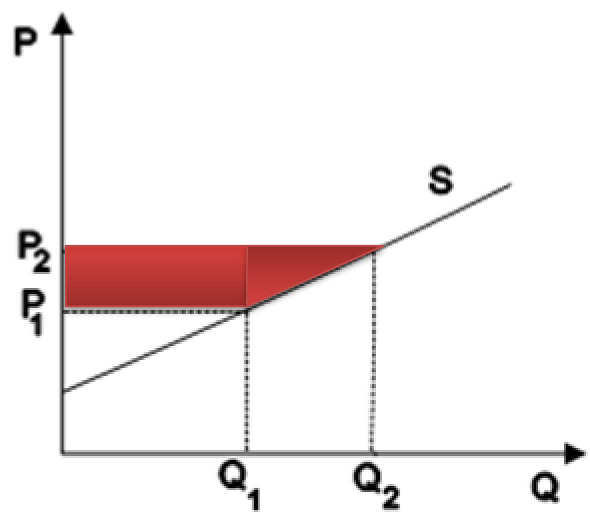
Producer surplus

- The amount that producer benefits by selling at market price that is higher than the least that they would be willing to sell for.

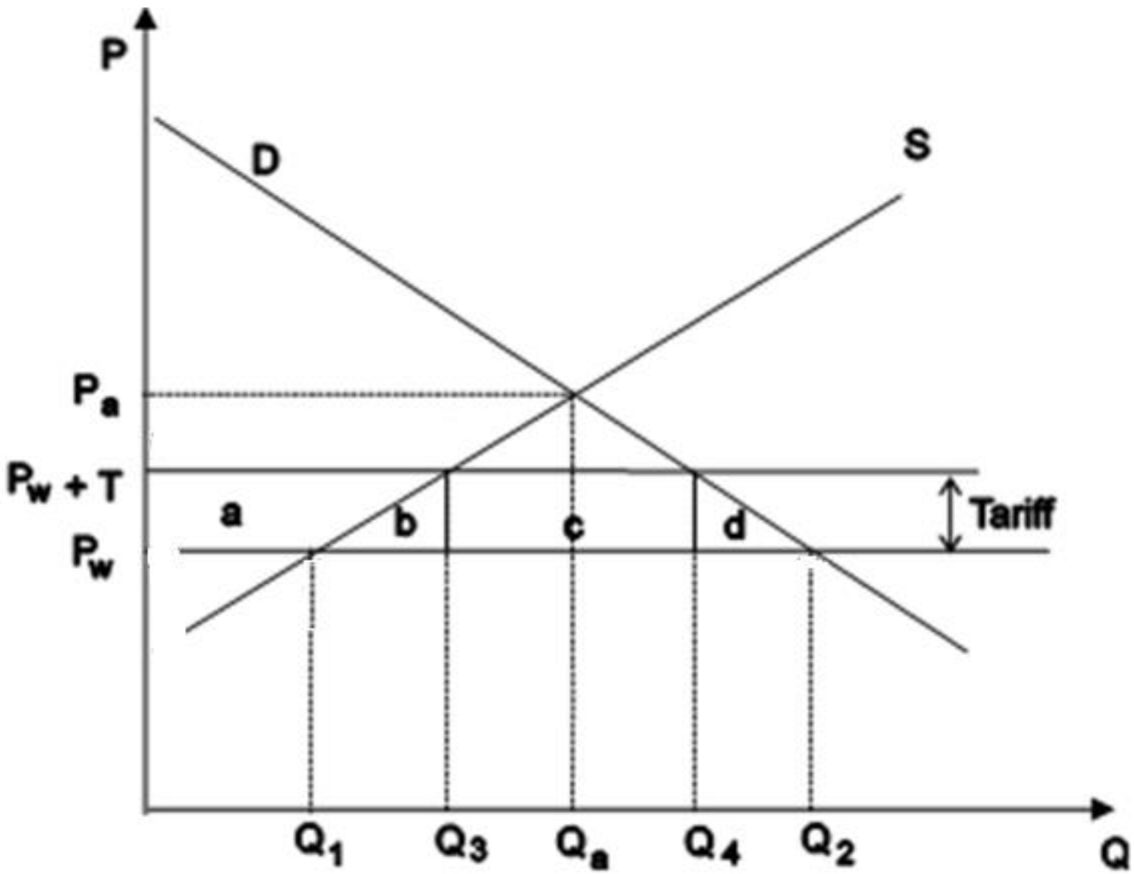
Producers' surplus







Effects of tariff under perfect competition
The small country case



Welfare analysis:

Consumers' surplus: -(a+ b+ c+ d)

Producers' surplus: +a

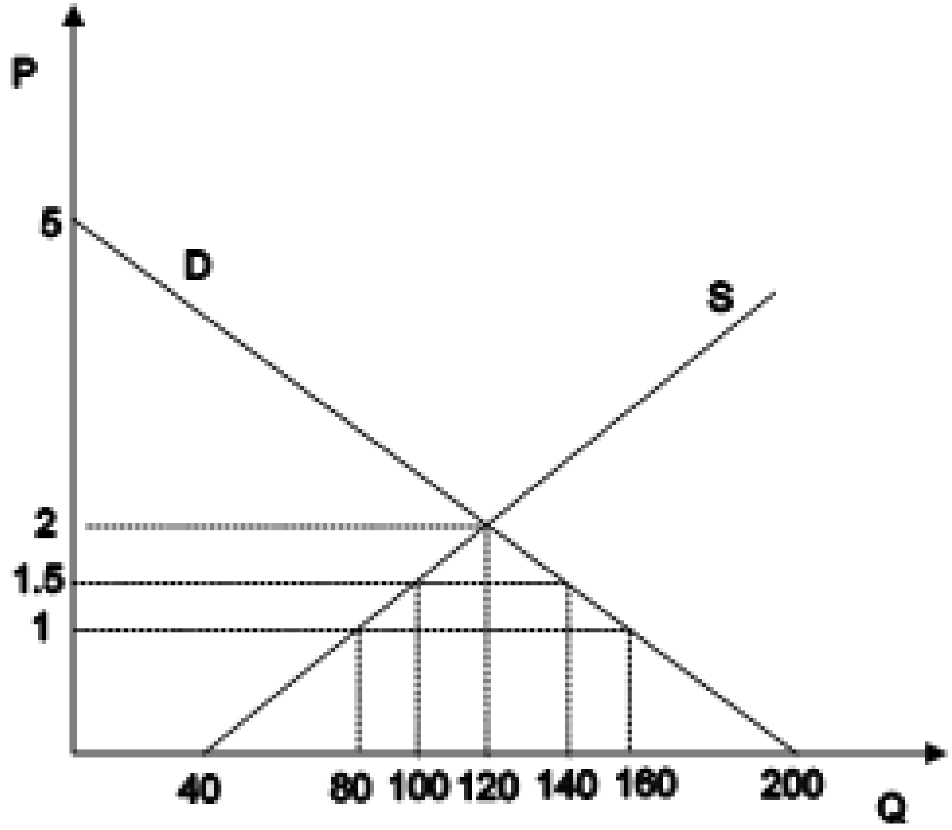
Government revenue: +c

Net welfare effect: -(b + d)

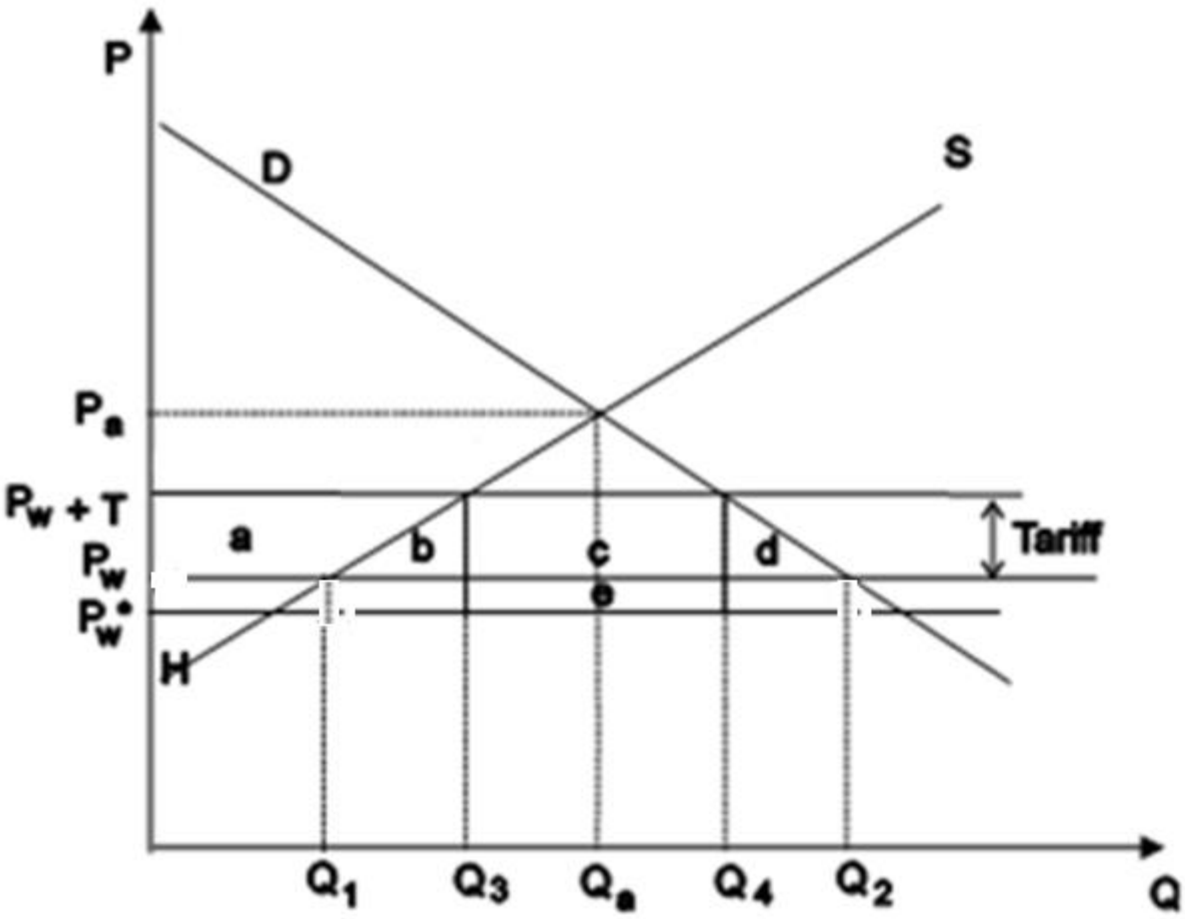
Example (A small country)

Demand	$D = 200 - 40P$
Supply	$S = 40 + 40P$
Autarky equilibrium price	2
Autarky equilibrium quantity	120
World price	1
Specific tariff	0.5
Consumers' surplus	-75
Producers' surplus	45
Government revenue	20
Net welfare effect	-10

Graphical illustration



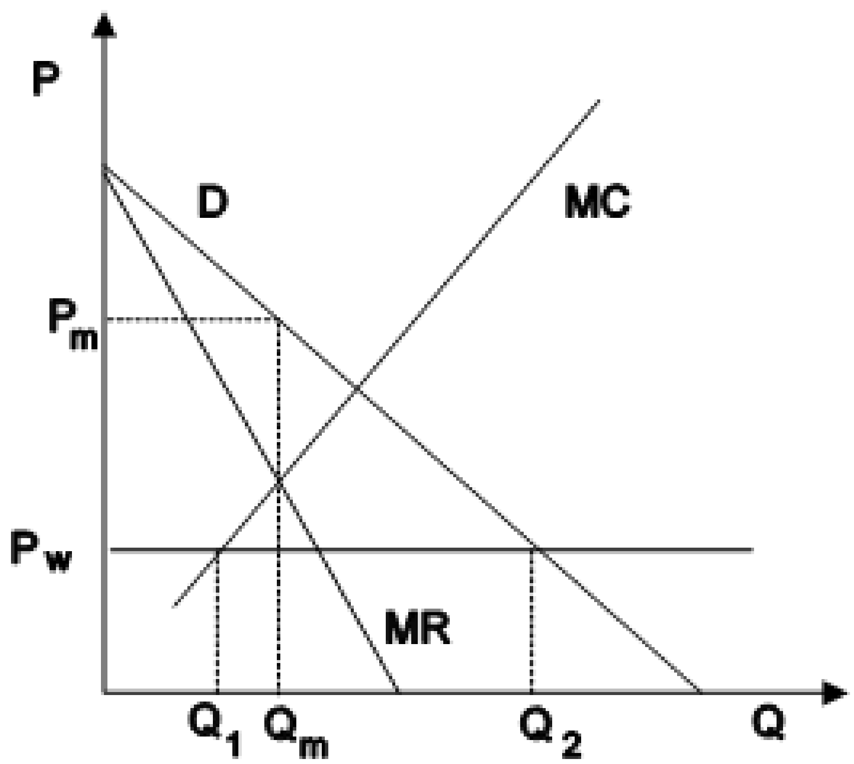
The large country case



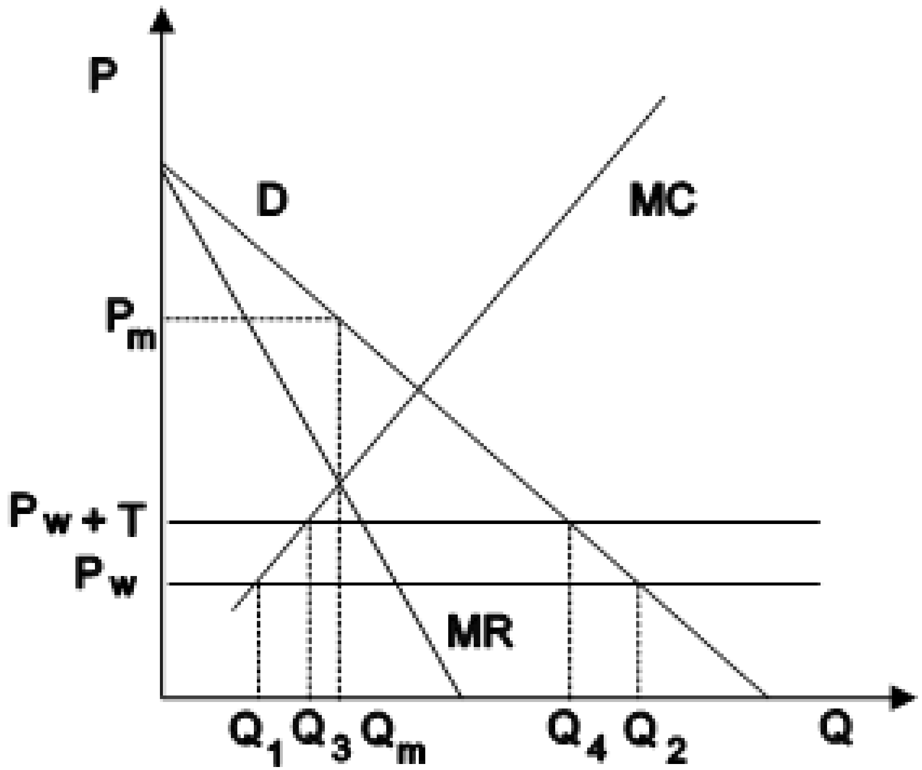
Monopoly

- In a monopoly there is one seller of the good which produces all the output.
- Price maker – a decides the price of the good or product to be sold.
- High barriers to entry – other producers are unable to enter the market of the monopoly.
- Economic (economies of scale, capital requirements, technology) and legal (patents, copyrights) barriers.
- Firm aims to maximize profits.

A monopoly and tariff
(domestic monopoly)



Free trade forces a monopoly to behave like a competitive firm



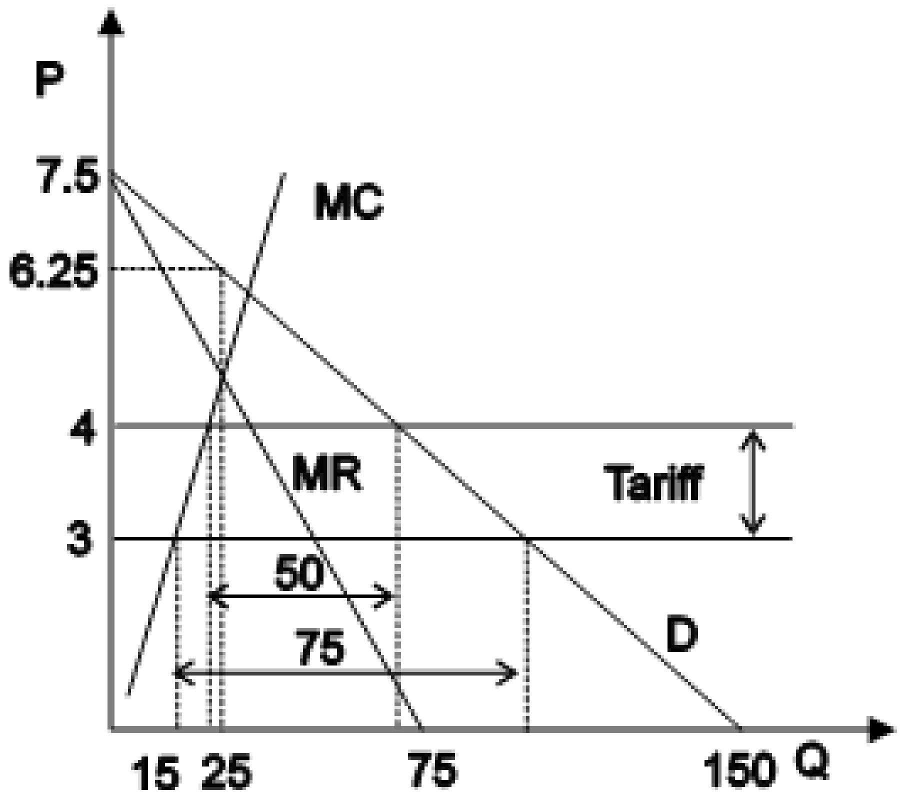
Example (Monopoly and tariff)

Demand	$D = 150 - 20P$
Marginal revenue	$MR = 7.5 - 0.1Q$
Marginal costs	$MC = 0.2Q$
Optimal output ($MR = MC$)	25
Monopoly price	6.25
World price P_W	3
Monopoly output ($P_W = MC$)	15
Import	75
Specific tariff	1
Monopoly output	20
Import	50

Note:

$$P = 7.5 - \frac{1}{20}Q, \qquad TR = P \cdot Q = \left(7.5 - \frac{1}{20}Q\right)Q, \qquad MR = \frac{d(TR)}{dQ}$$

Graphical illustration



Import quotas

- Import quotas are limitations on the quantity of goods that can be imported into the country during a specified period of time.

- There are two basic types of quotas: **absolute** quotas and **tariff-rate** quotas (TRQs).

Tariff-rate quotas (TRQs)

- **Tariff quotas** (tariff-rate quotas) - lower tariff rates for specified quantities, higher (sometimes much higher) rates for quantities that exceed the quota.

- In March 2002, the United States imposed tariff-rate quotas of about 30 percent on most imported steel above set quotas. This measure is expected to reduce steel exports from East Asian countries, particularly from Japan and Korea.

Tariff-rate quotas (TRQs)

- 1993 – the EU's regulatory regime for imported bananas
- ACP (Africa, the Caribbean, the Pacific) bananas – duty-free entry up to a celling of 857,000 tons, imports in excess of this amount paid 750 ECUs per ton.
- Non-ACP bananas – duty of 100 ECUs per ton on imports up to 2 million tons and 850 ECUs on imports above that amount.
- 33.5% of the 2 million tons of non-ACP bananas was reserved for European marketing firms

Tariff-rate quotas (TRQs)

- 5 Latin-American banana producing countries (Colombia, Costa Rica, Guatemala, Nicaragua, Venezuela) – GATT dispute settlement proceedings in June 1993.
- Framework Agreement – the non-ACP quota 2.1 million tons in 1994, 2.2 million tons in 1995, 75 ECUs per ton (except Guatemala); above quota duty at 765 ECUs per ton

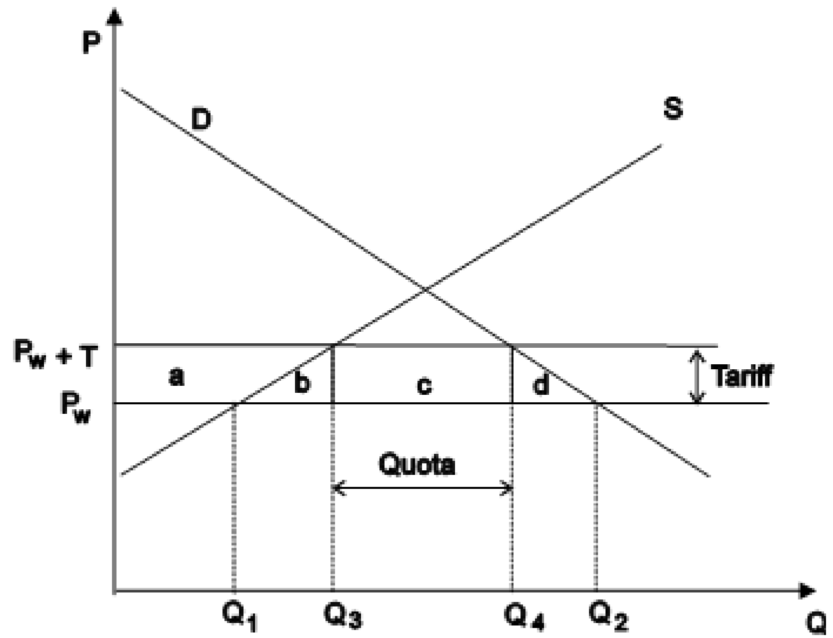
There are three basic methods used to administer import quotas

- **First-Come, First-Served** – The government can allow imports to enter freely from the start of the year until the quota is filled. Once filled, customs officials would prohibit entry of the product for the remainder of the year.

- **Auction Quota Rights** – The government can auction quota rights.

- **Give Away Quota Rights** – The government can give away the quota rights by allocating quota tickets to appropriate individuals.

Import quotas - a small country case



Welfare analysis:
Consumers' surplus: -(a+b+c+d);
Producers' surplus: +a;
Licence owners or a government: +c;
Net welfare effect: -(b+d)

With perfect competition, an import quota will raise domestic prices by the same amount as a tariff that limits imports to the level specified in the quota.

The choice between a tariff and a quota depends on several different concerns

- The revenue effects

- Administrative costs of tariffs and quotas

- The protective effect the policy has on the import-competing industries

The revenue effects

- A tariff has an immediate advantage for governments in that it will automatically generate tariff revenue.

- Quotas may or may not generate revenue depending on how the quota is administered. If a quota is administered by selling quota tickets (i.e., import rights) then a quota will generate government revenue, however, if the quota is administered on a first-come, first-served basis, or if quota tickets are given away, then no revenue is collected.

Administrative costs of tariffs and quotas

- Tariff involves product identification and processing of fees.

- Quota administration involves product identification and some method of keeping track, or counting, the product as it enters the country in multiple ports of entry. It may also involve some method of auctioning or disbursing quota tickets.

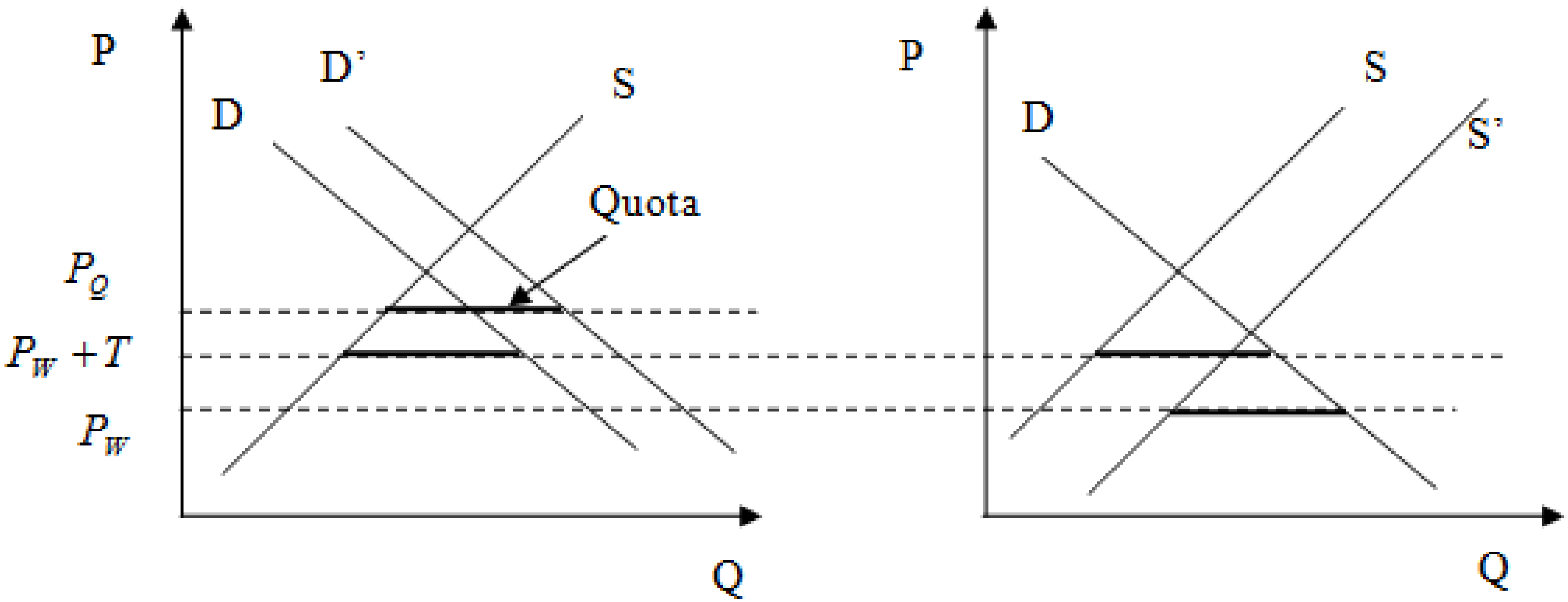
The protective effect the policy has on the import-competing industries

- Quotas are more protective for the domestic industry because they limit the extent of import competition to a fixed maximum quantity. The quota provides an upper bound to the foreign competition the domestic industries will face.

- In contrast, tariffs simply raise the price, but do not limit the degree of competition or trade volume to any particular level.

- Although tariffs and quotas are generally equivalent to each other in terms of their static price and welfare effects, this equivalence does not remain true in the face of market changes.

The Protective Effects of Tariffs vs. Quotas with Market Changes (a Small Country Case)



An increase in domestic demand

- A tariff – the increase in domestic demand will leave the domestic price unaffected and increase the level of imports.

- A quota – the increase in domestic demand causes the domestic price to rise up in order to maintain the import level unchanged.

- The quota is more protective for domestic producers than a tariff.

An increase in domestic supply

- A tariff – the increase in domestic supply will leave the domestic price unaffected and reduce the level of imports.

- A quota – the increase in domestic supply causes the domestic price to fall back to the free trade level in order to maintain the import level unchanged.

- The tariff is more protective for domestic producers than a quota in the face of an increase in domestic supply.

- In situations where market changes cause a decrease in imports, **a tariff** is more protective than a quota. This occurs if domestic demand falls, domestic supply rises, the world price rises, or some combination of these changes occurs.

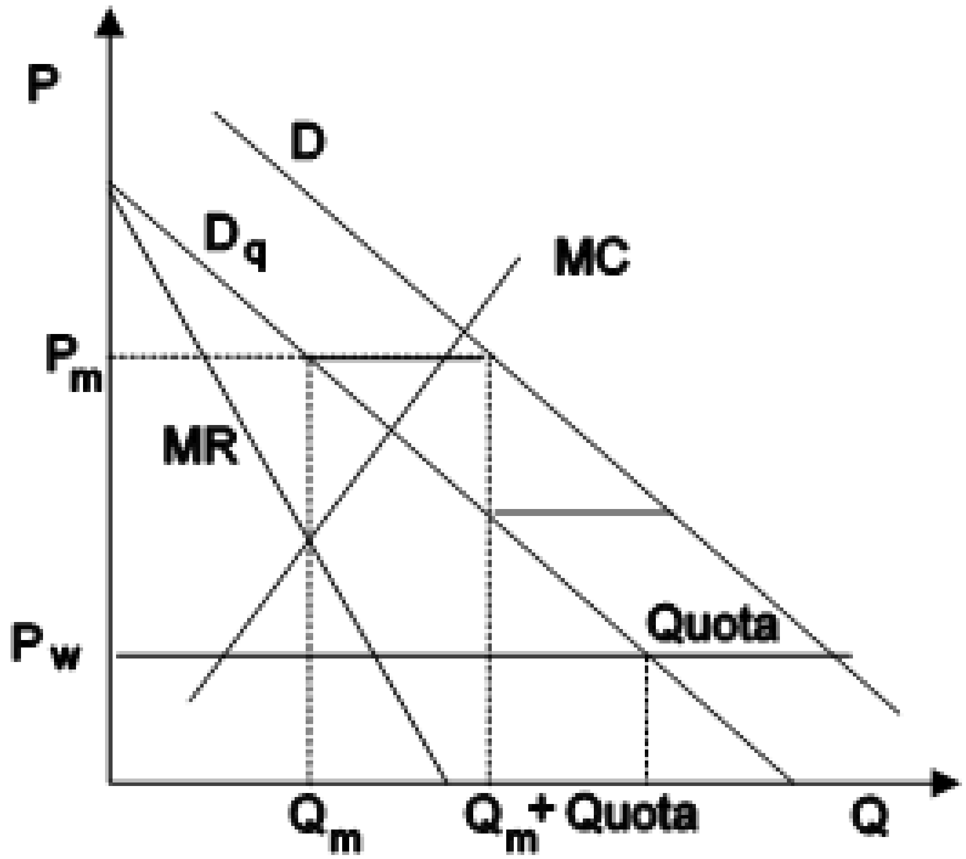
- Since import-competing firms are generally more concerned about situations where imports may increase, industry preferences usually favour **quotas** over tariffs since quotas will be more protective in these situations.

A Monopoly and a Quota

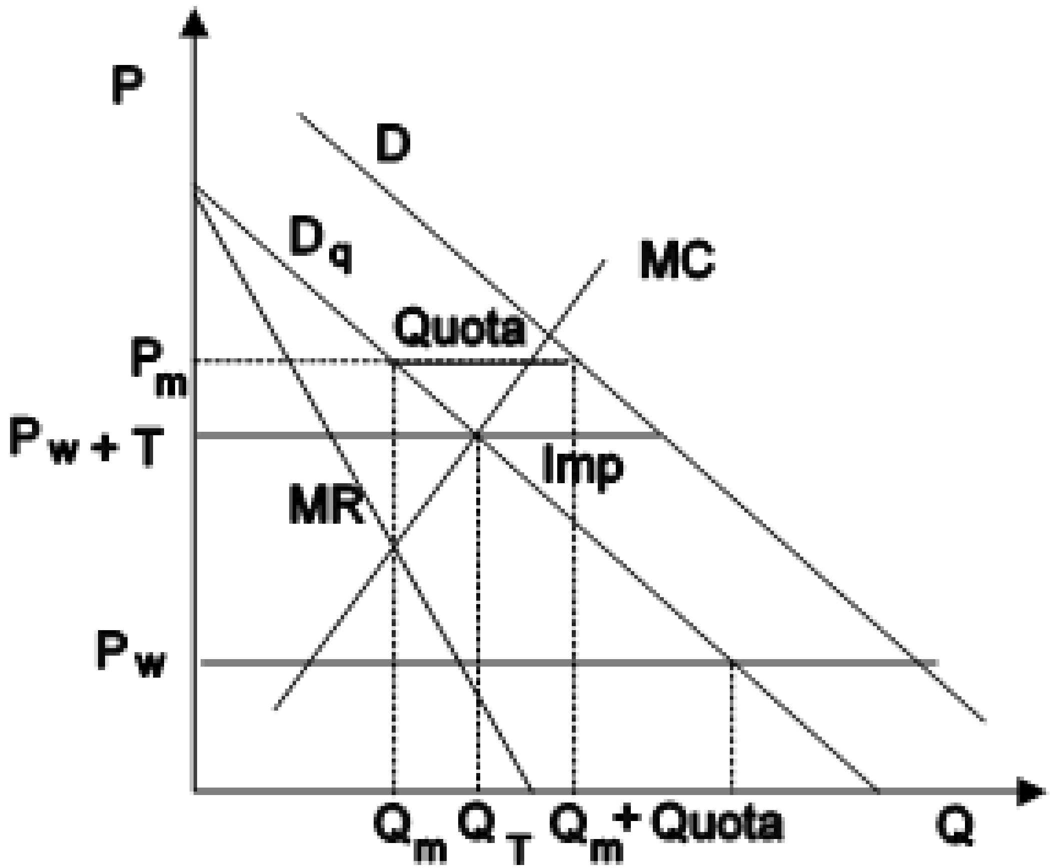
- Under domestic monopoly, a quota leads to lower domestic output and a higher price than a tariff that yields the same level of imports.

- A tariff protection is less restrictive than a quota protection.

A Monopoly and a Quota



A Tariff versus a Quota



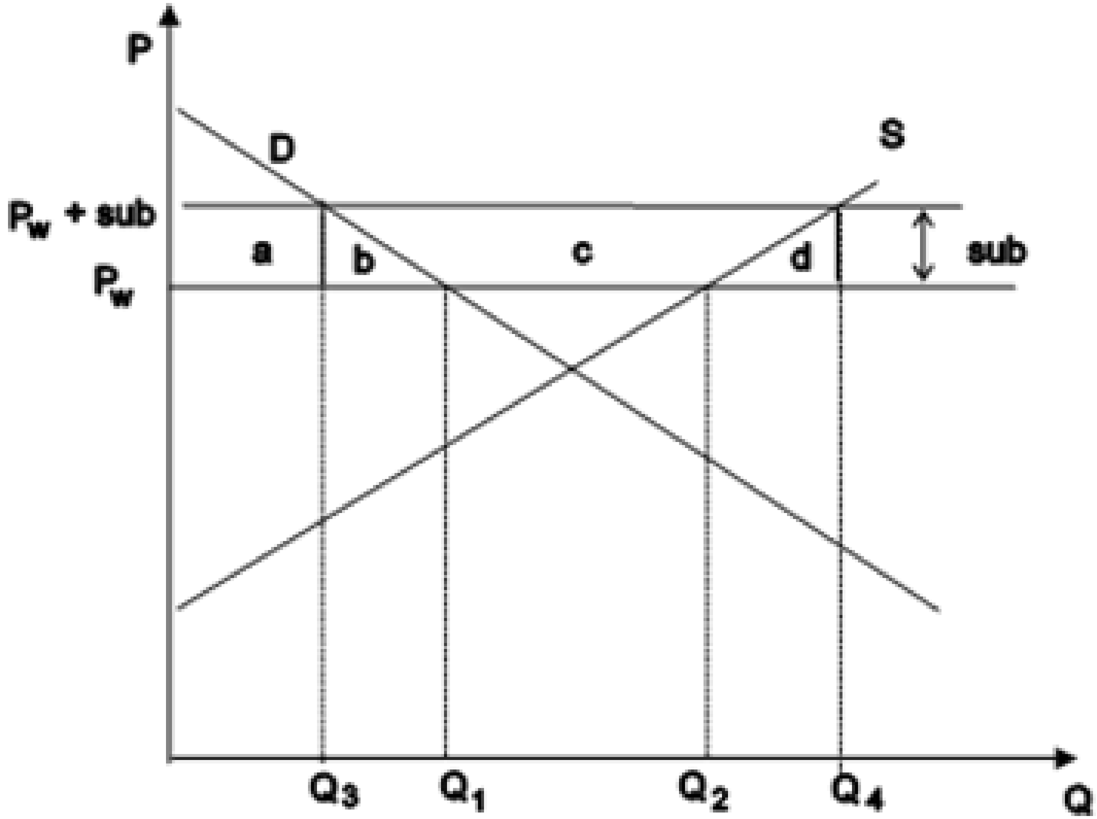
Export Subsidies

- Export subsidies are payments made by the government to encourage the export of specified products.
- The most common product groups where export subsidies are applied are agricultural and dairy products.

- Country's subsidies can hurt: a domestic industry in an importing country, rival exporters from another country when the two compete in third markets, exporters trying to compete in the subsidizing country's domestic market.

- If domestic producers are hurt by imports of subsidized products, **countervailing duty** can be imposed.

Export subsidies - the small country case



Welfare analysis:
Consumers' surplus: -(a+b)
Producers' surplus: +(a+b+c)
Government revenue (gov subsidies): -(b+c+d)
Net welfare effect: -(b+d)