21 PROTECTIONISM

21.1 The case for protectionism

Learning outcomes

- Discuss the arguments in favour of trade protection, including the protection of domestic jobs, national security, protection of infant industries, the maintenance of health, safety and environmental standards, anti-dumping and unfair competition, a means of overcoming a balance of payments deficit and a source of government revenue.

Protectionist barriers prevent free trade. Once built, they are difficult to tear down.

Despite the obvious gains made possible by trade, all countries try to protect some industries from unpredictability and the threat of foreign competition. This is protectionism. It can take many forms and is waged to varying degrees. Some of the most ardent free-trade countries still shelter or support large portions of their economies with a variety of protectionist methods. Other countries openly promote protectionism as their fundamental economic growth policy. Why is protectionism so popular? This chapter explores the arguments around protectionism and evaluates the effects of protectionist policies.

Protectionism is the placement of legal restrictions on international trade, and includes tariffs, quotas, subsidies and other bureaucratic barriers.

Protectionist measures run counter to the principle of comparative advantage explained in Chapter 20, where countries specialize in the goods with the lowest opportunity cost, and then trade those goods with others. The term 'free trade' describes the process of lowering protectionist barriers and thereby realizing those gains from trade. Countries work out these agreements through tedious negotiation at the global level through the World Trade Organization (WTO) and on the regional level through trade blocs such as the European Union, the North American Free Trade Agreement (NAFTA) or Mercado Común del Sur (MERCOSUR), also known as the Common Market of the South.

Arguments for protectionism

The proponents of protectionism argue that their vulnerable domestic markets face unfair and damaging foreign competition. As global trade has expanded dramatically in recent decades, many of the following arguments continue to be raised, especially in times of economic turmoil.

To protect domestic employment

Among the most loudly promoted rationales for protectionist measures is that they will keep local jobs safe from foreign competition. It is most likely to be heard from industries that are in a 'sunset' stage of relative decline compared to their international competition. They typically argue for more time to adjust to the market, to modernize and improve efficiency. Rather ironically, this kind of modernizing would usually eliminate many of the jobs these industries profess to want to save. However, in most situations, these firms are in long-term decline and are merely holding off an inevitable loss of market share. Nevertheless, industries threatened in this manner will often see management and labour unions join forces to press parliament or congress for protectionist advantages.

To protect sunrise or infant industries

Infant industries are those that are newly developed and have not had an opportunity to develop the economies of scale and low costs that are achieved by selling to a large market.

Many countries, perhaps especially less developed countries (LDCs), believe they have industries that are future champions. Countries can argue that their industries are as yet underdeveloped, and have not grown large enough to achieve lowered costs through economies of scale. These industries should therefore be sheltered until they can face on more equal terms the powerful multinational corporations and highly developed industries of rich countries. The strategy is to block imports with tariffs and other trade barriers. It may also include subsidies to the infant industry. In theory, these firms will eventually grow strong enough to compete without such assistance.

Advocates of the sunrise industry perspective point to the success of countries that have developed dramatically in a relatively short period, citing the Asian tigers of South Korea, Singapore, Taiwan and Hong Kong. Major industrial powers like the US, Germany and others have histories of protecting their heavy industries as they grew. These countries identified potential growth industries and supported them with state subsidies, as well as discouraged domestic consumption by levying high import tariffs. Critics take issue with these results, citing evidence of higher education levels and lower wages as the drivers of productivity in the tiger economies in particular. At the same time, critics of the sunrise industry view also note that most sunrise industries never grow up fully, and often require state support long after their infancy or even adolescence has passed. These dependent firms, they argue, will continue to draw government subsidies and will cry out for protectionism long into the future.

To counteract relative domestic tax differences

Some economists have recently argued that domestic tax policies can reduce or enhance the competitiveness of a country's exports. Countries that rely heavily on value added taxes have a competitive advantage over those that do not sell their goods in this system. It is said that where a country does not have VAT, the tax burden falls on domestic producers in other ways (payroll taxes, for example), ways that are not directly reflected in the price. When a VAT country exports its goods to a non-VAT country, it sends goods that have less of a built-in tax burden than the domestic goods of the non-VAT country.

Furthermore, when a non-VAT country tries to export to a VAT country, its goods carry with them a much higher built-in tax burden.

For example, an electric fan from a VAT country might cost $20 domestically, including the VAT. The non-VAT country might also produce an electric fan that would sell domestically at $20. When the fan with VAT is exported to the world market for fans, the VAT comes off so the export price is $17. Meanwhile, the non-VAT country would still be selling its electric fans at $20, because the payroll and other taxes are embedded into the price.

Advocates of tariff duties argue that the extra levies merely equalize tax differences and make competition fairer rather than distorted. However, it should be noted that it can be very difficult to determine the relative tax differences between countries and within specific industries.

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To prevent the dumping of foreign goods onto the domestic market

Dumping occurs when one country exports goods at a price below their average costs (Figures 21.1 and 21.2). This implies that exporters are losing money on these goods and are therefore preying on domestic producers hoping to steal away domestic consumers with unsustainably low prices. Dumping does occur, although with perhaps less frequency than complaining countries would admit. Some firms dump goods in an attempt to drive competition off of the market. The dumping firms then raise prices when domestic competition has been destroyed. Dumping firms might also be selling off surplus goods, having extracted higher prices for them in their domestic markets. For example, in recent years, the sell-off of excess clothing and textiles to African countries has prompted cries of dumping from domestic clothing makers there. If this were only an occasional instance, there would be little harm done. But when the practice is sustained over time, long-term damage to domestic sellers can occur. In contrast, the benefit to domestic consumers, in the form of cheaper clothes in the long run, is debatable.

Countries which believe they are victims of dumping can take their case to the WTO. Allegations of dumping, however, have proven difficult to confirm. Across countries, wide

Dumping is the selling of goods to another country at a price below the original domestic production costs.

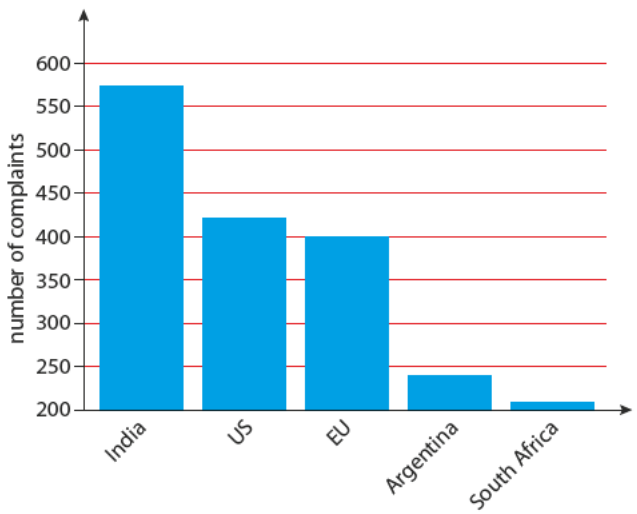

Figure 21.1
Dumping complaints: countries filing most complaints, 1995–2003.

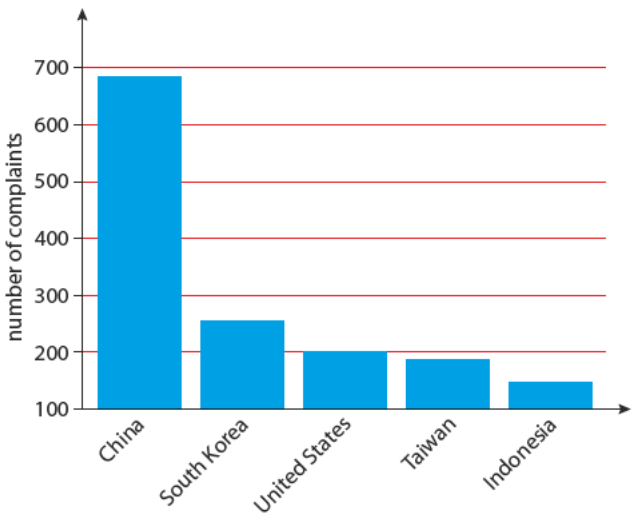

Figure 21.2
Dumping complaints: countries most accused of dumping, 1995–2003.

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differences in cost structures, as well as a lack of transparency and uniform accounting procedures, can make the calculation of relative costs exceptionally complicated. If one country wins a dumping complaint against another in the WTO, it can establish peremptory protectionist measures against the offender. However, this approach, as with any escalation of protectionist barriers, can lead to bitter and counter-productive trade wars.

To diversify the production base of a developing country

Many poor countries export a limited range of goods, and typically these goods are basic commodities. When the market price drops dramatically, this can cause significant loss of income for the country that relies on it. As a result, it is argued that some poor countries would benefit from selectively protecting some domestic markets in an attempt to diversify the economic base. With such protection, perhaps for sunrise industries, the country would be less vulnerable to wide swings in global market prices for their goods.

This argument, like most others, ignores the benefits gained by comparative advantage by demonstrating the risks of over-specialization. It also values a form of economic security rather than income gains. At the same time, it is understandable that any country would not want its entire economic future to be dependent on one industry. Brazil in the 1960s feared that coffee would be its only viable export, a situation that currently concerns Ethiopia. Furthermore, where these countries rely on extraction industries like mining, the worry can become rather acute as the resource is depleted.

To enforce product standards

Product standards exist to protect consumers from hazardous products as well as to ensure a reputation of quality production across an industry. These standards are likely to raise the cost of production. In recent years, countries have used product standard rules to challenge the import of goods, arguing that those products threaten the national safety or health. These claims can be derived from scandals in the news, such as the poisonous dog food and toothpaste produced in China in 2008. Or they can be based on disputed scientific claims about new methods of production, such as the long-running conflict over US hormone-injected beef. Several European countries, as well as Japan, have restricted such imports from the US, citing public health concerns.

To raise government revenue

A nation can raise revenue through a variety of tax methods. In poor countries, where income tax compliance is low, customs duties can provide a vital source of money. Nevertheless, the additional taxes still distort the market by taxing goods that are wanted or needed by the domestic population. By raising import prices, they may also limit the importation of important resources needed for growth and development to flourish by taxing needed capital goods or health products.

To protect against unfairly low labour costs

A popular argument among wealthy countries is that many imported goods are produced at wage rates far below those paid in their own domestic industries. This argument can be further extended to include hiring and working conditions that would be considered unacceptable at home. The combination of lower wages and reduced labour standards makes it impossible for industries at home to pay a living wage to their workers and provide them with safe and reasonable work environments.

However, for many countries a surplus of labour is their primary comparative advantage, allowing them to produce competitively in industries where they may lack technological knowledge or the latest capital equipment. The Chinese coastal town of Datang has become known as Sock City for its massive share of the global sock market. Many of Datang's workers sewed socks by hand in the 1970s, and the industry grew in large part because of its labour-cost advantage. All the while, China and other low-cost labour markets have won this share from Europe and the US – countries with a high labour cost.

To protect strategic industries

Plausible arguments can be made that military or defence needs should be produced domestically for security reasons. Buying sophisticated telecommunications equipment from foreign suppliers, for example, could make a country vulnerable if relations grow strained between the buying and selling countries. This argument can be used, less convincingly, to protect commodity industries such as food and metals. In these instances, it is more likely to be a case of protection of domestic employment or outright fears of foreign competition than legitimate strategic worry.

To overcome a balance of payments deficit

The balance of payments measures the flow of money into and out of a country. The export and import of goods and services, called the trade balance, is normally a major part of that accounting. Therefore, countries that find they are spending excessively on imported goods, thereby worsening their trade deficit, may enact protectionist policies to address this imbalance.

This approach, called expenditure-switching, is regarded by most economists as only a temporary solution. While it may lower imports for a short time, the structural problems that are causing the imbalance are not addressed by this policy. In the meantime, higher tariffs or stricter trade barriers continue to distort trade and deny the potential gains from comparative advantage.

To improve the terms of trade

Terms of trade is defined in detail in Chapter 25. Briefly, it is the ratio of export prices to import prices. The idea is that a large country might block access to its market with a tariff that could harm import demand enough to reduce demand for the imported good and reduce the price of those imports. For this to be true, the reduction of demand must outweigh the increased price effect of the tariff. The relatively small gains in terms of trade are only true for larger countries, however. It is also debatable whether countries would want to antagonize smaller neighbours over such limited gains. The weakened relations between the two countries could lead to retaliation and an escalating trade dispute.

As trade globalizes, the share of trade (as measured by exports) is likely to shift from region to region, country to country. Figure 21.3 (overleaf) shows the regional changes from 2000 to 2007. Remember that the shares of the various regions are derived from an ever-growing export market. In other words, a region may lose a portion of its export market share but still be exporting more in absolute terms because overall global trade is growing.

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To access Worksheet 21.2 on a call for protectionism, please visit www.pearsonbacconline.com and follow the onscreen instructions.

Sometimes, protectionism serves no purpose whatsoever. The US has had a shoe tariff since the 1930s. And what has happened over the years is that the world's shoe production has moved to China. The tariff, still in place today, protects no one – it simply harms American shoe consumers.

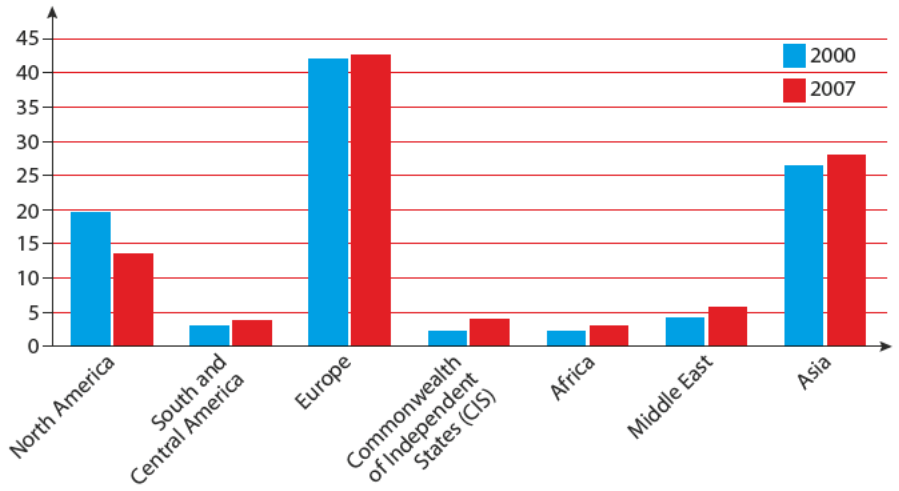


Figure 21.3
Shares of world exports by region.

EXERCISES

1	Compare the regional distribution of world exports shown in Figure 21.3. Would you expect, based on each region's population size, these results? Why?
2	To what degree have the shares of world exports changed between 2000 and 2007? Who has been gaining and who has been losing out?
3	Based on the data, can you infer which regions might be experiencing more trade disputes?

21.2 The case against protectionism

Learning outcomes

- Discuss the arguments against trade protection, including a misallocation of resources, the danger of retaliation and 'trade wars', the potential for corruption, increased costs of production due to lack of competition, higher prices for domestic consumers, increased costs of imported factors of production and reduced export competitiveness.

Arguments against protectionism

While Chapter 20 outlined the virtues of free trade, this section deals with the specific disadvantages of protectionist policies.

Misallocation of resources

Countries that protect declining industries compel their consumers to pay higher prices. This is an unnecessary misallocation of income to inefficient producers. Furthermore, because such industries are larger than they would otherwise be, they draw more workers and capital than would occur under free trade conditions. It follows that industries with the potential to realize their comparative advantage do not get these workers, nor the benefit of access to capital. It all goes to the inefficient but politically connected dinosaur firm.

Escalation to a trade war

What might start out as a dispute over subsidies or unfair bureaucratic barriers can degenerate quickly into a damaging trade conflict. When this occurs, trade can grind to a halt and economic growth is imperilled. This kind of escalation took hold during the Great Depression, as desperate governments resorted to protectionism as a way to prevent unemployment from deepening. Many economists have blamed this rapid shutdown of world trade as a major factor in the entrenchment of the crisis.

In the more recent troubles of 2008, trade complaints grew rapidly, while many governments and the WTO urged everyone to stay calm and avoid sparking a round of retaliatory policies. Despite a few isolated incidents of a tariff or quota, trade remained largely as free as it was before the crisis. Though it may seem paradoxical that WTO rulings actually allow retaliatory policies, it is believed that the WTO's role in adjudicating trade disputes tends to lower the chance of bad policy being made in the heat of the moment.

Protectionism as a corruption magnet

Industries that appeal for protection have a distinct economic interest in securing as much of it as they can. Higher tariffs mean more revenue for those producers, which creates a potentially very large incentive to bribe lawmakers to enact such laws. An industry that gets $300 million in extra profits from a quota against their competitor can surely spare some of that money to help their political allies. This opens the door to special political favours for any constituency, and erodes the integrity of the government.

Domestic complacency causes higher prices and costs

Protected firms quickly understand that their real profits come from staying protected, and thus put more energy into persuading the public and politicians of their case. They have less of an incentive to actually modernize or innovate for greater efficiency. After all, that would weaken their case for assistance the next time the laws are up for renewal. With such poor incentives, firms tend to be complacent and resist change. Thus, consumers and firms that buy from the protected firm pay higher prices. These higher costs, if borne by domestic producers, harm the ability of other domestic firms to supply products, reducing potential output. For consumers, this can result in a lower standard of living, especially when the protected goods are necessities.

Higher import costs

Protectionist measures directly affect the firms and consumers who buy imported goods. These higher prices might drive some imports out of the market entirely, relegating domestic producers and consumers to higher prices and possibly inferior quality goods. Again, these costs cause lower output levels for firms and lower standard of living for consumers.

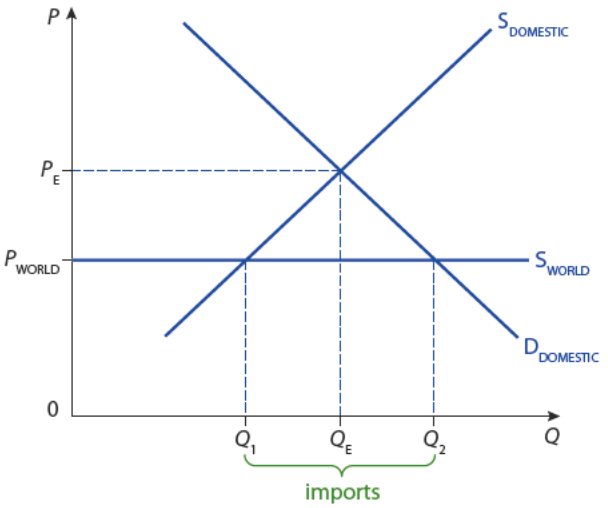
Reduced export competitiveness

Firms that use imported resources pay higher costs. Firms that hope to export suffer the indirect harm of having workers and resources (capital) drawn away by inefficient producers. These related effects suggest that protectionism can corrode seemingly unrelated export-based businesses. A recent example occurred when China expanded its quota on cotton imports, allowing in more cotton than ever before. This occurred under pressure from textile makers who were paying ever-higher prices on a market protected by strict quotas.

Gains from trade: from closed economy to free trade

Before examining the types and effects of protectionism, let's look briefly at the gains from trade. Figure 21.4 shows a closed economy domestic market price and quantity at P_E and Q_E. Were this market open to trade, foreign suppliers would supply at the world price of P_{WORLD}. This price is established by a multitude of sellers and buyers worldwide. This means that the domestic market for this country, being a relatively small piece of a large market, can import as much as it wants of the product at the world price. Thus, the P_{WORLD} price reflects a perfectly elastic supply curve for these imported goods.

Figure 21.4
From closed economy to open economy.



At the lower world price, far fewer domestic suppliers can afford to produce, so domestic production stops at Q_1. But more is demanded at that lower price as well. The country imports the amount the domestic firms cannot supply, as well as the extra quantity demanded. In Figure 21.4, this is shown as quantity Q_1 to Q_2 – imports supplied by foreign producers. As a result, the outcome of free trade is to improve the welfare of consumers, who enjoy more of the product at a lower price. Another outcome is to reduce the revenue of the relatively inefficient domestic producers, who produce less at the new lower world price. It is this loss in revenue, or rather the fear of it, that prompts domestic producers to request protectionist help from their governments.

21.3 Types of protectionism

Learning outcomes

- Explain, using a tariff diagram, the effects of imposing a tariff on imported goods on different stakeholders, including domestic producers, foreign producers, consumers and the government.
- Explain, using a diagram, the effects of setting a quota on foreign producers on different stakeholders, including domestic producers, foreign producers, consumers and the government.

- Explain, using a diagram, the effects of giving a subsidy to domestic producers or different stakeholders, including domestic producers, foreign producers, consumers and the government.
- Describe administrative barriers that may be used as a means of protection.
- Evaluate the effect of different types of trade protection.
- (HL only) Calculate from diagrams the effects of imposing a tariff on imported goods on different stakeholders including domestic producers, foreign producers, consumers and the government.
- (HL only) Calculate from diagrams the effects of setting a quota on foreign producers on different stakeholders including domestic producers, foreign producers, consumers and the government.
- (HL only) Calculate from diagrams the effects of giving a subsidy to domestic producers on different stakeholders including domestic producers, foreign producers, consumers and the government.

Tariffs

A tariff is a tax charged on imported goods. Taxes are viewed as an added cost of production by firms, so a tariff shifts the supply curve to the left or backwards. In Figure 21.5, a tax on imported goods shifts the supply curve S_{WORLD} upwards, reflecting higher costs imposed by the tax.

A tariff is an import tax placed on a good produced abroad.

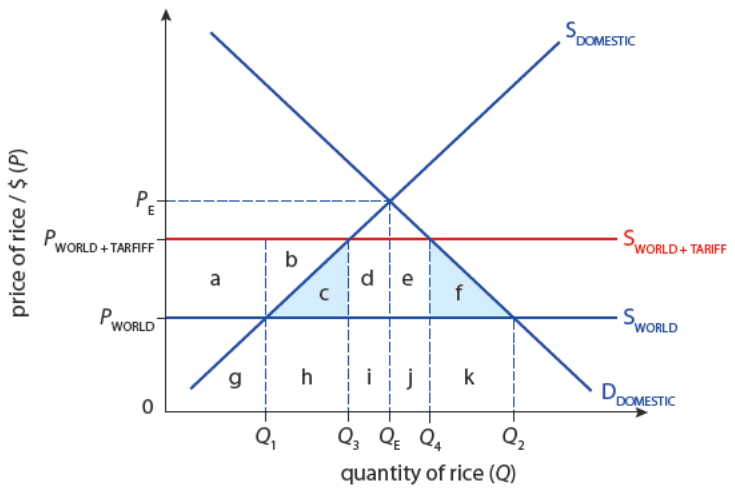


Figure 21.5
Tariff designed to reduce the quantity of imported rice.

Domestic producers

Before the tariff, the domestic supply was 0–Q_1, from which the revenue earned is shown by the box g. Now at the new tariff price, domestic producers can afford to produce more, and so increase production to 0–Q_3, and earn greater revenue at a + b + c + g + h.

Foreign producers

Before the tariff, foreign production (imports) was Q_1–Q_2 and earned revenue h + i + j + k. At the higher tariff price, domestic producers take the share of the market shown by Q_1–Q_3, and the consumer quantity demanded decreases from 0–Q_2 to 0–Q_4. So now foreign production (imports) drops to Q_3–Q_4 and import revenue declines to i + j. Foreign

producers do not, however, enjoy the benefit of the higher prices, as the government collects the difference between the world import price and the new tariff price, shown by d + e.

Government

Government collects the import tax, which can be a substantial benefit to the country's revenue base. This tariff revenue is shown in the boxes d + e.

Consumers

Consumers pay higher prices, from P_{WORLD} to $P_{WORLD + TARIFF}$ and now buy less of the product, from $0–Q_2$ to $0–Q_4$.

Welfare loss

The new market share enjoyed by domestic producers only occurs because of the artificially high tariff price. The area of the blue triangle c represents an inefficiency form of welfare loss, because that amount would already be produced at the world price, but now consumers must pay more for domestic producers to supply it. At the same time, consumers restrict their overall demand from $0–Q_2$ to $0–Q_4$ as a result of the tariff price, and so consume less. The reduced consumption overall represents another welfare loss, the loss of consumer surplus enjoyed before the tariff raised prices. This lost surplus is represented by the blue area f.

In sum, the tariff causes the price of the good to rise. If this product were a factor cost in other products (e.g. tyres for cars) then the price of the final goods (cars) would rise as well. Smaller quantities of the good are consumed, harming domestic consumers and reducing their welfare. Domestic producers enjoy the benefits of this protection, earning more revenue and producing more output, but they do so inefficiently and at the expense of consumers paying the higher tariff prices. Meanwhile, the government can gain some tax revenue that was not possible before imposing the tariff.

It is logical to conclude that domestic producers have a strong incentive to keep the tariff in place, while the government also enjoys the benefit of the tariff. Consumers, however, may not be aware of the impact of the tariff. If consumers are conscious of the tariff, it still represents a relatively minor impact on their welfare when measured against the gains made by the producer. The result is that consumers feel a relatively smaller incentive to fight the tariff politically. Foreign producers, while not having a political voice on the issue, can urge their governments to retaliate against the country imposing the tariffs. This can result in arbitration with the WTO or an outright trade war should the matter escalate beyond this dispute.

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EXERCISES

4 For decades, the EU has levied high tariffs on bananas imported from Latin America. Create an appropriate diagram to show this situation. To the left of your diagram list the beneficiaries of this policy under the heading 'Helped,' and to the right of the diagram make a list of the injured parties under the heading 'Hurt.' Be prepared to explain the reasons for each item on your list.

Quotas

Governments can decide to simply restrict the amount or number of a good allowed into the country. This restriction of the quantity imported is called a quota. For example, in the recent past, the US has placed strict quotas on imported textiles, a limit that most profoundly affected Taiwan and, more recently, China. Like a tariff, a quota tends to raise both domestic and import prices, but in ways that are unusual compared to the other protectionist diagrams.

A quota is a limit on the physical quantity of a good that can be imported into the country.

In a closed market (Figure 21.6), producers will produce Q_E at a price of P_E. If that market is open to trade, world producers can sell at a much lower price, P_{WORLD}. Among domestic producers, relatively few can produce at P_{WORLD}, and they produce only the amount 0–Q_1. World producers can sell the rest, Q_1–Q_2. Note that the world supply is perfectly elastic at that price, reflecting the fact that for most commodities, the size of the market is quite large compared to the demand of any single country. Therefore, the world market can supply as much as this country is willing and able to buy, represented by domestic demand, at the market price P_{WORLD}. For domestic producers, this marks a dramatic fall in revenue. Now they only receive a, where the foreign sellers receive b + c + d + e.

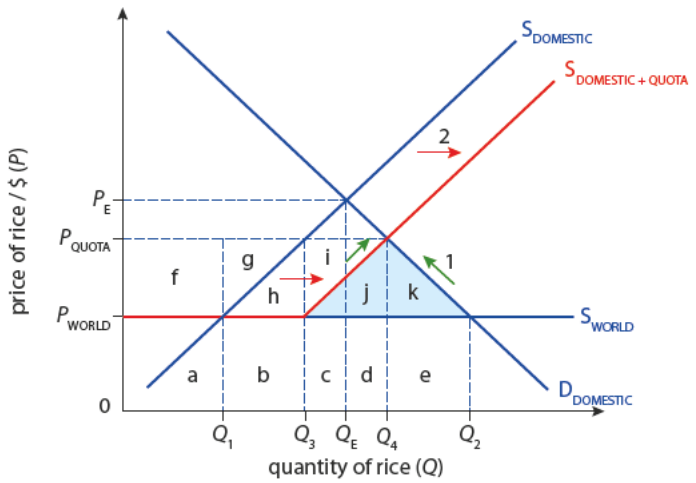


Figure 21.6
Quota to reduce the quantity of imported rice.

At this point, domestic rice producers are likely to call for protection from the overwhelming competition of foreign suppliers. If they convince the government to implement a quota, world producers will be limited to a specific amount, Q_1–Q_3. So, at P_{WORLD}, the domestic market still supplies only 0–Q_1, and Q_1–Q_3 is imported.

From this point onwards, there is a gap between the amount demanded, 0–Q_2, and the amount supplied, which has stopped at 0–Q_3. This shortage will cause producers, including foreign ones, to start raising prices. Producers begin to supply more to the market at higher prices, and consumers reduce their quantity demanded along the demand curve. This process, denoted by the two green arrows, continues until the market is cleared at P_{QUOTA} and Q_4. As producers supply more, this creates a new extension of the domestic supply curve, $S_{DOMESTIC + QUOTA}$, shown by the red arrows. Therefore, the market settles at a price below the domestic equilibrium P_E, but above the free trade price P_{WORLD}.

This situation creates clear winners and losers, as well as market inefficiencies and deadweight losses.

Domestic producers

Before the quota, domestic producers earned revenue represented by box a. After the quota, they earn a + f, and i + j + c + d where domestic suppliers resumed production.

Foreign producers

Before the quota, foreign producers earned revenue represented by boxes b + c + d + e. After, foreign producers sell fewer units, but get a higher price (P_{QUOTA}) for each of them. Their new revenue is shown by areas b + g + h. This could be viewed as an improvement over the alternative of a similar tariff, where the increased revenue from higher prices (g + h) would all go to the government. Here, the foreign producer receives that revenue.

Consumers

Before, consumers paid the lower price P_{WORLD} and could buy more on the market, 0–Q_2 rather than 0–Q_4. The quota causes higher prices and less consumption.

Government

Government gains no obvious advantage from a quota, although it is possible that any sales tax receipts would be lower with fewer goods on the market.

Market inefficiency

Where domestic supply resumes and begins to rise again, at Q_3, domestic producers only supply more with the incentive of higher prices. Before the quota, that same quantity was produced at the lower world price. This unnecessary increase in prices marks a global market inefficiency, where consumers pay more than the market would otherwise require, and is denoted by the blue triangle j.

Welfare loss

When the post-quota quantity demanded decreases to Q_4, it represents a loss of consumer surplus previously enjoyed by buyers of the good. This loss is marked by the blue triangle k.

Over the long term, like all forms of protectionism, quotas can lead to the dependence of domestic industries on government assistance rather than their own efforts.

Voluntary export restraints (VERs)

When a trade dispute is looming, the exporting country can offer to voluntarily limit the amount of their exports. This has the exact same effect as a quota of a similar size, and is also shown by Figure 21.6. This may pre-empt a worse outcome for the foreign producer, and may satisfy the protectionist demands of the domestic industries. A VER has advantages for the exporting country. Like a quota, any increase in market prices goes to the foreign producers. Politically, it prevents a tariff or quota from becoming law, and as a result is more likely to be flexibly applied in the future.

A voluntary export restraint is self-imposed quota, put in place by the importing country or industry.

Legally formed barriers can become entrenched and are much more difficult to change or remove. In recent decades, Japanese producers of cars and microchips have agreed to such restraints in US markets. Meanwhile, US beef producers have sought out a voluntary restraint on exports to South Korea, in an effort to prevent an outright ban.

EXERCISES

5	In the 1900s and early 2000s, the US imposed quotas on imports of textile goods from Taiwan and China. Create a diagram that shows an active quota on US imports of Chinese textiles. To the left, list beneficiaries of this policy; to the right, list injured parties. Be prepared to explain the reasons for your lists.

Subsidies

A country can also choose to protect domestic producers by subsidizing them. Subsidies are sums paid to firms by government to produce a particular good. A review of simple, closed economy subsidies is found in Chapter 2. These subsidies can be of two types: lump sum or per unit. A lump-sum subsidy has the effect of lowering overall costs and encouraging production. Per-unit subsidies are payments made for every extra unit produced. We will consider protectionist subsidies from the per-unit perspective. If the country in question were to subsidize its rice market, it would pay a specific amount for each level of output (number of bushels, kilograms, or tons).

A subsidy in the international context is a government payment to a firm that can be used to promote exports and/or reduce the quantity of imports.

Figure 21.7 demonstrates the effects of a subsidy intended to reduce the amount of imported rice. Facing open competition before the subsidy, domestic production only measures 0–Q_1. The rest of the market is satisfied by foreign producers selling Q_1–Q_2 at a market price of P_{WORLD}. Domestic producers earn far less, represented by box a, whereas foreign producers earn b + c + d. This kind of potent competition could devastate local production, so domestic rice farmers request government help.

American cotton farmers are the largest beneficiaries of agricultural subsidies, at a great cost to the American taxpayer.

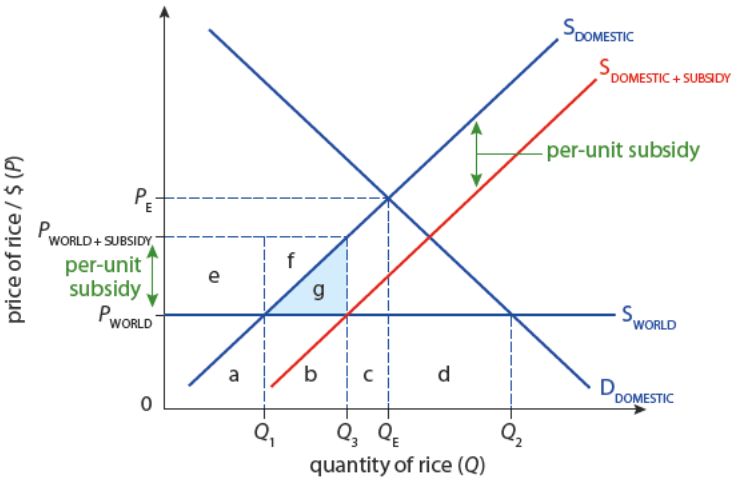


Figure 21.7
Subsidy to reduce the quantity of imported rice.

If that help takes the form of a subsidy, the government would pay a subsidy that can be seen as the distance between the two supply curves, or as the distance between P_{WORLD} and $P_{WORLD + SUBSIDY}$. That amount would be paid for each unit of production. This has the effect of lowering the production costs for rice farmers, increasing supply to a new level of production, 0–Q_3. Foreign supply drops to Q_3–Q_2. Note: the price of rice has not changed. Domestic producers are merely now able to produce more at the world price than before.

This significantly changes the amount of revenue earned by each group. Domestic producers now earn a + b + e + f + g, while foreign revenue drops to just c + d. The total

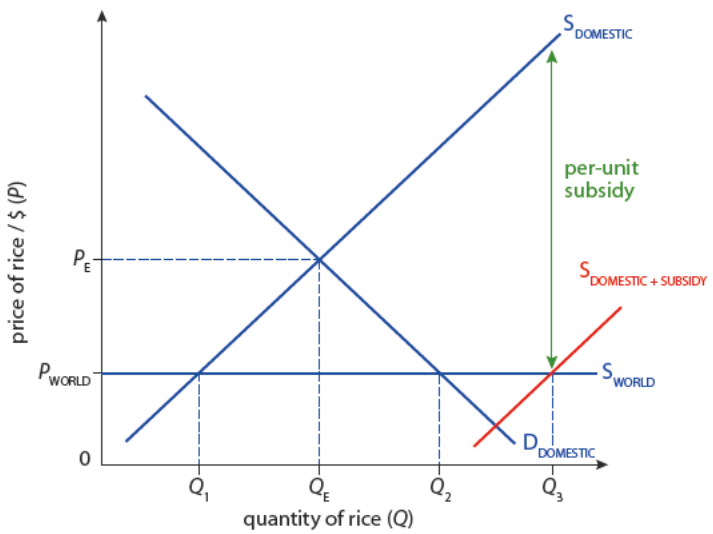
amount of government expenditure on the subsidy is shown by the amount of the per-unit subsidy multiplied by the amount produced domestically, which is ultimately 0–Q_3. So the government spends e + f + g on rice subsidies.

Just as with tariffs and quotas, this form of protectionism ignores comparative advantage and distorts the market. In the market for rice, the amount Q_1–Q_3 switches from foreign, low-cost production, to domestic higher-cost production. Foreign producers would have produced that amount without a subsidy, but domestic producers could only enter the market because they were paid the subsidy. The triangle g shows the area of inefficiency, where resources are being misallocated.

Export promotion subsidy

In a more extreme fashion, if the subsidy is high enough, a country can promote the export of their domestic production. Figure 21.8 shows how the domestic price could be lowered to a point beneath the world price and the country can export the excess.

Figure 21.8
Subsidy to promote exports (export subsidy).



In this case, domestic producers receive such a large subsidy that they can produce more at P_{WORLD} than is demanded by their home market. Before the subsidy, they imported Q_1–Q_2. After the subsidy, they export Q_2–Q_3. The same outcomes still apply, although with much more extreme effect. Domestic producer revenue soars, foreign revenue is completely eliminated. The amount of the subsidy rises significantly. The extent of market inefficiency grows, as resources are more pervasively misallocated.

This policy is part of a programme called 'export-led growth' that requires governments to select likely export 'winners' from their domestic industries. Ideally, such winners would be somewhat competitive on world markets and need only a relatively small subsidy to become export competitive. If this were true, the difference between P_E and P_{WORLD} would be smaller than in Figure 21.8, and a smaller subsidy would accomplish the same goal.

It is worth noting that such subsidies will come at significant cost to taxpayers, and mark a major redistribution of resource from those taxpayers to the favoured industries. In recent years, it has often been claimed that successful export economies such as Korea and China have resorted to this kind of extraordinary subsidy. If true, these countries are expending considerable resource in the process. This form of export promotion also ignores comparative advantage, and is likely to lead to industry dependence on the subsidies.

To access Worksheet 21.4 on tariffs, quotas and subsidies, please visit www.pearsonbacconline.com and follow the onscreen instructions.

Administrative barriers

Bureaucratic barriers

Countries may impede the penetration of their markets with waves of paperwork and legal requirements that raise the cost of importing. While any imported good must clear appropriate customs checks for health, safety and valuation, it is possible to extend and amplify these requirements so as to frustrate potential importers. The time and energy required may prevent potential importers from making the attempt, so imports are effectively reduced.

Product standards

Health, safety and environmental considerations can also be used to exclude goods from the local market. Imports may be expected to meet specific technical standards, and importers may be required to test and prove the safety and quality of their goods. This may raise costs to the point where many importers decide the extra cost is not worth it, and thus quit their attempt to enter the market. Where domestic producers and government regulatory agencies create these import standards with the goal of limiting imports, they are engaging in protectionism.

Among the more famous examples of this type of dispute is the resistance, on the grounds of health safety, of the UK, the EU and Japan to imports of hormone-fed US beef. In another instance, on entering the EU, small farmers in Romania had exports of their milk products to other EU countries blocked on the grounds of hygiene, and had their EU subsidies withheld until they agreed to milk their cows by machine.

Environmental standards

Environmental standards provoke passionate debates in trade matters. The depletion of common-access resources, with endangered species being particularly controversial, sparks fierce argument. Japanese whalers, for example, have long argued that theirs is a legitimate activity, based on the use of available resources, and that restrictions against it are disguised protectionism. In these cases, the WTO is asked to rule on the legitimacy of the claims.

Qualifications

The providers of domestic services such as teachers, physicians, lawyers, electricians and many others typically require specific qualifications to work legally in any given country. While justified on the grounds of raising professional standards of practice and expertise, such qualifications may also prevent capable workers from relocating to other countries. This keeps domestic prices (wages) high and protects domestic employment in these fields.

To learn more about barriers to trade, visit www.pearsonhotlinks.com, enter the title or ISBN of this book and select weblink 21.4.

Exchange rates

Exchange rates are covered more extensively in Chapter 22. An exchange rate is basically the amount one currency commonly and currently accepted in exchange for a unit of another. As the price of your own currency decreases, in terms of what other countries must pay to receive it, so do the price of your exports to the rest of the world. Low exchange rates make all your exports less expensive and, therefore, more attractive. They also make imports less desirable, effectively protecting domestic markets at the same time. In theory, these rates would adjust automatically. As quantity demanded for these low-priced exports grows, there would be upward pressure on the exchange rate as well.

To access Worksheet 21.5 on protectionism data response questions please visit www.pearsonbacconline.com and follow the onscreen instructions.

Countries can choose to intentionally manipulate their exchange rates to encourage exports, as China has allegedly done in recent years. But, in doing so, a country runs the risk of over-pricing significant imported resources and therefore limiting aggregate supply, possibly negating the boost that lower exchange rates might provide.

Nationalistic campaigns

An industry desperate to regain market share may also promote their products in patriotic terms. In theory, this should boost the domestic demand for locally produced goods. These campaigns often claim product superiority, or appeal to fellow countrymen to protect domestic employment. Such campaigns can gain substantial energy from the perception that one or more foreign countries are competing unfairly. As such, the campaigns may have initial temporary success in making marginal market gains for domestic producers. However, the cost in terms of advertising and promotion can be significant when measured against the results. Moreover, consumers can tire of these campaigns if they see little difference between competing goods over time.

Calculating the effects of protectionist policies (HL only)

When given specific values for price and quantity, we can calculate the effects of protectionist policies on all the relevant stakeholders: domestic and foreign producers, consumers, and the government.

Tariffs

Worked example

Figure 21.9 shows a tariff of $15 per unit placed on steel.

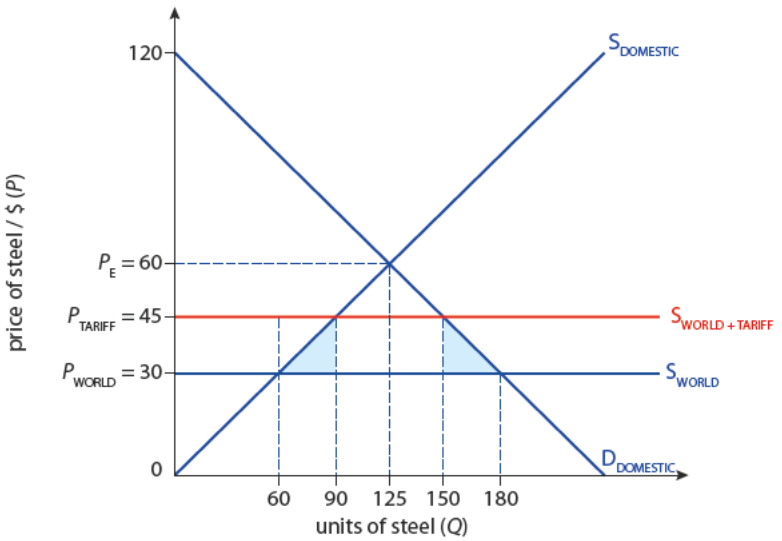


Figure 21.9
Tariff of $15 per unit placed on steel.

Domestic producers previously sold 60 units at the world price of $30. After the tariff, they are paid $45 and sell 90.

Domestic producer revenue before tariff:

$$P_{WORLD} \times Q_{DOMESTIC} = \$30 \times 60 = \$1800$$

Domestic producer revenue after tariff:

$P_{TARIFF} \times Q_{NEW\ DOMESTIC} = \$45 \times 90 = \$4050$

Foreign producers receive the world price of $30, but their imports are reduced from 120 units to 60.

Foreign producer revenue before tariff:

$P_{WORLD} \times Q_{IMPORTS} = \$30 \times (180 - 60) = \$3600$

Foreign producer revenue after tariff:

$P_{WORLD} \times Q_{NEW\ IMPORTS} = \$30 \times (150 - 90) = \$1800$

Consumer surplus is calculated as the area of the consumer surplus triangle, $\frac{1}{2}(b \times h)$.

Consumer surplus before tariff:

$\frac{1}{2}(\text{highest price} - P_{WORLD}) \times Q_{WORLD} = 0.5(120 - 30) \times 180 = \$8100$

Consumer surplus after tariff:

$\frac{1}{2}(\text{highest price} - P_{TARIFF}) \times Q_{WORLD} = 0.5(120 - 45) \times 150 = \$5625$

Government revenue is calculated as the amount of the tariff multiplied by the number of imports.

Government revenue before tariff:

0 = no tax collected

Government revenue after tariff:

$(P_{TARIFF} - P_{WORLD}) \times Q_{NEW\ IMPORTS} = (\$45 - \$30) \times (150 - 90) = \$900$

The two blue triangles represent the net loss of social welfare resulting from the tariff.

Welfare loss of tariff = $2(0.5(30 \times 15)) = 2 \times 225 = \$450$

Quotas

Worked example

Figure 21.10 shows a quota of 30 imported units of steel.

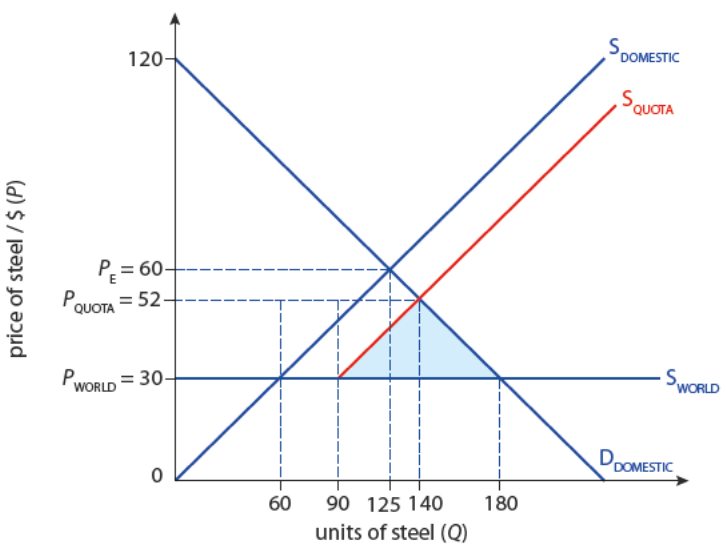


Figure 21.10 Quota of 30 imported units of steel.

Domestic producers previously sold 60 units at the world price of $30. After the quota, they are paid $52 and sell 110.

Domestic producer revenue before quota:

$P_{WORLD} \times Q_{DOMESTIC} = \$30 \times 60 = \$1800$

Domestic producer revenue after quota:

$P_{QUOTA} \times Q_{NEW\ DOMESTIC} = \$52 \times ((60 - 0) + (140 - 90)) = \$5720$

Foreign producers receive the same quota price of $52, but their imports are reduced from 120 units to 30.

Foreign producer revenue before quota:

$P_{WORLD} \times Q_{IMPORTS} = \$30 \times (180 - 60) = \$3600$

Foreign producer revenue after quota:

$P_{QUOTA} \times Q_{NEW\ IMPORTS} = \$52 \times (90 - 60) = \$1560$

Consumer surplus is calculated as the area of the consumer surplus triangle, $\frac{1}{2}(b \times h)$:

Consumer surplus before quota:

$\frac{1}{2}(\text{highest price} - P_{WORLD}) \times Q_{WORLD} = 0.5(120 - 30) \times 180 = \$8100$

Consumer surplus after quota:

$\frac{1}{2}(\text{highest price} - P_{QUOTA}) \times Q_{QUOTA} = 0.5(120 - 52) \times 140 = \$4760$

Government revenue is calculated as the amount of the tariff multiplied by the number of imports.

Government revenue before quota:

0 = no tax collected

Government revenue after quota:

0 = no tax collected

The blue triangle represents the net loss of social welfare resulting form the quota.

Welfare loss of quota = $0.5(50 \times 22) + 0.5(40 \times 22) = \$990$

Subsidy

Worked example

Figure 21.11 shows a per-unit subsidy of $15, the same value as the per-unit tariff above. This subsidy is designed to reduce the number of imports.

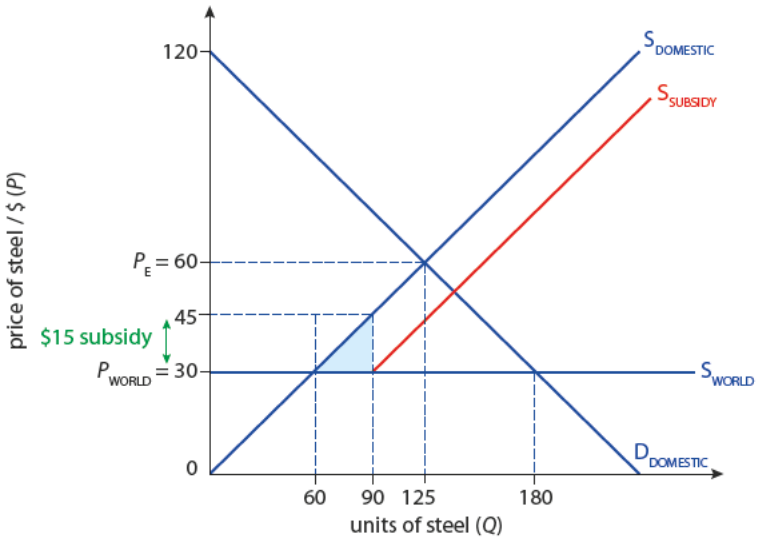


Figure 21.11
Subsidy.

Domestic producer revenue before subsidy:

$P_{WORLD} \times Q_{DOMESTIC} = \$30 \times 60 = \$1800$

Domestic producer revenue after subsidy:

$P_{SUBSIDY} \times Q_{NEW\ DOMESTIC} = \$45 \times 90 = \$4050$

Foreign producers receive the world price of $30, but imports are reduced from 120 to 90.

Foreign producer revenue before subsidy:

$P_{WORLD} \times Q_{IMPORTS} = \$30 \times (180 - 60) = \$3600$

Foreign producer revenue after subsidy:

$P_{WORLD} \times Q_{NEW\ IMPORTS} = \$30 \times (180 - 90) = \$2700$

Consumer surplus is calculated as the area of the consumer surplus triangle, $\frac{1}{2}(b \times h)$:

Consumer surplus before subsidy:

$\frac{1}{2}(\text{highest price} - P_{WORLD}) \times Q_{WORLD} = 0.5(120 - 30) \times 180 = \$8100$

Consumer surplus after subsidy:

$\frac{1}{2}(\text{highest price} - P_{WORLD}) \times Q_{WORLD} = 0.5(120 - 30) \times 180 = \$8100$

(Note that because equilibrium P and Q remain constant, the consumer surplus is unchanged.)

Government expenditure is calculated as the amount of the subsidy multiplied by the number of imports.

Government expenditure before subsidy:

0 = no subsidy paid

Government expenditure after subsidy:

per-unit subsidy $\times Q_{DOMESTIC} = \$15 \times 90 = \$1350$

The blue triangle represents the net loss of social welfare resulting form the subsidy.

Welfare loss of subsidy $= 0.5(15 \times 30) = \$225$

To access Worksheet 21.6 on Vietnam's shrimpers please visit www.pearsonbacconline.com and follow the onscreen instructions.

Extension topic: quotas *vs* tariffs (HL only)

Figure 21.12 is a quota diagram employing the same supply and demand as the original tariff diagram, Figure 21.9 (page 446). The tariff of $15 limited imports to 60 units; here, a quota of 60 imported units is set.

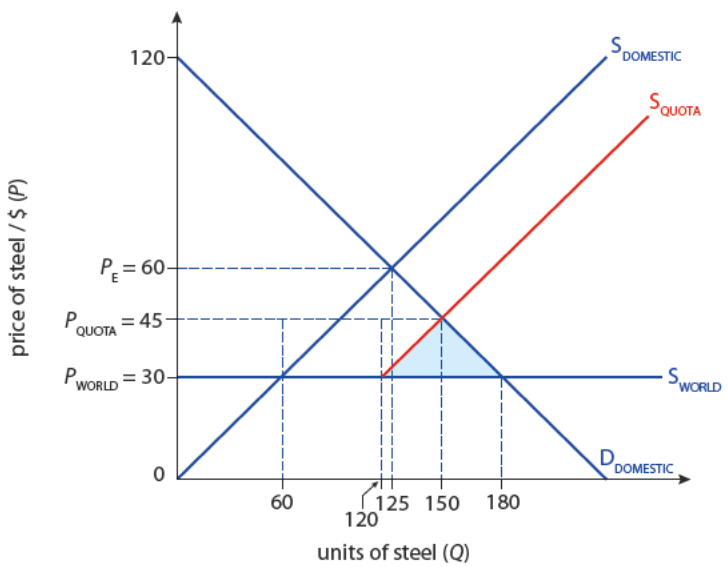


Figure 21.12
A quota of 60 units.

We can now compare quotas and tariffs. Most of the equilibrium effects are the same. Even the price rises by exactly the same amount, $15. Here's where the results diverge. To whom goes the increase in price? Domestic producers, of course, receive their share. But instead of the government receiving their tax revenue of $900, that revenue goes to the foreign producers.

This reinforces an important point about trade negotiations. For the importing countries, a quota is far better than a tariff because the importers receive the price differential. Better yet, when an importing country sees that quotas are to be established, it might volunteer to impose its own quota (a VER) to avoid any trade restrictions becoming law. Once legislated, trade rules like tariffs and quotas become difficult to repeal, unless done under orders from the WTO. A voluntary restraint, on the other hand, can be eased or lifted through diplomatic negotiation, and tends to be more flexible in the long run.

HL EXERCISES

6 Create a free trade diagram that has the following values:

- **a** a supply curve with quantities of 45 units at $15, 30 units at $10, 15 units at $5
- **b** a demand curve with quantities of 15 units at $15, 30 units at $10, 45 units at $5
- **c** world price: $5; domestic price $10
- **d** @ the world price, domestic quantity of 15 units
- **e** @ the world price, foreign imports of 30 units.

7 Impose a tariff of $3.

- **a** Draw in the expected results for domestic/import quantities on your diagram (you may estimate these, based on how your diagram is drawn).
- **b** Based on your diagram, calculate the following:
  - **i** domestic producer revenue before the tariff
  - **ii** domestic producer revenue after the tariff
  - **iii** foreign revenue before the tariff
  - **iv** foreign revenue after the tariff
  - **v** the total tariff amount
  - **vi** the areas of inefficiency and welfare loss.

8 Using the same starting values as in question 6, create a new diagram. Impose a quota of 15 units.

- **a** Draw in the expected results for domestic/import quantities on your diagram (you may estimate these, based on how your diagram is drawn).
- **b** Based on your diagram, calculate the following:
  - **i** domestic producer revenue before the quota
  - **ii** domestic producer revenue after the quota
  - **iii** foreign revenue before the quota
  - **iv** foreign revenue after the quota
  - **v** the amount of dollars representing area of inefficiency.

9 Using the same starting values as in question 6, create a new diagram. Place a subsidy of $2 on domestic production.

- **a** Draw in the expected results for domestic/import quantities on your diagram (you may estimate these, based on how your diagram is drawn).
- **b** Based on your diagram, calculate the following:
  - **i** domestic producer revenue before the subsidy
  - **ii** domestic producer revenue after the subsidy
  - **iii** foreign revenue after the subsidy
  - **iv** the area of inefficiency
  - **v** the total amount of the subsidy.

PRACTICE QUESTIONS

1 **Court backs EU anti-dumping duties on Chinese shoes**

r A European court has ruled that a decision to impose anti-**dumping** measures on shoes from China and Vietnam was sound, a court statement in Brussels said on Thursday.

s Beijing has filed a complaint with the World Trade Organization accusing the European Union of imposing illegal duties after the EU extended for 15 months, at the end of 2009, penalty taxes that were first imposed in October 2006 on shoes with leather uppers from the two countries.

t The General Court, a branch of the European Court of Justice, ruled against Chinese footwear producers in a series of six cases where 'applicants requested annulment of the 2006 regulation,' the statement said.

u 'The anti-dumping measure ... thus remains in force,' it added.

v The challenges cited what were faulty and erroneous analyses of the costs of Chinese and Vietnamese imports to European Union producers, who include some of the biggest brand names in the footwear world.

w The court 'rejected all of the applicants' claims and dismissed the actions for annulment,' ordering them 'to pay their own costs and the costs incurred by' the EU in defending the cases.

x Beijing announced at the start of February that it was filing a complaint with the **WTO**. If the two sides do not reach an agreement within 60 days, the WTO complaints body will rule on the case.

y European Trade Commissioner Karel De Gucht was in Hanoi on Tuesday to open negotiations with Vietnam on a free trade agreement with the EU.

z He said there that the European Commission had a 'very solid case' in its imposition of anti-dumping measures against shoes from China and Vietnam.

Agence France-Presse, 4 March 2010

a Define the following terms (indicated in bold in the text) from the text:

i dumping (paragraph r) (2 marks) [AO1]

ii WTO (paragraph x). (2 marks) [AO1]

b Using a diagram, show the effect of dumping on the market for shoes in the EU. (4 marks) [AO2], [AO4]

c Using a diagram, show the effect of the EU rulings that allow tariff duties on imported shoes in the eurozone. (4 marks) [AO2], [AO4]

d Evaluate the effectiveness of the EU's anti-dumping measures. (8 marks) [AO3]

2 **Let's keep the steel tariffs**

This is a letter to the editor written by Leo Gerard, International President, United Steel Workers of America.

u Eighteen months ago, the US steel industry was in ruins. Years of unfair foreign trade and **dumping** had devastated our domestic market, and the results were grim: more than 30 companies bankrupted, 17 companies sold out, more than 50 000 jobs destroyed and the healthcare benefits of more than 200 000 retiring workers were lost.

v President Bush recognized this grave danger and put in place a three-year program of tariffs on certain steel products. His goal was to protect American manufacturing jobs, to

To access Quiz 21, an interactive, multiple-choice quiz on this chapter, please visit www.pearsonbacconline.com and follow the onscreen instructions.

help the steel industry to recover by regaining its **comparative advantage**, and to stand up for the principle that free trade must be fair trade.

w Across our industry, companies are benefiting. Labour and management have made agreements that increase worker productivity and reduce unnecessary levels of management. Productivity is up, and billions of dollars have been invested in new technologies and improved facilities. None of this would have been possible without the extra time provided by the three-year steel tariff program.

x Just as important, the gloomy predictions of opponents of the tariff program have not become reality. Steel prices in America are among the lowest in the world. Steel supplies are readily available. Above all, the industries that are the biggest consumers of steel are in better competitive shape today than they were before the program was introduced.

y We have made great progress, but significant work remains. Rebuilding an industry isn't an event; it's a process. And we are very much in the middle of that process.

z The president's steel program planned for three years of gradually declining tariffs. Despite the critics, the challenge now is to continue with the program so that the sweeping changes made possible by the tariffs can be fully realized and turned into a foundation for long-term strength. We are confident that the president will continue to be true to his word so that this vital industry can continue its recovery, and manufacturing jobs will remain secure in America.

Source: adapted from *The Washington Post*, October 2003

a Define the following terms indicated in bold in the text:

i dumping (paragraph u) (2 marks) [AO1]

ii comparative advantage (paragraph v). (2 marks) [AO1]

(Total 4 marks)

b Using an appropriate diagram, explain how the domestic and foreign producers of steel will be affected by the US tariff. (4 marks) [AO2], [AO4]

c Using an appropriate diagram, show how an import quota might be used to protect the domestic producers. (4 marks) [AO2], [AO4]

d Using information from the text and your knowledge of economics, evaluate the validity and effectiveness of protectionist arguments and policies. (8 marks) [AO3]