

Chapter 6 Globalisation and trade

Exercise 6.1

a

Region	Share of total exports (%)	Share of total imports (%)	% of exports within region	% of imports within region
North America	14.4	20.2	53.9	38.4
S & C America	3.6	3.2	26.7	29.6
Europe	42.1	44.0	74.4	71.4
CIS	3.6	2.5	18.9	27.6
Africa	3.0	2.4	9.4	11.7
Middle East	5.3	3.3	11.7	18.9
Asia	27.9	24.4	50.4	57.7

Table A6.1

The export shares are calculated by expressing each row total as a percentage of the world total. For example, North America's total exports add up to \$1,678 billion, which represents $100 \times 1,678/11,644 = 14.4\%$ of total exports. The import shares are similarly calculated from the columns. The shares within region are calculated as the diagonal (bold) entries relative to the row (column) breaks.

In terms of population, there are more people living in Africa than in Europe – and yet Africa constitutes less than 3% of total world trade, while Europe accounts for more than 40%. In part this may reflect the extreme differences in average incomes between the two regions. It is also significant that around 70% of the trade in Europe is *within* the region; in other words, the trade is between countries in Europe, whereas this proportion is much smaller in Africa. In addition, it is important to remember that trade within Europe has been consciously encouraged through increasing integration in the EU – especially the Single Market measures, which have reduced the transaction costs of trade within the region. In this regard, it is also worth noting the contrast with North America. On the face of it, this region seems much less engaged in international trade. However, much of the 'trade' that takes place within the USA is inter-state rather than international, so is not included. Europe's trade is high partly because the individual member states of the EU have retained their sovereignty.

b

No. of countries	Cumulative % of UK exports	Cumulative % of UK imports
1	14.6	13.5
2	25.7	21.4
3	33.9	29.2
4	42.0	36.2
5	48.8	42.8
6	54.2	47.4
7	58.7	51.7
8	62.9	55.8
9	65.8	59.2
10	68.0	62.4

Table A6.2

The calculations show that almost 70% of exports from the UK go to the top ten countries in the list, and more than 60% of imports come from ten countries. Indeed, almost 50% of exports go to the top five countries in the list. (Notice that you could regard this as equivalent to the concentration ratio used to measure concentration in a market. A five-firm concentration ratio of 50% would be seen as relatively high.) This is a relatively small number of trading partners, and it is noticeable that the

majority of these countries are in Western Europe, the exceptions being the USA and China (including Hong Kong), which appear in both top ten lists; Japan is actually the 11th in both lists.

- c *It is difficult to provide commentary here, as I do not know what you found surprising.*

Exercise 6.2

- a As **West's** PPF lies entirely outside of East's, it is **West** that has an absolute advantage in producing both cotton and cars.
- b **East** has a comparative advantage in the production of cotton, as it must sacrifice fewer cars per bale of cotton than West.
- c **West**, on the other hand, has a comparative advantage in the production of cars.
- d If West produces 500 cars, it can produce 1,000 bales of cotton, and if East produces 300 cars, it can produce 600 bales of cotton; so total cotton production is $1,000 + 600 = 1,600$.
- e The number of cars produced is the same as before: 800. However, the production of cotton is now **1,900**. The net result of this is that total world output has increased. This illustrates the potential gains from trade, as both countries could be made better off than in the no trade position. A separate question is how those gains will in fact be distributed between West and East.

Exercise 6.3

- a At the world price *OE* domestic demand is given by *ON*, of which *OK* is supplied by domestic producers and the remainder (*KN*) is imported.
- b With the imposition of a tariff, the domestic price rises to *OA*.
- c At price *OA* domestic demand is *OM*, of which *OL* is supplied by domestic producers. Imports have fallen to *LM*.
- d Revenue from the tariff is given by the area *BCHG*.
- e Domestic producers receive economic rent given by the area *ABFE*.
- f Consumer surplus has been reduced by the area *ACJE*, although part of this represents a redistribution to government (the tariff revenue) and to producers (the economic rent). The deadweight loss is given by two areas. *BGF* is a resource cost incurred by encouraging domestic producers to supply more of the product when it could have been imported more cheaply. It reflects productive inefficiency. The area *CHJ* is lost consumer surplus. *Notice that the size of the deadweight loss depends upon the elasticities of demand and supply.*
- g The motivation for the tariff is to reduce dependence on imports, and to a degree it is successful in achieving this. However, there may also be a hope that there will be a long-term gain of encouraging domestic production, so that efficiency will eventually improve. Such infant industry arguments have rarely borne fruit in the past as domestic producers are shielded from international competition by the tariff barrier and therefore have little incentive to become efficient. Furthermore, it is possible that competitor nations will respond to the imposition of a tariff by retaliatory tariffs of their own. In this situation, everyone loses.
- h Trade liberalisation through the removal of a tariff can be a painful business, especially if the tariff has been in place for a long time. For example, it is possible that the producers that have been protected by the tariff will have become politically powerful and thus able to lobby against the removal of the tariff. Even if the government does manage to overcome such political objections, the removal of the tariff will require the protected sector to contract, with a loss of employment. The workers displaced by this may need to be compensated, or retrained, at a time when the government is losing revenue, partly because of the loss of tariff revenue, but also because of the reduced taxes being paid by displaced workers and contracting firms.

Exercise 6.4

As I do not know when you will be tackling this question, I cannot offer detailed comments. Oil is a crucial product in the global economy because of its role in providing energy and its use in the production of fertilisers. Fluctuations in the price of oil can thus have significant repercussions on the global economy. Such fluctuations can arise because of the actions of the OPEC cartel, or because of interruptions in supply, which have sometimes happened because of conflict in the Middle East where much of the world's supply is concentrated.

Exercise 6.5

*This chapter has rehearsed the arguments for and against globalisation. Now it is time for you to decide where **you** stand. Try to base your views on objective economic reasoning, and do not be distracted by the subjective factors that abound surrounding this topic.*

Additional exercise

Free trade and protectionism

5 Some early economic thinkers such as Adam Smith and David Ricardo drew attention to the possible benefits that nations could derive from engaging in international trade. These arguments were developed from notions of specialisation and division of labour, and Ricardo's law of comparative advantage. In spite of these potential economic gains, nations have always been tempted to introduce protectionist measures that interfere with free trade.

10 The arguments in favour of free trade stem from the observation that if countries specialise in the production of goods (or services) in which they have a comparative advantage, then it is possible for overall economic welfare to be increased through engaging in international trade. At the heart of this is that countries face different patterns of potential specialisation — in other words, differing opportunity costs in production of goods. For example, an industrialised country is likely to have a comparative advantage in the production of manufactured goods relative to agricultural commodities whereas a less developed country may have a comparative advantage in agricultural goods. Another way of putting this is that the opportunity cost of producing agricultural goods is higher for the industrial country than for the less developed country. Because of this, if each country specialises in producing the good in which it has a comparative advantage, total production of the goods can be increased.

15 One very important point to notice is that it cannot be guaranteed that both countries actually *will* be better off with trade. Some of the critics of globalisation have argued that many less developed countries today find themselves in a position in which they are encouraged to open up to more trade — but then find that the gains are being pre-empted by others.

20 One of the hopes for a trade liberalisation policy is that resources may be released from inefficient domestic production into more productive employment in the export sector. For many less developed countries, it may turn out that the export sector is unable to expand, so that the only effect of liberalisation is to release workers and other resources into unemployment.

25 Another political or strategic issue arises in this situation. Suppose that a country agrees to specialise completely in producing manufactures at the expense of agricultural goods, and then finds itself unable to engage in trade because of a war? How does it then feed its people? Following two world wars, many European countries in the 1950s may have seen this possibility as a real threat, and felt that maintaining some form of protection of their agricultural sectors was strategically crucial. This was one of the stated motivations behind the development of Europe's Common Agricultural Policy (CAP), which remains one of the world's prime examples of a protectionist policy.

30 Globalisation has given an added impetus to world trade, but has also highlighted problem areas. The rapid rise of China's economy and its success in export activity has been seen as threatening by some, and a protectionist lobby in the USA has put trade policy on the US election agenda. The developed countries are eager to persuade developing countries to open up their economies to services and manufactured goods, but a sticking point has been the reluctance of the developed countries to reduce their high farm subsidies, which make it difficult for developing countries to market the produce in which they have a natural comparative advantage. If an agreement is to be reached, it is likely that concessions will be needed on both sides.

This passage is an extract from 'Free trade or protectionism?' by Peter Smith, which appeared in Economic Review, Vol. 25, No. 4, April 2008.

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- a Explain the difference between absolute advantage and comparative advantage. Which of these notions gives rise to the potential gains from trade?
- b Discuss why these gains may not always be shared equally among the trading partners.
- c Examine the arguments for and against the use of tariffs.

Additional exercise

Discussion points

- a Absolute advantage is where a country is able to produce a good or service more efficiently than another. In comparing two countries, it is possible for one country to have an absolute advantage in the production of all goods and services. Comparative advantage is where there is a difference in the opportunity cost of producing goods between two countries. Country A could have an absolute advantage in producing two goods compared with Country B, but nonetheless the relative opportunity cost of producing the two goods may differ, such that Country A had a comparative advantage in producing one of the goods. Country B would then have a comparative advantage in production of the other good. It is this difference in the relative cost of producing the two goods in the two countries that gives rise to the possibility of making gains from specialisation and trade.
- b There may be many reasons why these gains may not be equally shared between the trading partners, especially where one of the partners has more market power, and is thus able to influence the terms on which trade takes place. Less developed countries have often felt that they do not gain as much from trade as they should. The changing pattern of demand over time may also be important. In global markets, the developed industrial nations tend to have a comparative advantage in the production of manufactured goods when compared to the less developed countries, whose comparative advantage is more likely to be in the production of primary goods. What has happened over time is that the relative prices of manufactured goods have tended to rise relative to prices of primary products. This has affected who benefits from trade.
- c An evaluation of tariffs tends to entail a balancing of economic against political issues. The economic analysis of tariffs reveals that, in almost all circumstances, they reduce welfare for the society that imposes them. However, there may be political reasons for imposing tariffs, of varying degrees of validity. There may be strategic reasons for safeguarding some sectors. There may also be a temptation to impose tariffs to save domestic jobs – but this may be costly in the longer term.

Extension material

China's comparative advantage?

One might expect that, with a population of 1.3 billion, China would specialise in the export of labour-intensive products. Zheng Wang explains why this is not the case

Under the World Trade Organization's (WTO's) surveillance mechanism, trade policies and practices of members are reviewed regularly. After its accession to the WTO in December 2001, the first trade policy review of China took place in April 2006. The review recognised that China has taken considerable steps in reforming its economy and in opening up to the world. Reform has led to a remarkable transformation of the Chinese economy. Real economic growth has been at 9% over almost two decades, and the percentage of China's population living below the poverty line declined from 73% in 1990 to 32% in 2003. Trade and investment reforms have resulted in China becoming the world's third largest trader and one of the largest recipients of foreign direct investment (FDI). Trade plays an important role in China's economic growth: in 2005, total trade in goods accounted for around 64% of GDP.

China's economic performance has attracted the attention of many economists worldwide. However, of the numerous papers studying the effect of international trade on economic performance, most focus on the role of imports and the analysis of a country's import regime, including tariffs and non-tariff barriers. Few studies have been conducted on China's export structure or its export policies.

Comparative advantage

One may doubt why there is any need to study a country's export structure, since international trade theory tells us that a country's trade will be based on its comparative advantage. Suppose for simplicity that the world is composed of just two countries, A and B. Assume that Country A can produce a particular good more cheaply, or that it can produce more of the good than Country B can with the same amount of resources. Country A therefore has an absolute advantage over Country B in producing the good in question. In this scenario, one may imagine that Country A will specialise in producing this good and export it to Country B, while Country B will produce and export other goods.

However, in international trade, what matters is not the absolute cost of production, but rather the opportunity cost, which measures how much is given up of one good to produce a unit of another good. Countries trade not because they have an absolute advantage over others, but because of their relative comparative advantage.

In the Heckscher-Ohlin model of international trade there are two factors of production – labour and capital – and countries may specialise in the production of labour-intensive or capital-intensive goods. In general, a country's comparative advantage will depend on its endowments of the two factors. If a country is relatively well endowed with labour, it will have a comparative advantage in the production of labour-intensive goods. Conversely, if it is relatively well endowed with capital, its comparative advantage will lie with the production of capital-intensive goods. This is sometimes termed the 'Rybczynski effect'.

China is a large, developing country with a population of 1.3 billion, so it is natural to suppose that it has a comparative advantage in the production of labour-intensive goods and that such goods will account for most of its exports. However, this view has been challenged in recent research by Dani Rodrik. Rodrik points out that among manufacturing exports, which accounted for more than 90% of China's merchandise exports in 1994, the share of relatively high technology products was approximately 45% (in 1998 the figure was 27%). These products include various types of machinery, transportation

equipment and telecommunications equipment. By contrast, exports of relatively low technology products, such as textiles and clothing, accounted for just 16% of total merchandise exports (down considerably from 23% in 1998). Accordingly, Rodrik concluded that China's 'export bundle is that of a country with an income-per-capita level three times higher than China's. China has somehow managed to latch on to advanced, high-productivity products that one would not normally expect a poor, labour abundant country like China to produce, let alone export.'

Is Rodrik correct? Is the pattern of China's exports inconsistent with the principle of comparative advantage? To answer this question, we need to look more closely at China's export structure.

Foreign-invested enterprises

More than half of China's exports are produced by foreign-invested enterprises (FIEs). In 2005, such enterprises created a net trade surplus of US\$84.4 billion, which represented approximately 83% of China's total trade surplus. FIEs accounted for a particularly large share of the export of high technology products, due mainly to their active role in the processing trade. For example, FIEs are responsible for nearly all China's exports of computers (see Table A6.3). This is due, in part, to the fact that firms from some east Asian economies, such as Chinese Taipei and the Republic of Korea, have largely relocated the production of notebook computers to mainland China.

	Share of multinationals in exports		Share in total exports, 2003
	1998	2003	
Computers	99%	97%	15%
Electronic components	81%	92%	5%
Television sets and other home equipment	96%	78%	5%
Telecom equipment	96%	91%	4%

Source: Sachwald, F. (2006), *Is China Becoming a High Tech Superpower?* Paper prepared for 2006 Tokyo Club Macro Conference.

Table A6.3
FIEs in China's exports of IT products

One explanation for the prominent role of FIEs is that they enjoy various tax advantages over domestic enterprises. For example, provided that they export over 70% of their annual production, they only pay 50% of the standard rate of income tax. Under the 2007 Enterprise Income Tax Law, the rates for FIEs and domestic enterprises will be equalised, but only after a 5-year transition period.

Trade policy and processing industries

China has been referred to as the 'world's assembly plant', and processing activity certainly plays an important role in its export structure. In 2004, processing activity accounted for more than 55% of total exports. As we shall now see, this type of activity has been encouraged by a number of policy measures.

Since the beginning of economic liberalisation, and especially after its accession to the WTO in 2001, China has carried out major trade and trade-related reforms. Both tariff and non-tariff barriers have been falling progressively, but have not been eliminated completely.

Processing activity and exports have been encouraged by policies relating to both imports and exports. An example of the first scenario is the policy of exempting imported goods from import tariffs if those goods are imported for processing and assembly for overseas clients or for export. This policy has been applied to imports of raw materials, spare parts, and assembly and packing materials.

Turning to the export regime, policies include export taxes, value-added tax (VAT) rebates on exports, as well as export restrictions (prohibitions, quotas and licences). We will begin by looking at export taxes. Export tax rates are set by China's Tariff Commission, and in 2005 were applied to

37 categories of product. In deciding whether to tax a product and, if so, at what rate, the Tariff Commission may seek to balance supply and demand in the domestic market or to promote the development of particular industries.

To see how a tax might affect processing activities, consider the impact on prices. First, there may be an impact on world prices. Specifically, if the product is one for which China is a large exporter, a reduction in the volume of its exports may cause an increase in the international price. Second, there may be an effect on domestic prices. The imposition of an export tax will cause some production to be switched from the export market to the domestic market, and the increase in domestic supply may lead to a fall in domestic prices (relative to their level in the absence of the tax). If the product in question is used as an input by other manufacturers then the fall in price will reduce their production costs. Thus, by reducing the domestic price of the product concerned, export taxes can implicitly subsidise domestic downstream processing.

The same effect arises from China's system of VAT rebates on exports. Exports are generally subject to VAT at either 17% or 13%, but may be eligible for a rebate. Various levels of rebate exist and the difference between the initial VAT imposed and the rebate can be thought of as a levy on exports. The levy, by depressing the volume of exports of the product, increases its domestic supply and thus reduces domestic prices. As before, this can act as an implicit subsidy to downstream processing of the products.

China imposes export restrictions on a number of products to avoid shortages in domestic supply, conserve exhaustible natural resources, or to conform to international obligations. Some 4% of China's exports are subject to a licensing regime, and certain products are prohibited for export. In so far as the restrictions reduce the domestic prices of the products concerned and these products are processed downstream, export restrictions once again constitute implicit subsidies to such processing.

Concluding comments

We have seen that China's policies on imports and exports have had the effect of implicitly subsidising downstream processing activity. This, together with measures to promote foreign-invested enterprises, has resulted in China – the country with the largest population in the world – specialising in the export of capital-intensive rather than labour-intensive products.

The welfare implications of this outcome are complex. For China, there are gains for domestic consumers (due to lower prices), the government (from tax income) and downstream processing firms. On the other hand, there are efficiency losses at the international level. This is because the export taxes and restrictions cause production at the world level to be switched from relatively efficient Chinese producers to less efficient producers in other countries.

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