

- Theoretical foundations of International trade
- Reasons for international trade
- Theories of International trade
- Gains from trade
- Foreign trade multiplier
- Terms of trade

International Trade

Trade – is the voluntary exchange of goods and services between one person/organization and another with the intention of gain from such exchange.

International trade – is trade between residents of two countries. (residents may be individuals, firms or other forms of association).

Benefits of International Trade

⇒ It would be sensible if a country can exchange some of the products that it can produce at a low cost for some products that it can produce at all or at a very high cost.

⇒ International trade allows a country to specialize in the manufacture and export of products that can be produced most efficiently in that country while importing that can be produced more efficiently in other countries.

Example: India exports a lot of agricultural products and textile and textile articles. This helps as we have a lot of low cost labour available to us and exporting these products provide employment to people in these sectors.

Economic Survey 2006-07 : Between 1995 and 2003, while *labour-intensive exports* (rice, tea, spices, horticulture and floriculture products, marine products, processed food, textiles, gems and jewellery, handicrafts, sports goods) grew by 7.2 per cent per year, the growth of *resource-intensive exports* (iron ore), *medium-technology-intensive exports* (manufactures of metals, primary & semi-finished iron and steel, manmade yarns, petroleum products) and *knowledge-intensive exports* (chemicals, drugs and pharma, plastics and linoleum, machinery and transport equipment, machinery, electronic goods) were of the order of 12 per cent, 19 per cent and 14 per cent, respectively. India's relatively small share of global exports of labour-intensive goods relative to China's indicate how the potential for such exports remain unutilized.

Capital goods (machinery, transport equipment) constitute an important item of India's imports to support high growth in manufacturing sector and rising needs of export sector. (Countries such as US have a cutting edge technological know-how which they use in manufacture of, say, commercial jet aircraft. For textiles, they will import from India).

Why study trade theory?

Trade in goods and services is one of the means by which countries are linked economically. Authorities in all countries need to decide what they should import and export. Once they make decisions, policies are accordingly made which then have an impact on business. If we decide to export certain items, whether other countries will permit imports to compete against their domestically produced goods. Similarly, if we

international trade is determined by differences in factor endowments rather than differences in productivity. China excels in the export of goods produced in labour-intensive manufacturing industries such as textiles and footwear. This reflects China's relative abundance of low cost labour. The US, which lacks abundant low-cost labour, has been a primary importer of these goods.

The Leontief Paradox

The H-O theory has been one of the most influential ideas in international economics. Because of its influence, the theory has been subjected to many empirical tests. Beginning with a famous study in 1953 by Wassily Leontief, many of these tests have raised questions about the validity of H-O theory. Using H-O theory, Leontief postulated that since the US was relatively abundant in capital as compared to other nations, the US would be an exporter of capital-intensive goods (such as bulk chemicals and steel) and an importer of labour-intensive goods (such as clothing and footwear). To his surprise, however, he found that US exports were less capital-intensive than US imports. Since this result was at variance with the prediction of the theory, it has become known as the Leontief paradox.

(SEE CHARLES HIL, P.153 <>)

MODERN FIRM-BASED THEORIES

Since WWII, International business has focused on the role of firm rather than the country in promoting international trade. Firm-based theories have developed for several reasons:

- Growing importance of MNCs in post-war international economy
- Inability of country-based theories to explain and predict the existence and growth of trade
- Failure of Leontief and other researchers to empirically validate the country-based H-O theory

Firm-based theories incorporate factors such as quality, technology, brand names and customer loyalty into explanation of trade flows. They consider firms and not countries, as the agents for international trade.

Country Similarity Theory

Inter-industry trade: Exchange of goods produced by one country in country A for goods produced by a different industry in country B.

Intra-industry trade: Trade between two countries of goods produced by the same industry. (e.g. Japan exports Toyotas to Germany while Germany exports BMWs to Japan.)

Intra-industry trade accounts for nearly 40% of the world trade. In 1961, Swedish economist Steffan Linder sought to explain the phenomenon of intraindustry trade. Linder's **country similarity theory** suggest that trade in manufactured goods should be between countries with similar per capita incomes. This theory is particularly useful in

explaining trade in differentiated goods such as automobiles, expensive electronics equipment and personal care products, for which brand names and product reputations play an important role in consumer decision-making.

In his view, firms initially manufacture goods to serve the firms' domestic market. As they explore exporting opportunities, they discover that the most promising foreign markets are in countries where consumer preferences resemble those of their own domestic market. (See more in Griffin p.132)

Linder tested his theory empirically by the use of a matrix of trade intensities for a sample of 32 countries. He found that most high trade intensities lay closer to the diagonal, meaning that countries with similar per capita income record most of the greater trade intensities.

Product Life Cycle Theory

This is a firm-based theory of international trade. It was developed in the 1960s by Raymond Vernon of the Harvard Business School. The theory states that the location of production of certain kinds of products shifts as they go through their life cycles which consists of four stages: introduction, growth, maturity and decline.

OR New product, maturing product and standardized product.

Stage 1: New Product Stage

A firm develops and introduces an innovative product, e.g, a personal computer, in response to a perceived need in the domestic market. When the product is new, the innovating firm is uncertain whether a profitable market exists. Once a co. has created a new product, theoretically, it can manufacture that product anywhere in the world. In practice, however, the early production (introductory stage) generally occurs in the domestic market so that the co. can obtain rapid market feedback as well as save on transport costs. So, market feedback is done to ensure that the new product satisfies consumer needs. The product is thus likely to be initially produced in the country where its R&D occurred, typically a developed country like Japan, US, Germany etc.

Vernon argued that although a new product can be produced abroad also at some low-cost location, however, most new products are initially produced in home country because pioneering firms believed it was better to keep production facilities close to the market and to the firm's centre of decision-making, given the uncertainty and the risks inherent in introducing new products. (Initially, firms can charge relatively high prices for new products because demand tends to be based on non-price factors)

Vernon's theory was based on the observation that for most of the 20th century, a very large proportion of the world's new products has been developed by US firms and sold first in the US market. E.g., mass-produced automobiles, TVs, cameras, photocopiers, PCs, semiconductor chips. To explain this, Vernon argued that the wealth and size of the US market gave US firms a strong incentive to develop new consumer products. Typically, new products/technology and production methods originate in industrial countries because of a combination of factors – competition, demanding consumers, high incomes, more education and hence more scientists and engineers.

At the introductory stage, cos. may sell a *small* part of their production in foreign markets, mainly in other industrial countries, because those customers have incomes to spend on newer products. Vernon argued that demand in other advanced countries is limited to high-income groups. The limited initial demand in other advanced countries does not make it worthwhile for firms in those countries to start producing the new product but does necessitate some exports from US to those countries.

Stage 2: Maturing Product Stage

Over time, demand for product expands dramatically as consumers recognize its value. Demand starts to grow in other advanced countries also (e.g UK, France, Germany, Japan). The innovating firm builds new factories to expand its capacity and satisfy domestic and foreign demand for the product. It sets up production facilities in those advanced countries where demand is growing. It also becomes worthwhile for foreign producers to begin producing for their home markets. Domestic and foreign competitors begin to emerge, lured by the prospect of lucrative earnings.

Stage 3: Standardised Product Stage

As the market in the home country (US) and other advanced nations matures, the product becomes more standardized and price becomes the main competitive weapon. As this occurs, cost considerations start to play a greater role in the competitive process. Firms are pressured to lower their manufacturing costs by shifting production to countries with low labour costs. As a result, the product begins to be imported in the innovating firm's home market (by either the firm or its competitors). E.g. Producers based in advanced countries where labour costs are lower than in US (e.g. Italy, Spain) might now be able to export to US. This cycle (cost pressure) by which US lost its advantage to other advanced countries might be repeated once more as developing countries (e.g. Thailand) begin to acquire a production advantage over advanced countries. Thus the locus of global production switches initially from the US to other advanced nations and then from those nations to developing nations.

The consequence of these trends for the pattern of world trade is that over time, the US switches from being an exporter of the product to an importer of the product as production becomes concentrated in lower-cost foreign locations.

(Example: The personal computer industry has entered the standardized product stage. In the US market, low-priced, brand name imports from new producers such as South Korea's Hyundai and Samsung have threatened the more established US manufacturers. Taiwanese manufacturers such as Tatung, Mitac International annually export millions of PCs to the US. To meet the challenge of these new competitors and price its products more competitively, Apple simplified its product line, outsourced manufacture of many components and streamlined its warehousing operations. Despite these efforts, domestic and foreign competitors continue to eat away at Apple's market share and profit margins and the co. has been relegated to a niche player in the industry it pioneered.

Thus

Stage 1: Domestic production begins
Exports by the innovating firm's country begin
Foreign competition begins to emerge by the end of stage 1

Stage 2: Domestic production peaks
Exports by the innovating firm's country peak
Foreign competitors expand productive capacity (thus servicing an increasing portion of their home markets and perhaps becoming net exporters)
Innovating firms and their domestic and foreign rivals seek to lower their production costs by shifting production to low-cost sites in LDCs

Stage 3: Domestic production slumps
Innovating firm's country becomes a net importer of the product
LDCs may become net exporters of the product

Evaluation of the Product Life-Cycle Theory

See photocopier example in C.W. Hill

- The theory holds quite true during US global dominance (1945-1975) because most new products were introduced in the US. In recent years, however, there have been exceptions due to changes taking place globally. With increased globalization and integration of world economy a growing number of new products (e.g. laptops, CDs and digital cameras) are now introduced simultaneously in the United States, Japan and advanced European nations. This may be accompanied by globally dispersed production whereby only particular components of the new product are produced in locations where skill and cost are favourable.
- There are many products for which shifts in production location do not take place. In these cases, the innovating country maintains its export ability throughout the product's life cycle. E.g. some electronic products have extremely short life cycles because of rapid innovation and hence it is not possible to achieve cost reductions by relocating.
- There has been an increased tendency on the part of MNCs to introduce new products at home and abroad simultaneously. Thus instead of merely observing their own markets, they develop products that transcend national boundaries. In doing so, they eliminate delays as a product is diffused from one country to another, and choose a production location that will minimize costs for serving markets in multiple countries.

PORTER'S THEORY OF NATIONAL COMPETITIVE ADVANTAGE

This is the newest addition to international trade theory. In 1990, Michael Porter of the Harvard Business School published the results of an intensive research effort that attempted to determine why some nations succeed and others fail in international competition. Porter and his team looked at 100 industries in 10 nations. Porter's work

was driven by a belief that existing theories of international trade told only a part of the story. For Porter, the essential task was to explain why a country achieves international success in a particular industry?

- Why does Japan do so well in the automobile industry?
- Why does Switzerland excel in the production and export of precision instruments and pharmaceuticals?

These questions cannot be answered easily by the H-O theory and theory of comparative advantage offers partial explanation. For instance, the theory of comparative advantage would say that Switzerland excels in the production and export of precision instruments because it uses its resources very productively in these industries. However, this does not explain why it is more productive in this industry than UK, Germany etc.

Porter believes that success in international trade comes from the interaction of four country- and firm-specific elements: factor conditions; demand conditions; related and supporting industries; and firm strategy, structure and rivalry.

Porter represents these four elements as the four corners of a *diamond*. He argues that firms are most likely to succeed in industries where the diamond is more favourable.

Factor conditions

A country's endowment of factors of production affects its ability to compete internationally. Although factor endowments were the centre of H-O theory, Porter goes beyond the basic factors- land, labour and capital- to include more advanced factors such as the educational level of the workforce and the quality of the country's infrastructure. Thus, Porter distinguishes between basic factors (natural resources, climate, location, demographics) and advanced factors (communication, infrastructure, sophisticated and skilled labour, research facilities, technological know-how). He argued that advanced factors are the most significant for competitive advantage. Unlike the naturally endowed basic factors, advanced factors are a product of investment by individuals, companies and governments. Thus govt. investment in basic and higher education an upgrade a nation's advanced factors.

The relationship between advanced and basic factors is complex. Basic factors can provide an initial advantage that is subsequently reinforced and extended by investment in advanced factors. Conversely, disadvantages in basic factors can create pressure to invest in advanced factors. E.g. Japan lacks arable land and mineral deposits and yet through investment has built a substantial endowment of advanced factors. Japan's large pool of engineers has been vital to Japan's success in many manufacturing industries.

Demand conditions

Characteristics of home demand are particularly important in shaping the attributes of domestically made products and in creating pressures for innovation and quality. Porter argues that a nation's firms gain competitive advantage if their domestic consumers are sophisticated and demanding. Such consumers pressure local firms to meet high

standards of product quality and to produce innovative products. In meeting their domestic consumers' needs, firms continuously develop and fine tune products that can also be marketed internationally. For instance, Japan's sophisticated and knowledgeable buyers of cameras helped stimulate the Japanese camera industry to improve product quality and introduce new, innovative model with better features. Japanese consumer electronics producers maintain a competitive advantage internationally because of the willingness of Japan's large, well-off middle class to buy the latest electronic creations of Sony, Toshiba etc.

Similarly, sophisticated and demanding local customers in Scandinavia helped push Nokia of Finland and Ericsson of Sweden to invest in cellular phone technology long before demand for cellular phones took off in other developed nations. As a result, Nokia and Ericsson today are dominant players in the global cellular telephone equipment industry.

Related and Supporting Industries

The third broad attribute of national advantage in an industry is the presence of suppliers and related industries that are internationally competitive. The benefits of investments in advanced factors of production by related and supporting industries can spill over into an industry, thereby helping it achieve a strong competitive position internationally. Swedish strength in fabricated steel products (e.g. ball bearings) has drawn on strengths in Sweden's specialty steel industry. Technological leadership in the US semiconductor industry until the mid-1980s provided the basis for US success in personal computers and several other technologically advanced electronic products.

One consequence of this process is that successful industries within a country tend to be grouped into clusters of related industries. Such clusters are important because valuable knowledge can flow between the firms within a geographic cluster benefiting all within the cluster.

Firm Strategy, Structure and Rivalry

The fourth broad attribute of national competitive advantage in Porter's model is the strategy, structure and rivalry of firms within a nation. Porter makes two important points.

- Different nations are characterized by different management ideologies which either help them or do not help them to build national competitive advantage. E.g. predominance of engineers in top management in Japanese and German firms are indicative of the firms' emphasis on manufacturing process and product design. In contrast, many US firms are led by people with finance backgrounds indicating the lack of attention that US firms give to manufacturing process and product design, particularly during 70s and 80s. Porter argues that this dominance of finance has led to overemphasis on maximizing short-term financial returns. Consequently, this management ideology has led to US losing its competitiveness in those engineering-based industries where manufacturing process and product design are all important. E.g. automobile industry

- There is a strong association between vigorous domestic rivalry and creation and persistence of competitive advantage in an industry. Vigorous domestic rivalry induces firms to look for ways to improve efficiency, which makes them better international competitors. Domestic rivalry creates pressures to innovate, to improve quality, to reduce costs, raise productivity and to invest in upgrading advanced factors. All this helps to create world-class competitors. Firms that have been tested in this way often develop skills needed to succeed internationally. Further, many of the investments they made to succeed in the domestic market (R&D, quality control, brand image, employee training) are transferable to international markets at low cost. Such firms have an edge as they expand abroad. Example: Nokia of Finland – strong domestic competition has led to global prominence in the market for cellular phone equipment. International success of Japanese automakers and consumer electronics good manufacturers and of US personal computer manufacturers is aided by intense domestic competition in these firms' home countries.

Evaluating Porter's Theory

Porter's theory is a hybrid: it blends the traditional country-based theories that emphasise factor endowments with the firm-based theories that focus on the action of individual firms.

Porter contends that the government can influence each of the 4 components of the diamond either positively or negatively. Countries (or their governments) play a critical role in creating an environment that can aid or harm the ability of firms to compete internationally but firms are the actors that actually participate in international trade. Factor endowments can be affected by subsidies, policies towards capital markets, policies towards education and so on. Govt. can shape domestic demand through local product standards or with regulations influencing buyer needs. Govt. policy can influence supporting and related industries through regulation; firm rivalry through such devices as capital mkt. regulation, tax policy etc.

In summary, no single theory of international trade explains all trade among countries. The classical country-based theories are useful in explaining inter-industry trade of homogenous, undifferentiated products such as agricultural goods, raw materials and processed goods like steel and aluminum. The firm-based theories are more helpful in understanding intra-industry trade of heterogeneous, differentiated goods many of which are sold on the basis of their brand names and reputations (Sony TV, Nokia).

decide to import certain goods, domestic suppliers may not be able to respond to foreign competition which may lead to closed factories and unemployed workers.

Because of international trade's obvious significance to businesses, consumers and workers, various scholars have attempted to develop theories to explain and predict the forces that motivate such trade. Governments use these theories when they design policies they hope will benefit their countries' industries and citizens. Managers use them to identify promising markets and profitable internationalization strategies.

Although these theories agree that international trade is beneficial to a country, they lack agreement in their recommendations for government policy. Mercantilism makes a crude case for govt. involvement in promoting exports and limiting imports. The theories of Smith, Ricardo and Heckscher-Ohlin forms part of the case for unrestricted trade. The argument for unrestricted free trade is that both import controls and export incentive (e.g. subsidies) are self-defeating and result in wasted resources. Both the new trade theory and Porter's theory of national competitive advantage can be interpreted as justifying some limited govt. intervention to support the development of certain export-oriented industries.

garments, agricultural products, iron ore and other minerals. Major import commodities included crude oil and related products, machinery, electronic goods, gold and silver

THEORIES OF INTERNATIONAL TRADE

The first theories of international trade developed with the rise of the great European nation states during the 16th century. These early theories focused on the individual country in examining patterns of imports and exports. These theories are particularly useful for describing trade in commodities. However, as MNCs rose to power in the middle of the 20th century, scholars shifted their attention to the firm's role in promoting international trade. The firm-based theories are useful in describing patterns of trade in differentiated goods such as automobiles, personal care products where brand name is important.

Mercantilism

The first theory of international trade emerged in England in the mid-16th century. Referred to as mercantilism, its principal assertion was a country's wealth is measured by its holdings of gold and silver and a country's goal should be to enlarge these holdings. At that time, gold and silver were the currency of trade between countries; a country could earn gold and silver by exporting goods. By the same token, importing goods from other countries would result in an outflow of gold and silver to those countries. The main tenet of mercantilism was that it is in a country's best interest to maintain a trade surplus, i.e. to export more than it imported.

Consistent with this belief, the mercantilists advocated govt. intervention to achieve surplus in the balance of trade. Limit imports by tariffs and quotas and subsidise exports.

Impact of mercantilism in those times: Export-oriented manufacturers favoured mercantilist trade policies such as those establishing subsidies or tax rebates that stimulated sales to foreigners. Domestic manufacturers threatened by foreign imports also endorsed mercantilist trade policies such as those imposing tariffs or quotas that protected the manufacturer's from foreign competition.

Flaws of mercantilism

➤ The classical economist David Hume pointed out an inherent inconsistency in the mercantilist doctrine in 1752. According to Hume, if a country had a trade surplus (e.g. England has a trade surplus with India), the resulting inflow of gold and silver would increase the domestic money supply and generate inflation in that country (England). In the other country (India), the outflow of gold and silver would contract money supply and prices would fall. This change in relative prices between India and England would encourage Indians to buy fewer English goods (because they are becoming more expensive) and the English to buy more Indian goods (because they are becoming cheaper). The result would be a deterioration in English trade balance and an improvement in India's trade balance till the English surplus is eliminated. Hence, according to Hume, *in the long-run, no country could sustain a surplus on the balance of trade* and so accumulate gold and silver.

- Many members of society are hurt by such policies. Govt. subsidies of exports of certain industries are paid by taxpayers in the form of higher taxes. Govt. import restrictions are paid for by consumers in the form of higher prices because domestic firms face less competition from foreign producers. During the age of Imperialism, govts. often shifted the burden of mercantilist policies onto their colonies. Colonies supplied many commodities that the mother country have had to purchase from a non-associated country. E.g, the British required some colonial industries to sell their output only to British firms such as rice, tobacco etc. The British also prohibited colonial firms from exporting certain goods that might compete with those from British factories such as hats, finished iron goods and woolens. These strategies ultimately backfired and contributed to the grievances that led to the overthrow of the British crown in American colonies. (It was one of the cause of the American revolution).

Some terminology of the mercantilist era has endured. A favourable balance of trade still indicates that a country is exporting more than it is importing and vice-versa. (See details, Daniels et al. p.178)

Neomercantilism

As mercantilism does benefit some members of the society, mercantilist policies are still politically attractive to some firms and their workers. Modern supporters of such policies are called neomercantilists or protectionists. Neomercantilism has emerged to describe the approach of countries that try to run favourable balances of trade in an attempt to achieve some social or political objective. For instance, a country may try to achieve full employment by setting economic policies that encourage its companies to produce in excess of the demand at home and to send the surplus abroad. Similarly, a country may attempt to maintain political influence in an area by sending more merchandise to the area than it receives from it, such as a govt. granting aid or loans to a foreign govt. to use for the purchase of the granting country's excess production.

Neomercantilists are present in US such as American Federation of Labour Congress on Industrial Organisations. North Americans and Europeans have long complained that Japan limits the access of foreign goods to its markets. Asian and North American firms criticize the Europeans for imposing barriers against imported goods such as automobiles, videocassette recorders etc.

Absolute Advantage

Adam Smith (1776) – An Inquiry into the Nature and Causes of Wealth of Nations

In his 1776 landmark book, *The Wealth of Nations*, Smith attacked the intellectual basis of mercantilism and demonstrated that it actually weakens a country. It robs individuals of the ability to trade freely and to benefit from voluntary exchanges. Moreover, in the process of avoiding imports at all costs, a country will waste its resources producing goods it is not suited to produce. These inefficiencies will reduce the wealth of country as a whole.

Adam Smith attacked the mercantilist assumption that trade is a zero-sum game (A zero-sum game is one in which a gain by one country results in a loss by another). Smith argued that *countries differ in their ability to produce goods efficiently*. Smith advocated free trade among countries as a means of enlarging a country's wealth. Free trade enables a country to expand the amount of goods and services available to it by specializing in the production of some goods and services and trading in others. But which goods and services should a country export and which should it import? To answer this question, Smith developed the **theory of absolute advantage**. A country has an absolute advantage in the production of a product when it is more efficient than any other country in producing it. So, a country should export those goods and services in which it has an absolute advantage over others and import those where other countries have an absolute advantage.

In Smith's time, the English, by virtue of their superior manufacturing process, were the world's most efficient *textile* manufacturers. The French has the world's most efficient *wine* industry due to favourable climate and good soils. The theory of absolute advantage suggests that the English should specialize in the production of textiles while the French should specialize in the production of wine. England can therefore get all its wine by selling its textiles to France and vice-versa. Smith's basic argument, therefore is that you should never produce goods at home that you can buy at a lower cost from other countries.

Based on this theory, Smith reasoned that global efficiency increase through free trade. If trade were unrestricted, each country would specialize in those products that gave it a competitive advantage. Each country's resources would shift to the efficient industries. Through specialization, countries could increase their efficiency because of three reasons: (Daniels et al. p.179)

- Labour could become more skilled by repeating the same tasks.
- Labour would not lose time in switching from the production of one kind of product to another.
- Long production runs would provide incentives for the development of more effective working methods.

A country can then use its excess specialized production to buy more imports than it could have otherwise produced.

Example:

Assume 2 countries and 2 products. Further, assume that both France and Korea have the same amount of resources which can be used to produce either wine or fans. In France, one hour of labour can produce either 3 bottles of wine or 2 fans (Table). In Korea, one hour of labour can produce either 1 bottle of wine or 5 fans. One hour of labour produces 3 bottles of wine in France but only one in Korea; so France has an absolute advantage in the production of wine. Similarly, one hour of labour produces 2 fans in France but 5 fans in Korea; so Korea has an absolute advantage in the production of fans.

Table 1

Output per hour of labour		
	France	Korea
Wine	3	1
Fans	2	5

If France and Korea were to trade with each other, both will be better off. Suppose France agrees to exchange 3 bottles of wine for 4 fans. Only 1 hour of French labour is needed to produce 2 bottles of wine. In return France will get 4 fans. These 4 fans could have required 2 hours of French labour had France produced them. By trading with Korea rather than producing the fans itself, *France saves 1 hour of labour time*. France can then use this freed-up labour to produce more wine, which in turn can be consumed by French citizens or can be traded for more fans with Korea. Thus, by allocating its scarce labour to produce goods for which it is more productive than Korea and then trading them to Korea, France can consume more goods than it could have done in the absence of trade.

Korea is similarly better off. Korea uses 0.8 hour of labour to produce 4 fans to exchange for the 3 bottles of wine. Producing the 3 bottles of wine itself would have required 3 hours of labour. By producing fans and then trading them to France, *Korea saves 2.2 hours of labour time*. This can be used to produce more fans that the Koreans can consume themselves or trade to France for more wine.

(SEE EXAMPLE IN DANIELS ALSO)

Comparative Advantage

What happens when one country has an absolute advantage in the production of all goods? In 1817, David Ricardo examined this question and expanded on Adam Smith's theory of absolute advantage to develop the theory of comparative advantage. In his 1817 book *Principles of Political Economy*, Ricardo showed that such a country may still derive benefits from international trade. According to Ricardo's theory of comparative advantage, it makes sense for a country to specialize in the production of those goods that it produces most efficiently and to buy those goods that it produces less efficiently from other countries, even if this means buying goods from other countries that it could produce more efficiently itself.

While this may seem counterintuitive, the logic can be explained with a simple example. The best lawyer in town also happens to be very good at secretarial work. Would it make economic sense for this lawyer to handle all the paper work and administrative duties of his office? (Ram Jethmalani, Narayan Murthy may be better at data entry operations than his employees, Shah Rukh Khan may be better in accounting than his own CA) The lawyer can earn more money by working as a lawyer, even though that means having to employ a less skilled secretary to manage the office. In the same way, a country will gain if it concentrates its resources on producing commodities that it can produce most efficiently. It will then trade some of those commodities for those commodities that it has relinquished.

The difference between the two theories is subtle: absolute advantage theory looks at absolute productivity differences while comparative advantage looks at relative productivity differences. The comparative advantage theory incorporates the concept of opportunity cost in determining which good a country should produce. The opportunity cost of good is the value of what is given up to get the good. In the above example, the opportunity cost of doing secretarial work for the lawyer is high: time spent in paper work is unavailable for dealing with cases and meeting clients.

Example

We return to our earlier example. We now change some facts. Suppose productivity stays the same in Korea. But increases in France due to some new training programmes.

Table 2

Output per hour of labour		
	France	Korea
Wine	5	1
Fans	6	5

France can now produce 5 bottles of wine and 6 fans per labour hour. France now has an absolute advantage in both wine and fans. For each hour of labour, France can produce 4 more bottles of wine or 1 more clock radio than Korea can. According to the theory of absolute advantage, no trade should occur because France is more productive than Korea in producing both goods.

The theory of comparative advantage, however, indicates that trade should still occur. Although France has an absolute advantage in the production of both goods, it has a *comparative advantage* only in the production of wine. France can produce 5 times as much wine as Korea but only 1.2 times as much fans. So France is *comparatively* more efficient at producing wine than it is in producing fans.

By the theory of comparative advantage, France should export wine to Korea and Korea should export fans to France. In the absence of trade, 1 bottle of wine will sell for 1.2 fans in France and for 5 fans in Korea. If Korea offers to trade 2 fans for 1 bottle of wine, France will be better off (even though France has an absolute advantage in fans production). Without trade, sacrificing 1 bottle of wine domestically would yield France only 1.2 fans in increased production. With trade, France could get 2 fans by giving 1 bottle of wine to Korea. France gets more fans per bottle of wine by trading with Korea than by producing fans domestically.

Gains from trade

We now introduce certain other assumptions into our discussion to demonstrate the gains from trade.

1. The output per hour of labour in France and Korea for wine and fans is shown in Table 2.
2. 100 units of resources (labour hours) are available to both countries.
3. Each country uses half of total resources per product when there is no foreign trade (although there are a number of combinations that can be produced with a given amount of resources).

Resources (labour hour) required to produce 1 bottle of wine and 1 fan

	Wine	Fan
France	0.2	0.167
Korea	1	0.2

Without trade, the combined production of wine will be 300 bottles and the combined production of fans will be 562.5 fans. Without trade, each country must consume what it produces. By engaging in trade, the two countries can increase their combined production of both wine and fans and consumers in both nations can consume more of both goods.

Production without trade

	Wine	Fan
France	250	300
Korea	50	250
<i>Total production</i>	300	550

Let us suppose now that France exploits its comparative advantage in the production of wine. If the combined production of wine is unchanged from when there was no trade, France could produce all 300 bottles by using 60 hours of labour time. The remaining 40 hours can be used for producing 240 fans. Korea can use all its resources to produce 500 fans ($100/0.2$). The combined wine production has remained same but fan production has increased from 550 to 740.

Production with specialization (increasing fan production)

	Wine	Fan
France	300	240
Korea	0	500
<i>Total production</i>	300	740

If the combined fan production is unchanged from the time before trade, Korea could use all its resources to produce fans, yielding 500 fans. France could produce the remaining 50 by using 8.35 hours of labour. The remaining 91.65 hours can be used to produce 456.25 bottles of wine. So without sacrificing any of the fans available before trade, wine production has increased.

Production with specialization (increasing wine production)

	Wine	Fan
France	456.25	62.5
Korea	0	500
<i>Total production</i>	456.25	562.5

There could be various combinations between these two points where both wine and fan production would increase over what was possible before trade took place. Whether production target is an increase of wine or fan or a combination of two, both countries can gain by having Korea trade some of its fan production to the France for some of that country's wine output.

Simple extensions of the Ricardian Model / Some Assumptions and limitations of the Theory of Specialisation

We now explore the effect of relaxing some of the assumptions identified in the simple comparative advantage model.

(SEE Charles Hill, p.148-151 and Daniels et al. 183-185)

Heckscher-Ohlin Theory (Factor-Proportions Theory)

The theory of comparative advantage leads us to a broader question: What determines the products for which the country will have a comparative advantage? To answer the question, two Swedish economists, Eli Heckscher (in 1919) and Bertil Ohlin (in 1933) developed the **theory of relative factor endowments** (or factor proportions theory) now often referred to as the **Heckscher-Ohlin theory**. These economists made two basic observations:

1. *Factor endowments (or types of resources) vary among countries.* For example, India has rich soil and fertile land and large cheap labour, Saudi Arabia has crude oil reserves, Japan has advanced technology etc.
2. *Goods differ according to the types of factors that are used to produce them.* For instance, wheat requires fertile land, oil production requires crude oil reserves and textile industry require unskilled labour, call centres (with clients in US and UK) require English-speaking people.

H-O argued that comparative advantage arises from differences in national factor endowments. By factor endowments, they mean the extent to which a country is endowed with such resources as land, labour and capital. Nations have different factor endowments and these different factor endowments explain differences in factor costs. The more abundant a factor, the lower its cost. So, if labour is abundant relative to land and capital, labour costs will be low relative to land and capital costs.

H-O theory says: A country will have a comparative advantage in producing products that intensively use resources (factors of production) it has in abundance. Thus, Saudi Arabia has a comparative advantage in oil production because of its abundance of crude oil reserves; India has a comparative advantage in textile manufacturing because of abundant unskilled labour; US has a comparative advantage in capital-intensive goods because of its abundance in capital. Australia and Canada have abundant land compared to the number of people, so they can excel in the production of goods requiring large amount of land such as wool and wheat (but not Hong Kong where they are many people relative to the amount of land). The most successful industries in Hong Kong are those in which technology permits the use of minimal amount of land relative to the number of people employed. Clothing production occurs in multistory factories where workers share minimal space.

The H-O theory predicts that countries will export those goods that make intensive use of factors that are locally abundant, while importing those goods that make intensive use of factors that are locally scarce. Like Ricardo's theory, H-O theory argues that free trade is beneficial. However, unlike Ricardo's theory, H-O theory argues that pattern of