

INTERNATIONAL TRADE

INTER-REGIONAL TRADE

Inter-regional trade refers to trade between regions within a country.

Thus inter-regional trade is domestic or internal trade.

INTERNATIONAL TRADE

International trade is trade between two nations or countries.

DIFFERENCE BETWEEN INTER-REGIONAL AND INTERNATIONAL TRADE

Nevertheless, there are several reasons to believe the classical view that international trade is fundamentally different from inter-regional trade.

DIFFERENCE BETWEEN INTERNAL VS INTERNATIONAL TRADE

1. Factor immobility
2. Difference in natural resources
3. Geographical and climate Differences
4. Different Markets
5. Mobility of goods
6. Different currencies

7. Problem of Balance of payments

8. Different transport costs

9. Different political Groups

10. Different National policies.

1. Factor Immobility.

The classical economists advocated a separate theory of international trade on the ground that factors of production are freely mobile within each region as between places and occupations and immobile between countries entering into international trade. Thus, labour and capital are regarded as immobile between countries while they are perfectly mobile within a country. There is complete adjustment to wage differences and factor-price disparities within a country with quick and easy movement of labour and other factors from low return to high sectors. But no such movements are possible internationally. Price changes lead to movement of goods between countries rather than factors. The reasons for international immobility of labor are-difference in languages, customs, occupational skills, unwillingness to leave familiar surroundings, and family ties, the high travelling expenses to the foreign country, and restrictions imposed by the foreign country on labor immigration. The international mobility of capital is restricted not by transport costs but by the difficulties of legal redress, political uncertainty, ignorance of the prospects of investment in a foreign country, imperfections of the banking system, instability of foreign currencies, mistrust of the foreigners, etc. Thus, widespread legal and other restrictions exist in the movement of labour and capital between countries. But such problems do not arise in the case of inter-regional trade .

2. Differences in Natural Resources.

Different countries are endowed with different types of natural resources. Hence they tend to specialize in production of those commodities in which they are richly endowed and trade them with others where such resources are scarce. In Australia, land is in abundance but labour and capital are relatively scarce. On the contrary, capital is relatively abundant and cheap in England while land is scarce and dear there. Thus,

commodities requiring more capital, such as manufactures, can be produced in England; while such commodities as wool, mutton, wheat, etc. requiring more land can be produced in Australia. Thus both countries can trade each other's commodities on the basis of comparative cost differences in the production of different commodities.

3. Geographical and Climatic Differences.

Every country cannot produce all the commodities due to geographical and climatic conditions, except at possibly prohibitive costs. For instance, Brazil has favorable climate geographical conditions for the production of coffee; Bangladesh for jute; Cuba for beet sugar; etc. So countries having climatic and geographical advantages specialize in the production of particular commodities and trade them with others.

4. Different Markets.

International markets are separated by difference in languages, usages, tastes, fashions etc. Even the systems of weights and measures and pattern and styles in machinery and equipment differ from country to country. For instance, British railway engines and freight cars are basically different from those in France or in the United States. Thus goods which may be traded within regions may not be sold in other countries. That is why, in great many cases, products to be sold in foreign countries are especially designed to conform to the national characteristics of that country. Similarly, in India right-hand driven cars are used whereas in Europe and America left-hand driven cars are used.

5. Mobility of Goods.

There is also the difference in the mobility of goods between inter-regional and international markets. The mobility of goods within a country is restricted by only geographical distances and transportation costs. But there are many tariff and non-tariff barriers on the movement of goods between countries. Besides export

and import duties, there are quotas, VES, exchange controls, export subsidies, dumping, etc. which restrict the mobility of goods at international plane.

6.' Different Currencies.

The principal difference between inter-regional and international trade lies in use of different currencies in foreign trade, but the same currency in domestic trade. Rupee is accepted throughout India from the North to the South and from the East to the west, but if we cross over to Nepal or Pakistan, we must convert our rupee into their rupee to buy goods and services there.

It is not the differences in currencies alone that are important in international trade, but changes in their relative values. Every time a change occurs in the value of one currency in another, a number of economic problems arise. "Calculation and execution of monetary exchange transactions incidental to international trading constitute costs and risks of a kind that are not ordinarily in domestic trade. Further, currencies of some countries like the American dollar, the British pound the Euro and Japanese yen are more widely used in international trade actions, while others are almost inconvertible. Such tendencies tend to create more economic problems at the international plane. Moreover, different countries follow different monetary and foreign exchange policies which affect the supply of exports or the demand for imports. It is this difference in policies rather than the existence of different national currencies which distinguishes foreign trade from domestic trade," according to Kindleberger.

7. Problems of Balance of Payments.

Another important point which distinguishes international trade from inter-regional trade is the problem of balance of payments. The problem of balance of payments is perpetual in international trade while regions within a country have no such problem. This is because there is greater mobility of capital within regions

than between countries. Further, the policies which a country chooses to correct its disequilibrium in the balance of payments may give rise to a number of other problems. If it adopts deflation or devaluation or restrictions on imports or the movement of currency, they create further problems. But such problems do not arise in the case of inter-regional trade.

8. Different Transport Costs.

Trade between countries involves high transport costs as against inter-regionally within a country because of geographical distances between different countries.

9. Different Political Groups.

A significant distinction between inter-regional and international trade is that all regions within a country belong to one political unit while different countries have different political units. Inter-regional trade is among people belonging to the same country even though they may differ on the basis of castes, creeds, religions, tastes or customs. They have a sense of belonging to one nation and their loyalty to the region is secondary. The government is also interested more in the welfare of its nationals belonging to different regions. But in international trade there is no cohesion among nations and every country trade with other countries in its own interests and often to the detriment of others. As remarked by Friedrich List, "Domestic trade is among us, international trade is between us and them."

10. Different National Policies.

Another difference between inter-regional and international trade arises from the fact that policies relating to commerce, trade, taxation, etc. are the same within a country. But in international trade there are artificial barriers in the form of quotas, import duties, tariffs, exchange controls, etc. on the movement of goods and services from one country to another. Sometimes, restrictions are more subtle. They take the form of elaborate custom procedures, packing requirements, etc. Such restrictions are not found in inter-regional

trade to impede the flow of goods between regions. Under these circumstances, the internal economic policies relating to taxation, commerce, money, incomes, etc. would be different from what they would be under a policy of free trade.

Conclusion. Therefore, the classical economists asserted on the basis of the above arguments that international trade was fundamentally different from domestic or inter-regional trade. Hence, they evolved theory for international trade based on the principle of comparative cost differences.

4 IMPORTANCE OF INTERNATIONAL TRADE

International trade plays an important role in countries growth and development. The area like Industrialization, advanced transportation, globalization, multinational corporations, and outsourcing are all having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization. Without international trade, nations would be limited to the goods and services produced within their own borders. There are some important roles given below:

1. **Boost Economic Development:**

Trade can help boost development and reduce poverty by generating growth through increased commercial opportunities and investment, as well as broadening the productive base through private sector development.

2. Enhances Competitiveness:

Trade enhances competitiveness by helping developing countries reduce the cost of inputs, acquire finance through investments, increase the value added of their products and move up the global value chain.

3. Export Diversification:

Trade facilitates export diversification by allowing developing countries to access new markets and new materials which open up new production possibilities.

4. Encourages Innovation:

Trade encourages innovation by facilitating exchange of knowhow, technology and investment in research and development, including through foreign direct investment.

5. Expand Business Opportunities:

Trade openness expands business opportunities for local companies by opening up new markets, removing unnecessary barriers and making it easier for them to export.

6. Expand Choice:

Trade expands choice and lowers prices for consumers by broadening supply sources of goods and services and strengthening competition.

7. Improvement of Quality:

Trade plays a role in the improvement of quality, labour and environmental standards through increased competition and the exchange of best practices between trade partners, building capacity in industry and product standards.

8. Cutting Government Spending:

Trade contributes to cutting government spending by expanding supply sources of goods and services and strengthening competition for government procurement.

9. Strengthen Ties Between the Nations:

Trade strengthens ties between nations by bringing people together in peaceful and mutually beneficial exchanges and as such contributes to peace and stability.

1.5 ADVANTAGES OF INTERNATIONAL TRADE

The fundamental reason for international trade is to sell something that we don't need and to buy something we do need. Trade creates jobs, attracts investments, attracts new technology and materials, and offers wider choice in products and services. The main advantage of international trade is as follows:

1. Meeting Nation's Need:

Trade is always balanced if it is fair. If 2 people trade baseball cards and one gives another 6 cards, they should get 6 back. Many businesses can create a surplus inventory of goods and services. Many nation farms produce more food than they can eat, manufacturers make more products than they use, and service providers can provide service to other countries.

Some nation cannot produce fruits like bananas and oranges and many other products in their own nation and these products are imported. Both trading partners nation get something they need by trading something they don't need.

2. Job Creation:

Unlike the battering that used to go on between trading partners, now businesses receive money from selling their products or services to foreign businesses. When foreign businesses buy Indian products it creates jobs for Indians. Exports are very important for international trading partner because it increases the flow of funds to the nations and creates job opportunities. When trade is balanced, businesses remain profitable and may grow faster.

3. Attracting Investment:

Investment follows trade. Many foreign companies will invest in an office, factory, or distribution warehouse to simplify their trade and reduce cost. This investment also creates more jobs. It also attracts international investors.

4. New Technology and Materials: New technology promotes competitiveness and profitability. If a business could create a machine that works better, faster, or cheaper (or all three), then the business will have produced a more competitive product for national and international markets.

4. Diverse Products and Services:

A century ago, many products were considered a rare treat; people put them in stockings for children. Now, we can buy these products at local grocery stores thanks to better preservation and trading technologies. Foreign trade turns the world into a giant market, delivering food, fashions, etc.

5. Transfer of Knowledge and Technology:

According to the Adam Smith International trade leads an additional benefit namely that it transfers knowledge and technology between different nations. The adoption and use of new production techniques lead to productivity growth and thus , to economic development and an increase in wealth. For example, China already has a large domestic market and would therefore primarily gain from open trade with Europe by getting access to its technology rather than by widening its market New services such as banking, travel, and consultation are also available now. Business competition is no longer on a city scale; instead, businesses compete against worldwide businesses.

The result is better quality goods, lower prices and functional design.

1.6 DISADVANTAGES OF INTERNATIONAL TRADE

The Global market has made it easy to buy and sell international goods. While this has benefits, it also presents a problem. Such trade can cause countries to be prosperous for a short time, but leads to economic exploitation, loss of cultural identity and even physical harm.

1. Support of Non-democratic Systems:

Great hardship can be caused when people make poor decisions about land use or surplus production for export and do not take the general population's welfare into consideration. For example: Landowners in many nations want farmers to grow coffee beans because it is a very profitable cash crop, however, the farmers would like to use the land to grow more food for their families. The farmer's wishes are ignored because they do not actually own the land.

2. Cultural Identity Issues:

Culture is a major export in the world. It displays and promotes values and lifestyles worldwide. The "culture consumer" in other countries is sometimes overwhelmed by developed nation's ideas. Products also carry cultural ideas and messages. There are values of the culture that make the product.

3. For example:

Coca-Cola, McDonalds, Nike, and Microsoft all sell products that symbolize American values and symbolize and reflect American corporate culture.

4. Social Welfare Issues:

Maintaining safety standards, minimum wages, worker's compensation and health benefits are all social welfare issues that cost business money. If a running shoe is made in a country where these issues are not met then the shoe can be sold for less in other nation. The downside to this is that substandard safety conditions cause death and injury in the workplace.

5. Environmental Issues:

In international trading environment this is one of the important issues. International traders ignore the rules and regulations to clean the environment. Their motive is only to make profit. They are not interested in protecting the environment because it is costly business. Due to this international traders decide to move their operations to countries where it is less regulated.

6. Political Issues:

Precious commodities such as gold, diamond, oil or farmland are so important for countries to have control that wars have been started and as a result people are killed. Trade of these items has caused political alliances that do not help the people in the trading nation but only the powerful corporations that control the commodity.

1.7 CONCLUSION

International trade plays an important role in countries growth and development. The areas like industrialization, advanced transportation, globalization, multinational corporations and outsourcing are all having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization. Without international trade, nations would be limited to the goods and services produced within their own borders. Along with importance of international trade between the nations, it is not free from some problems associated with it such as economic exploitation of least developing nations by MNCs, loss of cultural identity and even physical harm etc.

INTERNATIONAL TRADE EQUILIBRIUM : SOME ANALYTICAL TOOLS

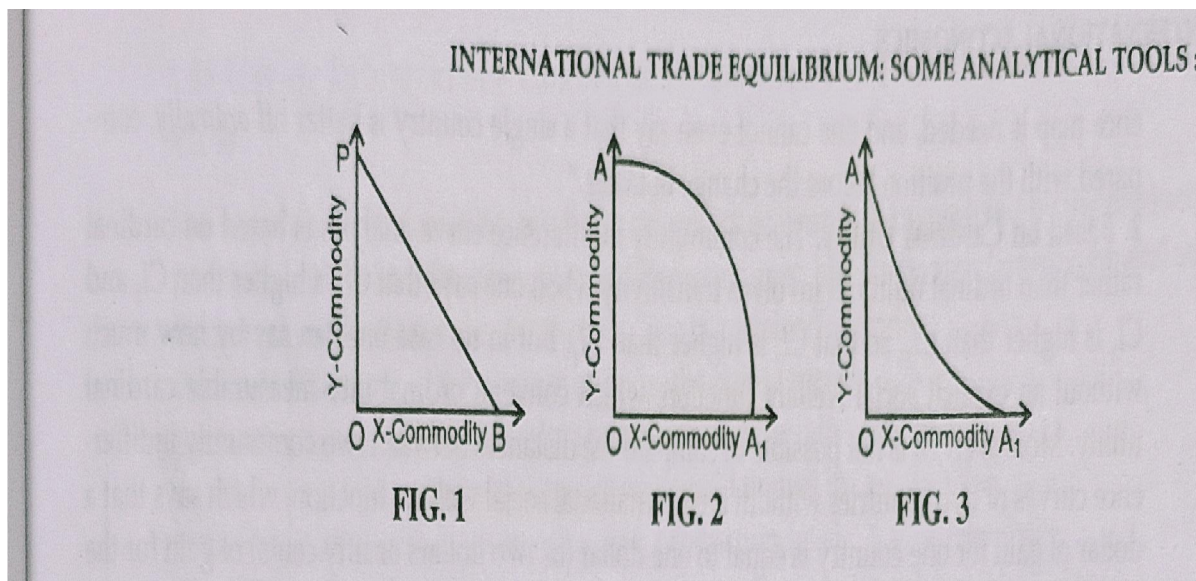
INTRODUCTION

The neo-classical economists, such as Haberler, Leontief, and Meade", have Introduced some analytical tools in the theory of international trade. They are the production Possibility the community indifference curve, and the trade indifference curve respectively. They have been used extensively along with Marshall's offer curves in trade theory to analyse general equilibrium.

THE PRODUCTION POSSIBILITY CURVE

A production possibility curve represents the supply side in international trade equilibrium it shows the various alternative combinations of the two commodities that a country can produce efficiently by fully utilising its factors of production with the available technology.

It is based on the most concept of opportunity costs. The slope of production possibility curve measures the amount of one commodity that a country must give up in order to get an additional unit of the second commodity. In other words, the slope of production possibility curve whether a straight line or a curvature, is negative.



The slope of the production possibility curve depends on cost conditions operating in an economy. Under constant opportunity costs, the production curve is a straight line, shown as PB in Fig. 1. The production possibility curve under increasing opportunity costs is concave to the origin, shown as AA, in Fig. 2. Under decreasing opportunity costs, the production possibility curve is convex to the origin, shown as AA, in Fig. 3. The production possibility curve, as a tool of analysis, has been used by Haberler as a refinement to the classical theory of international trade. But the production possibility curve does not tell what will, in fact, be produced. It merely sets out what the possibilities are." More information is needed for this purpose on the demand side.

THE COMMUNITY INDIFFERENCE CURVE

A community indifference curve or social indifference curve represents the demand side in international trade equilibrium. A community indifference curve shows the various combinations of two commodities which yield the same satisfaction to the community. Community indifference curves can be drawn by aggregating the

various individual tastes in a country. Community indifference curves have the same characteristics as individual indifference curves.

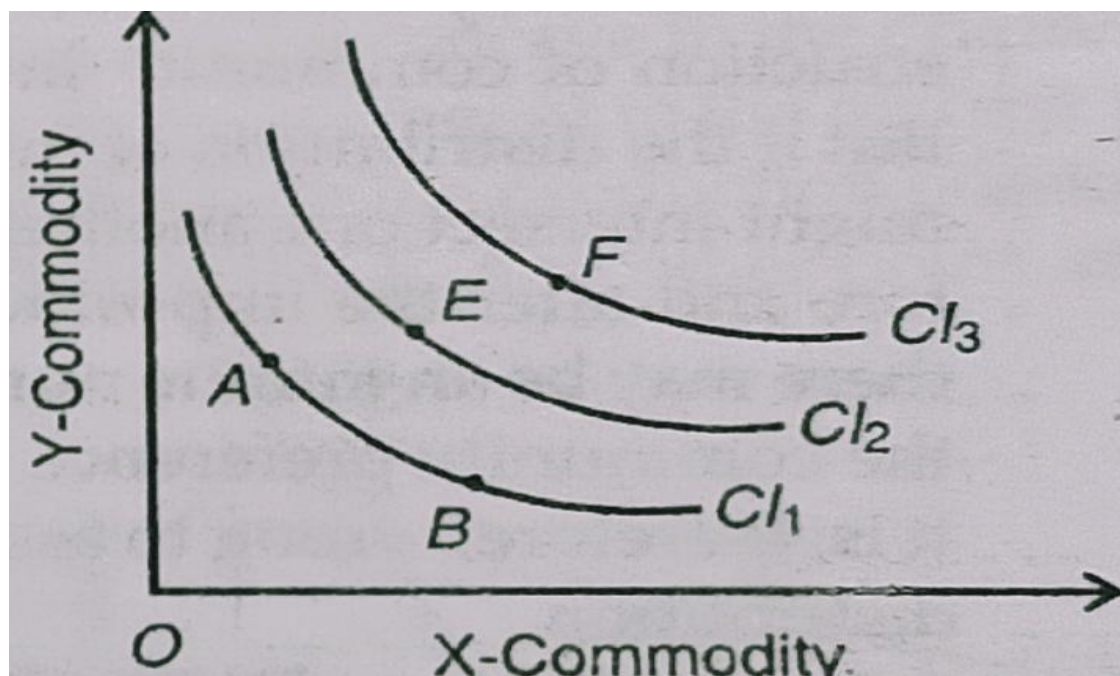


Fig. 4 shows a map of community indifference curves as represented by CI_1 , CI_2 , and CI_3 curves. All points on the CI_1 curve, such as A and B, give equal satisfaction to the community. A higher community indifference curve gives higher level of satisfaction to the community, such as point E on the CI_2 curve which gives higher satisfaction to the community than points A and B on the CI_1 curve, and point F on the CI_3 curve gives higher satisfaction than point E on the lower curve CI_1 . In other words, the farther the curve is away from the origin, the greater the utility it represents. Further, the community indifference curves are downwards sloping from left to right or negatively inclined. They are convex to the origin. The absolute slope of a community indifference curve at any point is its marginal rate of substitution (MRS), i.e. the amount of a commodity which the nation is willing to give up to obtain one additional unit of other commodity and still remain on the same indifference curve. "Last but not the least, community indifference curves must not intersect. It implies that income and tastes of all residents of the country must be identical.

CRITICISMS

The use of community indifference curves in international trade theory has been severely criticised. The points of criticism arise from the assumptions of constant tastes and income distribution of country.

But these assumptions are unrealistic.

1. Aggregation of Individual Tastes not possible.

2. Based on Cardinal Utility

3. Difficult to Measure Price Changes.

4. Problem of Interpersonal Comparisons.

5. Community Indifference Curves not Independent of Income Distribution

6. Conceals Many Difficulties.

1. Aggregation of Individual Tastes not possible.

It is not possible to aggregate individual tastes for constructing community indifference curves. Moreover, the tastes of the community are not consistent with the taste of an individual from one period to another. As a matter of fact, taste differ from individual to individual and overtime. "Again, if tastes change, a new indifference map is needed, and one cannot even say that a single country better off ordinally, compared with the position before the change in tastes."

2. Based on Cardinal Utility.

The community indifference curve analysis is based on cardinal rather than ordinal utility. It involves transitivity when one says that CI₂ is higher than CI₁ and CI₃ is higher than CI₂ so that CI₃ is higher than CI₁. But in no case one can say by how much without an explicit social welfare function, which converts ordinal into measurable cardinal utility. Moreover, "it is not possible to compare the distances between two community indifference curves of two countries without an international social welfare function, which says that a dollar of gain for one country is equal to one dollar (or two dollars or fifty cents) of gain for the other."

3. Difficult to Measure Price Changes.

In the real world, according to Kindleberger, "It is operationally difficult, approaching impossibility to measure the change in prices before and after trade, or, from a given trading position, to estimate how much prices would be changed if trade were suddenly eliminated."

4. Problem of Interpersonal Comparisons.

The community indifference curves embody inter-personal comparisons of utility. Scitovsky tries to overcome this difficulty by constructing community indifference curves on the basis of the compensation principle. If it is clear that the beneficiaries of a change in price have enough additional income to compensate (or bribe) the losses for their loss, and some left over, the new position represents an improvement. But the Scitovsky principle is also not free from interpersonal comparisons.

5. Community Indifference Curves not Independent of Income Distribution.

Scitovsky's construction of community indifference curves assumes a fixed income distribution throughout. But if the distribution of income changes with the imposition of a tariff, the community curves might intersect one another. There will be a different set of community indifference curves before and after the imposition of a tax on commodities entering into international trade. Thus, there may be an infinite number of community indifference curves passing through any point in the community preference map, each corresponding to a different level of income distribution. It is, therefore, wrong to assume that community indifference curves are independent of income distribution.

6. Conceals Many Difficulties.

According to Johnson, the technique of community indifference curve in international trade theory "conceals a number of difficulties, which can only be evaded by making one or other of a number of restrictive assumptions. We can assume, for example, that the State has its own preference system, or we can assume that the State follows some social welfare policy which specifies the distribution of real income

amongst the citizens. The problem here is that if we assume a free enterprise economy, with income distributed according to factor ownership, then (unless ownership shares and individual tastes are identical) any change in production will, by altering factor prices, shift the weights given to the different people's preferences in adding up the social preference system. "

CONCLUSION.

These criticisms have led economists to avoid the use of the tool in international trade theory, especially by Haberler who regards it "far from a satisfactory solution." Wnunalnany economists like Johnson, Elisworth, Sodersten and Vanek continue to use it. Accorag Caves, "The community indifference concept proves shaky, despite the regularity with wn has been used." On the other hand, to Kindleberger, "However unrealistic, the community in difference curve is schematically a neat device."

THE OFFER CURVE

Another important tool of analysis in international economics is the offer curve, also known as the reciprocal demand curve developed by Mill, Edgeworth, Marshall and Meade. The offer curve of a country determines the relative commodity price at which trade takes place. It shows the various quantities of its exportable commodity a country is willing to exchange for an importable commodity at various international prices.

Derivation of Offer Curve.

The offer curve of a country is derived from its production possibility curve, its community indifference curves and the various international commodity prices at which it would trade with the other country.

Panel (A) of Fig. 10 shows AA1 the production possibility curve of country A, the community indifference curves CI 1, CI 2 and CI 3 and P1, P2 and P3 the price lines. In the absence of trade, domestic producers and consumers are in equilibrium at point E, as revealed by the domestic price line P1 which passes through the point of tangency between the production possibility curve AA1 and the community indifference curve CI 1.

Suppose this country decides to enter into international trade. Since it has a comparative advantage in the production of commodity Y (this is clear from the shape of the production possibility curve AA 1), its terms of trade are shown by the price line P 2. It will then produce at point F and consume at E1 on the higher community indifference curve CI2. Its trade triangle GEF shows that it will export GF of Y in exchange for GE1 of X imports. If the terms of trade are settled at the P3 price line on which the country produces at point C and consumes at point E2 on a still higher community indifference curve CI3. It thus exports DC of Y commodity in exchange for DE2 of X commodity.

DIAGRAM FIG 10

Country A's offer curve is drawn in Panel (B) of Fig. 10 by taking the vertical axis exactly below the CD line of Panel (A). The triangle AOE1G in the lower figure is the same as the triangle FE1G in the upper figure, the terms of trade OP are the same as those shown by the price line p in Panel (A), as they have the same absolute slope. Similarly, the triangles OE2D and CE2D are similar and so are their price ratios OP3 and P3 respectively in the two Panels (B) and (A). The price line OP1 corresponds to the domestic price line P1 of the upper figure. Connecting points E1 and E2 from the origin, we have the offer curve OA of country A which shows the exports of Y-commodity OG and OD that will be offered in exchange for imports of X-commodity (not shown here) as the international terms of trade represented by OP2 and OP3 respectively.

The offer curve of country A is drawn in Panels (A) and (B) of Fig. 11 with the help of the production possibility curve BB1 the community indifference curves CI 0, CI 1 and CI 2 and p0, p1 and p2 price line. Since the slope of the production possibility curve shows country B to be possessing comparative advantage

in the production of commodity X this country will export this commodity in exchange for the import of Y commodity .

DIAGRAM

The procedure for drawing the offer curve OB in the lower portion of the offer figure is the same as followed in Fig. 10 (A) and (B). The trade triangle OG_1E_1 corresponds to the trade triangle $G_1F_1E_1$, and the triangle OD_1E_2 to $D_1C_1E_2$. The lines of OP_1 and OP_2 represent the international terms of trade which have the same absolute slopes as the price lines p_1 and p_2 in Panel (A) of the figure. Point E_1 are the loci of equilibrium trade at these international prices and by joining them through the origin, we have the offer curve OB of country B in Panel (B). This curve shows that (B) country B will offer OG_1 and OD_1 , quantities of its exportable commodity-X in exchange for certain quantities of imports of Y (not shown in the figure) at these international prices.

Trade Equilibrium.

In order to determine the trade equilibrium at given international prices, we combine the offer curves of Fig. 10 (B) and 11 (B) in Fig. 12. The point where the two offer curves intersect, will determine the quantities of exports and imports of each commodity of at international prices by the two countries. The offer curves OA and OB intersect at point E_2 . At the international price line $P_3 (=P_2)$, country A offers OD of its exports of Y in exchange for OD_1 of its imports of X from B country. Similarly, country B offers OD_1 , of its exports of X in exchange for OD imports of Y from country A. At any point other than E_2 , say E_1 on the price line OP_2 , country A would be willing to exchange OG of its commodity Y for a lesser amount GE_1 , of X from country B.

Similarly, if B is at point E on the international price line OP_1 , it would be willing to accept much less quantity G_1E of commodity Y from country A in exchange for OG_1 , of X. A. Thus, neither point E_1 nor point E on the international price lines OP and OP_1 can be one of equilibrium, "because the terms of trade implied by the ray from the origin of each point do not suffice to clear the market." Hence, the point $E_2 (=E_2)$ where the offer curves OA and OB of the two countries intersect will be the equilibrium point.

A NOTE ON THE ELASTICITY OF THE OFFER CURVE

The elasticity of the offer curve is measured in terms of the following formula :

$$\frac{\% \text{ Change in Imports}}{\% \text{ Change in Exports}} = \frac{\frac{AM}{M} \frac{AM}{X}}{\frac{AX}{X} \frac{AX}{M}}$$

where M and X refer to imports and exports respectively.

The elasticity of the offer curve OB of country B at point E in Fig. 13 can be measured in the following way. Draw a tangent TTI to the offer curve OB at E, and a perpendicular from E on the horizontal axis at point N. We can work out the above formula on the basis of the diagram as under:

$$\frac{DX}{DN} = \frac{NE}{ON}$$

The slope at point E is

$$\frac{AM}{X} \frac{NE}{ON} \frac{ON}{ON} = \frac{AM}{X} \frac{NE}{ON}$$

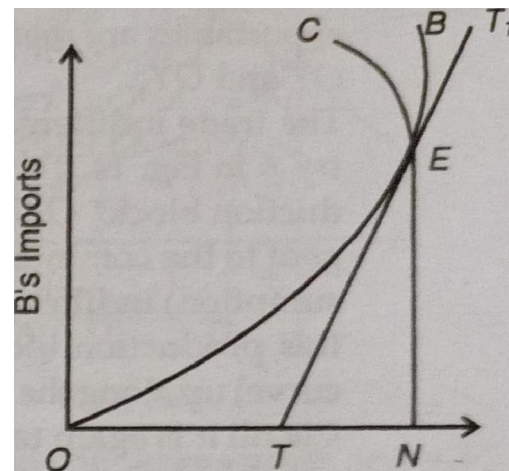
$$\frac{AX}{M} \frac{TN}{NE} \frac{TN}{TN}$$

FIG. 13

It shows that the elasticity of the offer curve at point E is greater than 1. It is highly elastic beyond E on the offer curve OB. When the offer curve is a straight vertical line beyond E, its elasticity is unitary. It is inelastic when the offer curve is backward bending OC, beyond point E.

IMPORTANCE OF THE OFFER CURVE

The offer curve is a useful geometrical tool in international trade theory. It was first used by Edgeworth and Marshall. But now it is being used to explain Mill's theory of reciprocal demand, the gains from international trade, the exchange rate theory and the theory of tariff. It is, however, the elasticity of the offer curve which is generally taken into consideration. Moreover, "the offer curve is a general equilibrium concept. It is determined



by production and consumption conditions jointly. It is more appropriate to say that these conditions determine the shape of the trading partners' offer curves, which in turn determine the terms of trade. "II

THE CLASSICAL THEORY OF COMPARATIVE ADVANTAGE

1. INTRODUCTION

The classical theory of international trade was first formulated by Robert Torrens, David Ricardo and John Stuart Mill. Their ideas relate to the theory of comparative cost or advantage. Adam Smith, the first classical economist, advocated the principle of absolute advantage as the basis of international trade which was discarded by Ricardo. But the Ricardian theory of comparative advantage has been accepted and improved upon by modern economists like Taussig and Haberler. In this chapter, we discuss the views of Smith and Ricardo.

2. SMITH'S THEORY OF ABSOLUTE DIFFERENCES IN COSTS

Adam Smith extolled the virtues of free trade. These are the result of the advantages of division of labour and specialisation both at the national and international levels. The division of labour at the international level requires the existence of absolute differences in costs. Every country should specialise in the production of that commodity which it can produce more cheaply than others and exchange it for the commodities which cost less in other countries. According to Smith, "Whether the advantage which one country has over another be natural or acquired, is in this respect of no consequence."

To illustrate, let there be two countries, A and B, having absolute differences in costs in producing a commodity each, X and Y respectively, at an absolute lower cost of production than the other. The absolute cost differences are illustrated in Table 1.

Table 1. Absolute Differences in Costs

Country	Commodity-X	Commodity-Y
A	10	5
B	5	10

The table reveals that country A can produce 10X or 5Y with one unit of labour and country B can produce 5X or 10Y with one unit of labour.

In this case, country A has an absolute advantage in the production of X (for 10X is greater than 5X), and country B has an absolute advantage in the production of Y (for 10Y is greater than 5Y). This can be expressed as

$$\frac{10X \text{ of A}}{5Y \text{ of A}} > \frac{5X \text{ of B}}{10Y \text{ of B}}$$

Trade between the two countries will benefit both if A specialises in the production of X and B in the production of Y, as is shown in Table 2.

Table 2. Gains From Trade

Commodity	Production after Trade		Production from Trade	Gains before Trade
Country	(1)	(2)	(2)	(2-1)
X	10	5	20	+ 10
Y	5	10	20	+ 10
Total Production	15	15	20	20

The above table reveals that before trade both countries produce only 15 units each of the two commodities by applying one labour-unit on each commodity. If A were to specialise in producing commodity X and use both units of labour on it, its total production will be 20 units of X.

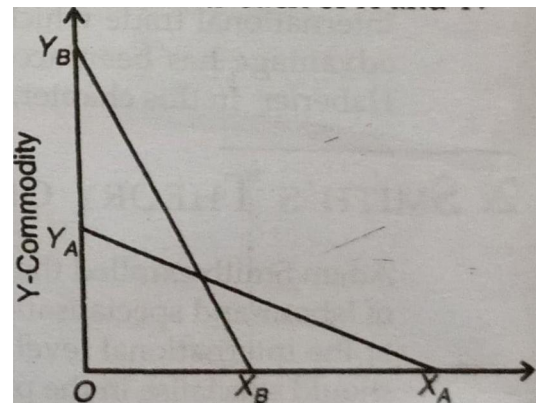
Similarly, if B were to specialise in the production of Y alone, its total production will be units of Y. The combined gain to both countries from trade will be 5 units each of X and Y.

Figure 1 illustrates absolute differences in costs with the help of production possibility curves. YAXA is the production possibility curve of country A which shows that it can produce either OXA of commodity X or OYA of commodity Y. Similarly, country B can produce OXB of commodity X or OYB of commodity Y. The figure also reveals that A has an absolute advantage in the production of commodity X. According to Ellsworth, Smith assumes without

argument that international trade requires a producer of exports to have an absolute advantage, that is, an export-

($OXA > OXB$) and country B has an absolute advantage in the production of commodity Y ($OYA < OYB$).

But Smith has been criticised for his vagueness and lack of



X-Commodity, —

FIG. 1

ing country must be able to produce with a given amount

of capital and labour a larger output than any rival. But this basis of trade is not realistic because there are many underdeveloped countries which do not possess absolute advantage in the production of any commodity, and yet they have trade relations with other countries. Thus, Smith's analysis is weak and unrealistic.

3. RICARDO'S THEORY OF COMPARATIVE DIFFERENCES IN COSTS

According to David Ricardo, it is not the absolute but the comparative differences in costs that determine trade relations between two countries. Production costs differ in countries because of geographical division of labour and specialisation. Differences in climate, natural commodity resources, a lower

geographical cost than the situated in and this way, efficiency each of country labour, specialises a country in can the produce production one of that commodity in which it makes the lowest cost of production is the least. Therefore, when a country enters into trade with some other country, it will export those commodities in which its comparative production costs are less, and will import those commodities in which its comparative production costs are high. This is the basis of international trade, according to Ricardo. It follows that each country will specialise in the production of those commodities in which it has the greatest advantage or the least comparative disadvantage. Thus, a country will export those commodities in which its comparative advantage is the greatest and import those commodities in which its comparative disadvantage is the least.

ASSUMPTIONS OF THE THEORY

The Ricardian theory of comparative advantage is based on the following assumptions:

1. There are only two countries, say England and Portugal.
2. They produce the same two commodities say, wine and cloth.
3. There are similar tastes in both countries.
4. Labour is the only factor of production.
5. The supply of labour is unchanged.
6. All units of labour are homogeneous.
7. Prices of two commodities are determined by labour cost, i.e., the number of labour-units employed to produce each.
8. Commodities are produced under the law of constant costs or returns.
9. Technological knowledge is unchanged.
10. Trade between the two countries takes place on the basis of the barter system.
11. Factors of production are perfectly mobile within each country, but are perfectly immobile between countries.
12. There is free trade between the two countries, there being no trade barriers or restrictions in the movement of commodities.
13. No transport costs are involved in carrying trade between the two countries—
14. All factors of production are fully employed in both the countries.
15. The international market is perfect so that the exchange ratio for the two commodities is the same.

EXPLANATION OF THE THEORY

Given these assumptions, Ricardo shows that trade is possible between two countries when one country has an absolute advantage in the production of both commodities, but a comparative advantage in the production of one commodity than in the other. This is illustrated in terms of Ricardo's well-known example of trade between England and Portugal as shown in Table 3.

Table 3. Man-years of Labour Required For Producing One Unit

Country	Wine	Cloth
England	120	100
Portugal	80	90

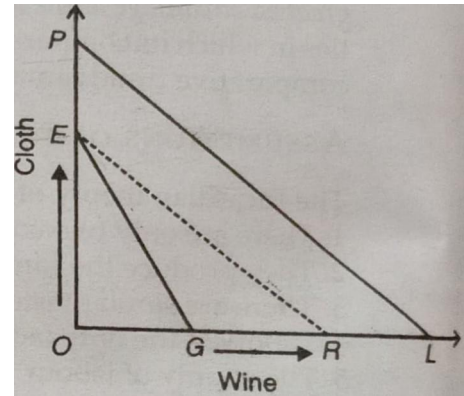
The table shows that the production of a unit of wine in England requires 120 men for a year, while a unit of cloth requires 100 men for the same period. On the other hand, the production of the same quantities of wine and cloth in Portugal requires 80 and 90 men respectively. Thus England uses more labour than Portugal in producing both wine and cloth. In other words, the Portuguese labour is more efficient than the English labour in producing both the products. So Portugal possesses an absolute advantage in both wine and cloth. Portugal would benefit

more by producing wine and exporting it to England because it possesses greater comparative advantage in it. This is because the cost of production of wine (80/120 men) is less than the cost of production of cloth (90/100 men). On the other hand, it is in England's interest to specialise in the production of cloth in which it has the least comparative disadvantage. This is because the cost of production of cloth in England is less (100/90 men) as compared with wine (120/80 men).

Thus, trade is beneficial for both the country. The comparative advantage position of both is illustrated in Fig. 2 in terms of production possibility curves.

CL is the production possibility curve of Portugal, and EG that of

England. Portugal enjoys an absolute advantage in the production of both wine and cloth over England. It produces OL of wine and OP of cloth, as against OG of wine and OE of cloth produced by England. But the slope of ER (parallel to PL) reveals that Portugal has a greater comparative advantage in the production of wine because if it gives up the resources required to produce OE of cloth,



it can produce OR of wine which is greater than OG of wine of England. On the other hand, England had the least comparative disadvantage in the production of OE of cloth. Thus, Portugal will export OR of wine to England in exchange for OE of cloth from her.

Gains from Trade and Their Distribution. Ricardo does not discuss the actual ratio at which wine and cloth would exchange and how much the two countries gain from trade. Before trade the domestic trade ratios in the two countries for wine and cloth are shown in Table 4. The cost of production of one unit of wine in England is 120 men and that of producing one unit of cloth is 100 men. It shows that the cost of producing wine is more as against cloth because one unit of wine can exchange for 1.2 units of cloth. On the other hand, the cost of producing one unit of wine in Portugal is 80 men and that of producing one unit of cloth is 90 men. It is clear that the cost of producing cloth is more than that of wine because one unit of wine can exchange for **unit of cloth.**

Suppose trade begins between the two countries. England will gain if it imports one unit of wine from Portugal in exchange for less than 1.2 units of cloth. Portugal will also gain if it **imports one** unit of cloth from England in exchange for more than 0.89 unit of wine.

Table 4. Domestic Exchange Ratios

England		Portugal	
Wine	120	Wine	80
Cloth	100	Cloth	90
Ratios (6/5)		Ratios (8/9)	

Table

4.

Domestic Exchange

1 : 1.2

1 : 0.89

Cloth 100 : 120 Wine (5/6)

Cloth 90 : 80 Wine (9/8)

1 : 1.13

The Table shows that the domestic exchange ratio in England is one unit of cloth wine, and in Portugal one unit of wine = 0.89 unit of cloth. If we assume the between the two countries to be 1 unit of cloth = 1 unit of wine, England would gain 0.83) unit of wine by exporting one unit of cloth to Portugal. Similarly, the gain to unit Of will be 0.11 (1 unit Of cloth. Thus, for both countries.

The gains from trade and their distribution are shown in Figure 3 where the line CIW2 depicts the domestic exchange ratio 1 unit of cloth = 0.83 unit of wine of England, and the line WIC2 that of Portugal at the domestic exchange ratio 1 unit of wine = 0.89 unit of cloth. The line CIWI shows the exchange rate of trade of 1 unit of cloth = 1 unit of wine between the two countries, At this exchange rate, England gains W2W1 (0.17 unit) of wine, while Portugal gains C2C1 (0.11 unit) of cloth.

To sum up, both England and Portugal specialise in the production of one commodity on the basis of comparative costs. Each reallocates its factors accordingly and exports that commodity in which it has comparative advantage and imports that commodity in which it has a comparative disadvantage. Both gain through trade and can increase the consumption of the two commodities.

ITS CRITICISMS

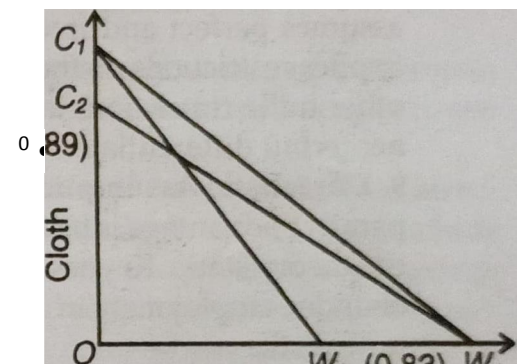
The principle of comparative advantage has been the very basis of international trade for over a century until after the First World War. Since then critics have been able only to modify and amplify it. As rightly pointed out by Prof. Samuelson. "If theories, like girls, could win beauty contests, comparative advantage would certainly rate high in that it is an elegantly logical structure. "

But the theory is not free from some defects. In particular, (it has been several times criticised by Bertin Ohlin and Frank D. Graham. We discuss some of the important criticisms as under:

1. Unrealistic Assumption of Labour Cost. The most severe criticism of the comparative advantage doctrine is that it is based on the labour theory of value. In calculating production costs, it takes only labour costs and neglects non-labour costs involved in the production commodities. This is highly unrealistic because it is money costs and not labour costs that are the basis of national and international transactions of goods.

Further, the labour cost theory is based on the assumption of homogeneous labour. This is again unrealistic because labour is heterogeneous of different kinds and grades, some specific or specialised, and other non-specific or general.

2. No Similar Tastes. The assumption of similar tastes is unrealistic because tastes differ with different income brackets in a country. Moreover, they also change with the growth on an economy and with the development of its trade relations with other countries.



3. **State Assumption of Fixed Proportions.** The theory of comparative costs is based on the assumption that labour is used in the same fixed proportions in the production of all commodities. This is essentially a static analysis and hence unrealistic. As a matter of fact, labour is used in varying proportions in the production of commodities. For instance, less labour is used per unit of capital in the production of textiles. Moreover, some substitution of labour for capital is always possible in production.

4. **Unrealistic Assumption of Constant Costs.** The theory is based on another weak assumption that an increase of output due to international specialisation is followed by constant costs. But the fact is that there are either increasing costs or diminishing costs. If the large-scale of production reduces costs, the comparative advantage will be increased. On the other hand, if increased output is the result of increased cost of production, the comparative advantage will be reduced, and in some cases it may even disappear,

Q. **Ignores Transport Costs.** Ricardo ignores transport costs in determining comparative advantage. This is highly unrealistic because transport costs play an important role in determining the pattern of world trade. Like economies of scale, it is an independent factor of production. For instance, high transport costs may nullify the comparative advantage and the gain from international trade,

6. **Factors not Fully Mobile Internally.** The doctrine assumes that factors of production are perfectly mobile internally and wholly immobile internationally. This is not realistic because even within a country factors do not move freely from one industry to another or from one region to another. The greater the degree of specialisation in an industry, the less is the factor mobility from one industry to another. Thus, factor mobility influences costs and hence the pattern of international trade.

7. **Two-Country Two-Commodity Model Unrealistic.** The Ricardian model is related to trade between two countries on the basis of two commodities. This is again unrealistic because in actuality, international trade is among many countries trading in many commodities.

8. **Unrealistic Assumption of Free Trade.** Another serious weakness of the doctrine is that it assumes perfect and free world trade. But, in reality, world trade is not free. Every country applies restrictions on the free movement of goods to and from other countries. Thus, tariffs and other trade restrictions affect world imports and exports. Moreover, products are not homogeneous but differentiated. By neglecting

these aspects, the Ricardian theory becomes unrealistic. 9. Unrealistic Assumptions of Full Employment. Like all classical theories, the theory of comparative advantage is based on the assumption of full employment. This assumption also makes the theory static. Keynes falsified the assumption of full employment and proved the existence of under-employment in an economy. Thus, the assumption of full employment makes the theory unrealistic.

10. Self-Interest Hinders its Operation. The doctrine does not operate if a country having a comparative disadvantage does not wish to import a commodity from the other country due to strategic, military or development considerations. Thus, often self-interest stands in the operation of the theory of comparative costs.

11. Neglects the Role of Technology. The theory neglects the role of technological innovations in international trade. This is unrealistic because technological changes help in increasing the supply of goods not only for the domestic market but also for international market. World trade has gained much from innovations and research and development (R & D).

12. One-Sided Theory. The Ricardian theory is one-sided because it considers only the supply side of international trade and neglects the demand side. In the words of Prof. Ohlin, "It is indeed nothing more than an abbreviated account of the conditions of supply."²

13. Impossibility of Complete Specialisation. Prof, Frank Graham has pointed out that complete specialisation will be impossible on the basis of comparative advantage in producing commodities entering into international trade. He explains two cases in support of his argument: one, relating to a big country and a small country; and two, relating to a commodity of high value and low value.

To take the first case, suppose there are two countries which enter into trade on the basis of comparative advantage. Of these, one is big and the other is small. The small country will be able to specialise completely as it can dispose of its surplus commodity to the bigger one. But the big country will not be able to specialise fully because (a) being big, the small country will not be in a position to meet its requirements fully, and (b) if it specialises completely in a particular commodity, its surplus will be so large that the smaller country will not be able to import the whole

In the second case of commodities having incomparable value, the country producing in high value commodity will be able to specialise while that producing in low-value commodity will not be able to do the same. This is because the former country will be in a position to have a larger gain than the latter country. Thus, according to Graham, "The classical conclusion of complete specialisation between two countries can hold ground only . . . by assuming trade between two countries of approximately equal economic performance."³

14, A Clumsy and Dangerous Tool. Prof. Ohlin has criticised the theory of international trade on the following grounds:

(1) The principle of comparative advantage is not applicable to international trade alone, rather it is applicable to all trade. To Ohlin, "International trade is but a special case of inter-local or interregional trade." Thus there is little difference between internal trade and international trade.

(ii) Factors are immobile not only internationally but also within different regions. This is proved by the fact that wages and interest rates differ in different regions of the same country. Further, labour and capital can also move between countries in a limited way, as they do within a region. (iii) It is a two-country, two-commodity model based on the labour theory of value which is sought to be applied to actual conditions involving many countries and many commodities. He, therefore, regards the theory of comparative advantage as cumbersome, unrealistic, and as a clumsy and dangerous tool of analysis. As an alternative, Ohlin has propounded a new theory which is known as the modern theory of International Trade.

15. Incomplete Theory. It is an incomplete theory. It simply explains how two countries gain from international trade. But it fails to show how the gains from trade are distributed between the two countries.

Conclusion. Despite these weaknesses, the theory has stood the test of the times. Its basic structure has remained intact, even though many refinements have been made over it. To conclude with Prof. Samuelson, "Yet for all its oversimplifications, the theory of comparative advantage has in it a most important glimpse of truth. Political economy has found few more pregnant principles. A nation that neglects comparative advantage may have to pay a heavy price in terms of living standards and potential rates of growth."

MILL'S THEORY OF RECIPROCAL DEMAND

1. INTRODUCTION

Ricardo expounded the theory of comparative advantage without explaining the ratios at which commodities would exchange for one another. It was J.S. Mill who discussed the latter problem in detail in terms of his theory of reciprocal demand. [The term 'reciprocal demand' introduced by Mill to explain the determination of the equilibrium terms of trade. It is used to indicate a country's demand for one commodity in terms of the quantities of the other commodity it is prepared to give up in exchange. It is reciprocal demand that determines the terms of trade which, in turn, determine the relative share of each country. Equilibrium would be established at that ratio of exchange between the two commodities at which quantities demanded by each country of the commodity which it imports from the other, should be exactly sufficient to pay for one another. To explain his theory of reciprocal demand, Mill first restated the Ricardian theory of comparative costs. "Instead of taking as given the output of each commodity in two countries, with the labour costs different, he assumed a given amount of labour in each country, but differing outputs. Thus his formulation ran in terms of comparative advantage, or comparative effectiveness of labour, as contrasted with Ricardo's comparative labour cost."2

ASSUMPTIONS

Mill's theory of reciprocal demand is based on the following assumptions:

1. There are two countries, say, England and Germany.
 2. There are two commodities, say, linen and cloth.
 3. Both the commodities are produced under the law of constant returns.
 4. There are no transport costs.
 5. The needs of the two countries are similar.
 6. There is perfect competition.
 7. There is full employment.
 8. There is free trade between the two countries.
- . The principle of comparative costs is applicable in trade relations between the two countries.

TABLE

Suppose Germany can produce 10 units of linen or 10 units of cloth within one man-year. England can produce 6 units of linen or 8 units of cloth with the same input of labour-time. According to Mill, "This supposition then being made, it would be in the interest of England to import linen from Germany, and of Germany to import cloth from England." This is because Germany has an absolute advantage in the production of both linen and cloth, while England has the least comparative disadvantage in the production of cloth. This can be seen from the domestic exchange ratios and international exchange ratios. Before trade, the domestic cost ratio of linen and cloth in Germany is 1:1; and in England 3:4. If they were to enter into trade, Germany's advantage over England in the production of linen is 5:3 (or 10:6), and in the production of cloth 5:4 (or 10:8). Since $\frac{5}{3}$ is greater than $\frac{5}{4}$, Germany possesses greater comparative advantage in the production of linen. Thus it is in Germany's interest to export linen to England in exchange for cloth. Similarly, England's position in the production of linen is $\frac{3}{5}$ (or $\frac{6}{10}$) and in the production of cloth is $\frac{4}{5}$ (or $\frac{8}{10}$). Since $\frac{4}{5}$ is greater than $\frac{3}{5}$, it is in the interest of England to export cloth to Germany in exchange for linen. Mill's theory of reciprocal demand relates to the possible terms of trade at which the two commodities will exchange for each other between the two countries. The terms of trade refer to 'the barter terms of trade' between the two countries, i.e., the ratio of the quantity of imports for a given quantity of exports of a country. And "the limits to the possible barter terms of trade (the international exchange ratio) are set by the domestic exchange ratios established by the relative efficiency of labour in each country." To take an example, in Germany 2 inputs of labour-time produce 10 units of linen and 10 units of cloth, while in England the same labour produces 6 units of linen and 8 units of cloth. The domestic exchange ratio between linen and cloth in Germany is 1:1 and 1:1.33 in England. Thus the limits of possible terms of trade are 1 linen: 1 cloth in Germany and 1 linen: 1.33 cloth in England. Thus the terms of trade between the two countries will be between 1 linen or 1 cloth or 1.3 cloth. But the actual ratio will depend upon reciprocal demand, i.e. "the strength and elasticity of each country's demand for the other country's product." If Germany's demand for England's cloth is more intense (inelastic), then the terms of trade will be nearer 1:1. Germany will be prepared to exchange one unit of linen with one unit of cloth of England. The terms of trade will move against it and in favour of England. Consequently, Germany's gain

from trade will be less than that of England. On the other hand, if Germany's demand for England's cloth is less inelastic (more elastic), then the terms of trade will be nearer 1:1.33. Germany will be prepared to exchange its one unit of linen with 1.33 units of cloth of England. The terms of trade will move in favour of Germany and against England. Consequently, Germany's gain from trade will be greater than that of England. In short, "(1) the possible range of barter terms is given by the respective domestic terms of trade as set by comparative efficiency in each country; (2) within this range, the actual terms of trade

depend on each country's demand for other country's produce; and (3) finally, only those barter terms of trade will be stable at which the exports offered by the country just suffice to pay for the imports it desires." Mill's theory of reciprocal demand is explained diagrammatically in terms of Marshall's offer curves. In Fig. 7.1, England producing only cloth is taken on the horizontal axis and Germany producing only linen is taken on vertical axis. The curve OE is England's offer curve. It shows how many units of cloth England will give up for a given quantity of linen. Similarly, OG is the offer curve of Germany which shows how many units of linen Germany is prepared to give up in exchange for a given quantity of cloth. The point T where the two offer curves OE and OG intersect is the equilibrium point at which OC of cloth is traded by England for OL of linen of Germany. The rate at which cloth is exchanged for linen is equivalent to the slope of the ray OT. A change in the demand on the part of one country for the product of the other country brings about a change in the shape of its offer curve. Suppose England's demand for Germany's linen increases. England might now be prepared to exchange more cloth for Germany's linen. Consequently, England's offer curve shifts to the right as OE', which intersects Germany's offer curve OG at T'. Now England

FIG 1

trades OC', units of cloth for OL units of linen. The terms of trade, as shown by the slope of the (dotted) ray OT', indicate that they have deteriorated for England and improved for Germany. This is evident from the fact that England trades CC', units of cloth for LL', units of linen. CC', is greater than LL'. Similarly, if Germany's demand for England's cloth increases, Germany's offer curve shifts to the left as OG', which intersects England's offer curve OE at T', Now

Germany exchanges OL units of linen for OC, units of cloth. The terms of trade, as shown by the slope of the (dotted) ray OT, indicate that they have deteriorated for Germany and improved for England. This is clear from the fact that Germany exchanges LL, more linen for CC, less cloth, i.e. $LL > CC$. But the actual terms of trade will depend upon the elasticity of demand of the offer curve of each country. The more elastic the offer curve of a country, the more unfavourable will be terms of trade for it in relation to the other country. On the contrary, the more inelastic is its offer curve, the more favourable will be its terms of trade in relation to the other country.

DISTRIBUTION OF GAINS FROM TRADE

The distribution of gains from trade is explained in terms of Fig. 7.2 where OE and OG are the offer curves of England and Germany respectively. Oe and Og are the constant domestic cost ratios of producing both linen and cloth in the two countries respectively. The actual terms of trade are settled at P, the point of intersection of OE and OG. The ray OT represents the equilibrium terms of trade. The cost ratio within England is KS units of linen: OK units of cloth. But it gets KP units of linen through trade. $SP (= KP - KS)$ units of linen is, therefore, its gain. The domestic cost ratio in Germany is KR units of linen: OK units of cloth. But it imports OK units of cloth from England in exchange for only KP units of linen. $PR (= KR - KP)$ units of linen is its gain. The greater will be the gain of a country, the closer are its actual terms of trade to the other country's domestic terms of trade.

FIG 2

CRITICISMS that offers from ham, and

1. Does not pay Attention to Domestic Demand.

Mill's theory of reciprocal demand d. into account the domestic demand for the product. As pointed out by Viner, each countake others. export its product only after satisfying its home demand. Thus the demand curve for Ou only

2. Both Countries cannot be of Equal Size.

According to Graham, Mill's analysis is valid and would not be below the line OG until the domestic demand was satisfied, and the same in England. The two countries are of equal size and the two commodities are of equal consumption value. In a country gains the most on both counts: First, if it produced a high-value commodity. In the absence of these two assumptions, if one country is small and the other large, the smaller size, the terms of trade will be fixed at or near the comparative costs of the large country and the smaller will adopt the cost ratios of its big partner; and Second, the two trading countries being of unequal size, the terms of trade will be fixed at or near the comparative costs of the large country and the smaller will adopt the cost ratios of its big partner; and Second, the two trading countries being of unequal size, the terms of trade will be fixed at or near the comparative costs of the large country and the smaller will adopt the cost ratios of its big partner.

3. Two-countries, Two-commodities Assumption is unrealistic.

Mill's theory is based on the unrealistic assumption of two-countries and two-commodities. Graham, therefore, favours several countries and complex trade.

4. Neglect of Supply Side.

Graham further criticises Mill for emphasising demand and neglecting supply in determining international values. According to him, the application of the reciprocal demand makes it appear that demand alone is of interest. He maintains that production cost (supply) are also of paramount importance in international trade. He thus attacked the Law of Reciprocal Demand "as appropriate only to trade in antiques and old masters."

5. Does not pay Attention to Fluctuations in Income in two Countries.

Another weakness of Mill's analysis of reciprocal demand is that it makes no allowance for fluctuations in incomes in the two trading countries which are bound to influence the terms of trade between them.

6. Unrealistic and Arbitrary.

Further, the theory is based on barter of trade and relative price ratios. Thus it 'neglects all stickiness of prices and wages, all transitional inflationary and overvaluation gaps, and all balance of payments problems'. No wonder, the theory is abstract and unrealistic. Graham, therefore, regards the theory "in its essence fallacious and should be discarded."

7. Unrealistic Assumptions.

Mill's theory is based on such unrealistic assumptions as two countries, two commodities, law of constant returns, lack of transport costs, full employment, perfect competition, etc. These make the theory unrealistic. Conclusion. But there is little basis in the criticisms made by Graham which appear to be flimsy. As pointed out by Viner, "The terms of trade can be directly influenced by reciprocal demands and by nothing else. The reciprocal demands, in turn, are ultimately determined by the cost conditions together with the basic utility functions."⁵ The real fault in Mill's analysis is that overemphasises the basic utility functions and neglects the production costs.

