3 Trade Theory in the Age of Marshall

3.1 Marshall

Marshall systematically developed and refined by means of geometrical and analytical methods the classical theory of international values, in particular the ideas originally expounded by John Stuart Mill. He combined Mill's analysis of demand (in terms of reciprocal demand) with the older emphasis on supply. Marshall argues that the international exchange ratio (terms of trade) is influenced not only by demand, but also by the ability of a country to adjust supplies of its own products to the demands of foreign markets; although in practice the influence of cost factors is pushed into the background by the analytical assumption that each country specialises in one product. In addition to the presentation of Mill's reciprocal demand method in diagrammatic form, Marshall tries to improve upon labour time as a measure of costs (i.e. he includes capital and other production costs along with labour costs) and to deal with the problem of aggregation over commodities. This he does by means of the concept of a 'representative bale' of a country's factors of production. In classical spirit, he wants to express the costs of production and gains from trade in real terms (effort, abstinence, etc.). Ricardo had measured the value of commodities in labour time; but, says Marshall, 'it seems better to suppose either country to make up her exports into representative "bales"; that is, bales each of which represents uniform aggregate investments of her labour (of various qualities) and of her capital'. Each 'bale' corresponds to a fixed input of labour and capital (or factors of production in general). An increase in the efficiency of the factors or a reduction in costs will cause the size of the bale, reckoned in exportable goods, to expand. So although the costs of production were expressed in real terms, the value of commodities were not reckoned simply in terms of labour time. With the classical labour theory there was no means of comparing the costs of commodities produced with different capital structures or different qualities of labour – particularly when applied to more than two countries and two commodities. The representative bale was an effort to deal with the problem of aggregation and it
appeared more realistic than the traditional two-good (linen and cloth) model. These aggregates were then treated as the units in which national demand was expressed in world markets. But these aggregates were not clearly related to consumer tastes, e.g. the preferences of individuals; because of this limitation the bale concept was not widely used by other writers.

Marshall represented reciprocal demand schedules as curves. The curves are complex; they attempt to represent general equilibrium in trade. Each point on the curve is a point of potential equilibrium, and a movement along it presupposes that the economy has rearranged its internal trade to conform to the new equilibrium conditions. The commodity composition of Marshall's bales changes (1) when the curves shift (e.g. through technological change) and (2) as a result of balance-of-payments adjustments to disturbances where commodities can shift from the export side to the import list. Marshall was able to construct reciprocal demand (or offer curves) for the two-country case even when the number of commodities in each country is large (provided they are produced at constant cost) through the representative bale idea. As indicated above, the bale is not a typical assortment of exports or imports but the units of 'productive power' embodied in each country's exports; hence the terms of trade are not measured by the ratio of commodity prices, but the rate at which the units of productive power of one country exchange for those of another – the factorial terms of trade. Marshall used these curves to examine the stability of world markets, the influence of elasticity on trade flows and effects on the terms of trade of shifts in the curves, e.g. in relation to import duties.

SHIFTS OF INTERNATIONAL DEMAND AND THE TERMS OF TRADE

In *Money, Credit and Commerce* Marshall discussed the effects of changes in international demand on the terms of trade and gave a solution in appendix J. Suppose demand for imports increases in one country, England for example, how will the terms of trade and volume of trade change? Marshall shows that the deterioration of England's terms of trade will vary directly with England's elasticity of demand for imports and inversely with the other country's (Germany's) elasticity of demand for imports. The increase in the volume of trade will vary directly with both of the elasticities: