The current world economic situation is the legacy of the days of industrial revolution in the North and colonization of the major countries of the South. This divided the world economy into two regions: the industrially developed North and less-developed South. In the context of the North-South divide of the world economy, the long-term behavior of the terms of trade between the two regions has been a much discussed and much debated topic.

By terms of trade we usually mean commodity terms of trade, the term popularized by Jacob Viner. The commodity terms of trade of the South in relation to the North can be defined as the price (unit value index) of exports of the South to the North divided by the price (unit value index) of exports of the North to the South.

The commodity terms of trade is also known as net barter terms of trade, thanks to Frank William Taussig. He introduced another concept, the gross barter terms of trade. It is the ratio of the volume index of imports to the volume index of exports. It is not widely known or used in the literature.

G. S. Dorrence introduced the concept of the income terms of trade. It is an index of the value (= volume x unit value) of exports divided by the unit value of imports and it corresponds to the commodity terms of trade (= unit value of exports/unit value of imports) multiplied by the volume of exports. It measures the purchasing power of exports—the amount of imports that can be financed by total exports of a country or region.

If, instead of volume of exports, the commodity terms-of-trade index is multiplied by some index of factor productivity in the export sector, we get the single factorial terms of trade. To construct the double factorial terms of trade, the single factorial terms of trade is deflated by the index of factor productivity in the export sector of its trading partner. So, the double factorial terms of trade is the commodity terms of trade multiplied by the ratio of the indices of factor productivity in the export sectors of the trading partners. Usually labor productivity is considered for factorial terms-of-trade index calculation.
The single factorial terms-of-trade index has a simple intuitive implication: it indicates the amount of wheat (say) that can be imported by a country (say, Ghana) by employing one hour of labor in production of its export item, say, cocoa. An improvement in the index implies a rise in the country’s labor productivity in the export sector valued in terms of its import goods. Among other possibilities, it may be due to a rise in the labor productivity in its export sector not fully counterbalanced by a (resulting) fall in its export prices relative to its import prices (that is to say, a fall in its commodity terms of trade)—trade has not wiped out the whole fruit of technical progress in its export sector. In the process, its trading partner can experience a rise in its single factorial terms of trade through an improvement in its commodity terms of trade.

There are many other cases where the single factorial terms of trade of two trading countries can rise or fall together, but a rise (fall) in the double factorial terms of trade of one country must imply a fall (rise) in the double factorial terms of trade of its trading partner. That is why the economists interested in relative gains from trade or unequal exchange focused on this concept of terms of trade.

Suppose the North and the South experience the same rate of technical progress and labor productivity improvement in their respective export sectors. One region (say South) experiences lower export prices in response to technical progress and cost reduction—wages do not rise in proportion to the rise in productivity because of (say) surplus labor and the consequent weak labor union. Suppose the other region (North) experiences rising wages and profit because of strong labor union and monopoly power of the producers and no fall in their export prices. Then double factorial terms of trade would move in favor of the North and against the South. This is what was highlighted by Prebisch (1950) and Singer (1950) in the context of trade between the industrially developed North and the less-developed South and gave birth to the well-known Prebisch-Singer hypothesis. They provided some evidence of a long-term decline in the commodity terms of trade of primary products and the primary-product exporting South since the last quarter of the 19th century and indicated a long-term decline in the double factorial terms of trade of the South vis-à-vis the North on the basis of the well-accepted fact that the industrial sector of the North experienced a higher rate of technical progress in those days.

This Prebisch-Singer hypothesis generated much controversy in the academic world both on empirical and theoretical grounds, and it was virtually discarded in mainstream economics. But there is now an increasing volume of literature in its support (see Sarkar 1986, 2001).

In the “mainstream” neoclassical, perfect competitive framework, each factor (including labor) is paid according to its productivity. So the single factorial terms of trade is the real wages measured in terms of import goods and the double factorial terms of trade is the wage ratio (measured in a common currency). In a simple classical political economy framework of the (North-South) world economy with free mobility of capital and labor, the North-South commodity terms of trade would be equal to the ratio of labor embodied in the production of export goods in the two regions (in accordance with the classical labor theory of value) and the double factorial terms of trade would be equal to one. This is the ideal situation—“equal exchange”—the Marxist economist Emmanuel (1969) had in mind. But in a world of nearly perfect mobility of capital and imperfect labor mobility, the commodity terms of trade is not in accordance with the labor theory of value. The double factorial terms of trade are equal to the wage ratio as in the neoclassical framework. Granted that Northern workers get higher wages (even after adjusting for their higher skill and productivity), the double factorial terms of trade of the South are less than one. That implies that one hour of Southern labor is exchanged for less than one unit of (comparable) Northern labor. This is a case of (static) “unequal exchange” at a point of time. If over time this North-South wage gap rises, the double factorial terms of trade would decline indicating increasing “unequal exchange.” Thus there is a convergence between the Prebisch-Singer hypothesis and Emmanuel’s dynamic “unequal exchange” idea.
Last there is another concept, employment-corrected double factorial terms of trade, introduced by Spraos (1983). It is based on the idea that if a country or region such as South has a large pool of unemployed labor force, a decline in its double factorial terms of trade is welcome if that is more than compensated by a rise in employment through the growth of trade and production. This index is calculated by multiplying the double factorial terms of trade of a country or region by the total employment in its traded sector (if both the countries or regions face this unemployment problem the multiplicative factor would be the employment ratio and the index would be turned into a ratio of export values!). On the assumption of near full employment in the North and a large-scale unemployment problem in the South, he calculated such indexes and found some evidence of decline in the terms of trade of the South from 1960 to 1977.

The concepts of terms of trade and a study of their behavior are useful in understanding whether the evolution of the world economy led to some kind of uneven development through the terms-of-trade movements against the interest of the less developed South, thereby hampering the process of catching up.

See also import substitution industrialization; North-South trade; primary products trade; trade and economic development, international

FURTHER READING


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