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International Trade Theory and Policy: A Review of the Literature*

by

Sunanda Sen
Levy Economics Institute of Bard College

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Levy Economics Institute
P.O. Box 5000
Annandale-on-Hudson, NY 12504-5000
http://www.levyinstitute.org

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ABSTRACT

This paper provides a survey of the literature on trade theory, from the classical example of comparative advantage to the New Trade theories currently used by many advanced countries to direct industrial policy and trade. An account is provided of the neo-classical brand of reciprocal demand and resource endowment theories, along with their usual empirical verifications and logical critiques. A useful supplement is provided in terms of Staffan Linder's theory of "overlapping demand," which provides an explanation of trade structure in terms of aggregate demand. Attention is drawn to new developments in trade theory, with strategic trade providing inputs to industrial policy. Issues relating to trade, growth, and development are dealt with separately, supplemented by an account of the neo-Marxist versions of trade and underdevelopment.

Keywords: Comparative Costs; Resource Endowment Pattern and Trade; Overlapping Demand; Strategic Trade; New Theories of Trade; Trade and Development

JEL Classifications: F11, F12, F14

CLASSICAL THEORY: THE EARLY BEGINNING OF A THEORY OF FREE TRADE

Tracing back the evolution of what today is recognized as the standard theory of international trade, one goes back to the years between 1776 and 1826, which respectively mark the publications of Adam Smith's (1986 [1776]) *Wealth of Nations* and David Ricardo's *Principles of Economics* (1951). The two volumes herald the formulation of a theory of free trade, based on the unprecedented success of England in the respective fields of industry and trade. For Smith, the division of labor, in the nascent large-scale industries of his homeland England, provided the base for lowering labor costs, which ensured effective competition across countries. Possible dilemmas in terms of the need for monetary adjustments for countries having a continuous trade surplus (with absolute advantage in all traded goods) could be shelved aside by relying on the automatic adjustment, in terms of the price-specie flow mechanism, the theory offered by Smith's contemporary, David Hume (1971 [1776]), around the same time.

It was left to Ricardo to sort out the basic premises of a theory of free trade, which Smith had initiated. Industrial capitalism in Ricardo's England was at a relatively advanced stage as compared to what it was in Smith's time, both with rapid growth of large-scale industries and captive markets in overseas colonies. Imports of wage goods (corn) had a special role by cheapening wage goods and hence labor cost for industry in Ricardo's England. Free trade, as opposed to the Mercantilist policies of protection, was championed by both Smith and Ricardo as a route to achieve production efficiency at a global level. Ricardo's cost calculations, despite his concerns for the introduction of machinery on a large scale, were based on labor hours, which were treated as a single homogeneous input with production (in a two commodity world) subject to constant costs. It was comparative and not absolute advantage, which was considered both necessary, as well as sufficient, to ensure mutually gainful trade across nations, warranting complete specialization in the specific commodity with a comparative advantage in terms of labor hours used per unit of output.

ROLE OF DEMAND IN TRADE THEORY

For the Benthamite utilitarians, who became prominent by the first two decades of the twentieth century, the Ricardian doctrine missed out the role of demand as an explanation of the terms of trade in exchange. It was for J.S. Mill to do the balancing act by introducing the notion of

"Reciprocal Demand." A few years later Alfred Marshall further advanced the role of demand in terms of the "offer curve" construct, which, according to him, completed the Ricardian trade theory by determining the "terms of trade." However, the supply-side embedded in these theories had in the meantime changed drastically from the Ricardian notion of fixed labor time inputs to "real costs." These costs, for Marshall, were measured by the subjective disutility or sacrifices of labor at the job. In addition, output was subject to diminishing returns, with changing factor proportions rather than with constant factor (labor) coefficients as in Ricardo. Units of a "representative bale" of goods offered by the respective nations in the two-country model bore the mark of demand as well as supply. Factors as above settled the terms of trade at a stable equilibrium, as long as goods exchanged were of a "normal" category, with elastic demand and production was not subject to increasing returns. Possibilities of multiple equilibria, as arose when the above conditions were not fulfilled, were carefully avoided by Marshall by assuming that all costs are irreversible, even when subject to increasing returns (Bharadwaj 1989).

RESOURCE ENDOWMENT AS A BASIS FOR FREE TRADE DOCTRINES

The balancing act between forces of supply and demand was carried forward by the Austrian school with their notion of opportunity cost, defined in terms of the utility of foregone consumption. This provided the base for the Heckscher-Ohlin version of free trade doctrine that followed. Use of the marginal rates as in this theory turned the Classical theory on its head. Simultaneously, a basis was laid for the defense of free trade as Pareto-optimum, rather than on grounds of comparative supply costs alone, thus ensuring optimization of production, consumption, and exchange (trade) for the two trading nations at equilibrium. This version of neo-classical trade theory has continued to have a special appeal to economists championing the cause of free trade on the grounds of optimization at a global level, of productive efficiency, consumption (and as such welfare), and the automatic utilization of factors of production at full capacity. Returns to the two factors of production that included labor and capital were at levels that were in proportion to their respective material contribution valued at market prices. Unlike in the Ricardian paradigm where the supply cost measured in labor hours was the determining factor of trade advantages, consumer preferences (ordinal rankings) for goods was as important as the supply factors in determining price competitiveness of goods for the trading nations.

However, the Heckscher-Ohlin (and later Samuelson), in short HOS, version of free trade doctrine played down the otherwise overwhelming role of demand on market prices in order to bring resource endowments of nations to the center stage as the determining factor for mutually gainful trade. With this device, free trade theory moved away from the skill- or technology-based interpretations of the Ricardian comparative cost doctrine to an endowment-based explanation for nations having similar access to technology.

It was a Herculean job for the neo-classical economists in setting the stage to arrive at the factor-endowment based theory of free trade. Thus consumer preferences (or demand) in either country had its role in determining both commodity and factor prices (including those of labor) in the pretrade stage, reflecting the disparities in factor endowments. With identical consumer preferences between the trading partners, factor endowments determine the price competitiveness of the traded goods. The common world price was settled at a level that was within the boundaries set by the pretrade prices in the two countries. While factors of production were assumed to be immobile (as in the Classical comparative cost theory), equalization of commodity prices was supposed to bring about the equalization of factor prices across countries. Problems in arriving at uniform prices in absolute terms with different national currencies were carefully avoided by ignoring, altogether, the possibility of different currencies across nations. Justifications as were implicit in such assumptions probably came from the branding of this kind of theory as “pure,” as distinct from a monetary theory of trade!

Theorems that follow from the HOS theory of free trade doctrine include (apart from factor-price equalization) a corollary, named after Stolper and Samuelson, which relates protection and real wages. In terms of above, the scarce factor in trading nations, are to lose under free trade under factor price equalization. Thus labor, considered as the scarce factor of production in United States, was considered to benefit from protection and not from free trade (Stolper and Samuelson 1941).

Attempts have been made by different theorists to try models of the old trade theories (both comparative cost and the HOS models) for multi-commodity, multi-factor, and multi-country situations. The innovated models, dealing with “Higher Dimensional Issues in Trade Theory” (Ethier 1984), did not contribute much in terms of their relevance in terms of the observed facts.

EMPIRICAL VERIFICATIONS OF ENDOWMENT MODELS

Failure of the HOS model of free trade theory to address the world of realities was responded to in the next few decades at different levels. At an empirical level, an observed tendency for exports to be more labor intensive than imports in the United States (where capital is relatively abundant) led Leontief (1956) posed a paradox that was apparent in terms of the endowment-based explanation of trade patterns under the HOS theorems. He tried to resolve the paradox with his interpretation that units of U.S. labor are equivalent to more than one unit of labor in rest of world.

LOGICAL PROBLEMS OF THE ENDOWMENT APPROACH AND MODIFICATIONS

At a logical level, the HOS model needed a reinterpretation in order to validate its central argument relating to factor price equalization. The qualifications, appended by Minhas in particular, further restricted the model to CES production functions, which are subject to constant elasticity of substitution between factors of production, thus ruling out factor intensity reversals, which disrupt the uniqueness of the factor-price commodity-price frontier with the strict ordering of goods in terms of factor-intensities (Minhas 1960). Other conditions that remained to be satisfied in terms of the HOS model included the usual specifications of a 2x2x2 model subject to differing endowment ratios in the two trading countries, different factor intensities for the two goods produced and traded, constant returns to scale, and diminishing returns to varying proportions of factors applied in production. Eventually it was incomplete specialization with trade in both goods that ensured, under the stated assumptions, the equalization of factor prices as a consequence of free trade in goods. As in the Ricardian model, prices continued to be defined in real terms and not in units of money.

THEORY OF OVERLAPPING DEMAND: NEW ROLE OF DEMAND IN TRADE THEORY

Deviating from the supply-side explanations of the pattern of trade in the literature, an alternate explanation of the pattern of trade was offered in 1964 in terms of “overlapping demand” by a Swedish economist, Staffan Linder (1961). Representative demand in the trading nations for a

range of goods that are typically demanded at the respective per capita income, determine, according to Linder, the feasibility of trade across nations. To produce and trade, representative demand in the respective countries needs to have an overlapping zone in terms of the range of goods that are produced and consumed in common. In terms of the above interpretation of trade, it is demand and not supply that comes to the center stage as an explanation of trade. Linder's notion of trade overrides the earlier emphasis on supply-based explanations of trade in terms of comparative cost or factor endowments. Rich with potentials for explaining intraindustry trade, product differentiation (or "sophistication" as Linder puts it), or even South-South trade of recent years, the theory, however, was rather neglected in the literature.

NEW TRADE THEORY (NTT) RESTRUCTURES THE FREE TRADE DOCTRINE BY DISCARDING LIMITING ASSUMPTIONS OF OLD TRADE THEORY

In the meantime, the rigid framework of trade theory started being questioned from different quarters. In a major departure from old trade theories, attempts were made in the new trade theory (NTT) literature to introduce the scale economies in production. A major point raised in these modifications included the impact of increasing returns to scale on the pattern as well as on the mutual benefits from international trade. A related point concerned the size of firms and the market structure, both of which were intricately linked to the possible economies from scale, thus demanding attention in the literature.

To appreciate the implications of the scale economies as above, one needs to notice the related issue of imperfect markets, which always go with the former. Products, especially under monopolistic competition, are likely to be differentiated, generating further deviations from a competitive model. In all, the three deviants (consisting of the scale economies, imperfect markets, and product differentiation) that differentiate these NTT from the old trade models of the HOS variant completely negate the capacity of the HOS model as a predictor of the pattern of trade across nations on the basis of pretrade commodity and factor prices.

As already mentioned above, increasing returns, if related to economies of scale as are internal to the firm, was considered incompatible with competitive equilibrium. This is because producers enjoying internal economies of scale are usually in a position to influence the market by exercising control over prices as well as the market share. Imperfect competition with monopolistic competition, oligopoly, or monopoly could result as a consequence. The

possibilities, especially with oligopolistic sharing of the market, have also led to the application of strategic trade principles that emerged as an alternative position with strong overtones in terms of policy during the coming years. We will deal with those developments of theory at a later stage in this paper.

SOME EARLIER ATTEMPTS TO INCORPORATE INCREASING RETURNS

Problems in incorporating increasing returns to scale, which is integral to the expansion of industrial firms, had also been raised earlier in the literature on trade theory. Marshall avoided the problem of possible multiple equilibria under increasing returns by assuming that costs are historical and hence irreversible over time. At one stroke Marshall also avoided the Pigouvian proposal for taxes and bounties for the respective increasing and decreasing cost industries. A similar issue was also raised by Graham and Knight who dealt with increasing returns and its effects on trade (Viner 1937).

ATTEMPTS TO REVALIDATE THE "PREDICTIVE POWER" OF TRADE THEORY IN NTT AND RELATED PROBLEMS

Problems faced in the NTT in more recent times in incorporating increasing returns to scale have been more complex, especially with its point of departure defined in terms of the neo-classical HOS formulation. This made it binding on part of some of these theorists to rehabilitate the HOS theory, focusing in particular on its "predictive power" for the pattern of trade when increasing returns, as well as imperfect competition, are common (Helpman 1981 and 1984).

Problems were several for NTT in accommodating increasing returns to scale and imperfect competition within the framework of the HOS model. One of these includes the breakdown of a perfectly competitive market with *scale economies internal to the firm,* a problem recognized earlier in the literature (Young 1928; Sraffa 1926). The change negates the basic assumptions underlying the model and, as such, the major conclusions arrived at in terms of its predictive power for trade patterns and its corollaries relating to factor-price equalization,

protection and real wages (the Stolper-Samuelson theorem), and effect of changes in proportions of factor endowments (Rybczynski theorem).[1]

Efforts from within the NTT circles to reinstate the predictive power of such theories by introducing a set of restrictive assumptions did not help in terms of its generality (Helpman 1981). Alternatively, use has been made of "…Dixit-Stiglitz preferences (represented by a utility function in which utility increases with the varieties consumed, not just the quantity of each variety)..." (Bhattacharjea 2004) to conclude that the welfare effect of the variegated consumption basket outweighs the losses, if any, from the movement from autarky to free trade. These losses may affect the small producers who are unable to reap the economies of scale, which permit them to cover fixed costs.

As for the *scale economies, which are external to the firm and internal to industry*, production achieves a global span in terms of location. This, in terms of NTT, permits cost reduction on a global scale while dislocating production from areas/countries where it is less cost-efficient (Krugman 1981; Ethier 1982). Implicit in the argument is a case for free trade that relies on the potential gains to all trading nations by achieving increasing returns on a global scale (Krugman 1981).

In the literature a further distinction is drawn between scale economies (external to the firm) that are of "national" origin as distinct from the ones that are "international," the latter arising from developments in the global industry. As with other scale economies, both are disruptive to the predictive power, as well as the major theorems, of the traditional HOS model. However, gains from trade arise with increased output of industries in trading countries that enjoy national-level scale economies. Similarly, gains from trade are also made possible to industries that enjoy economies arising at an international level. In particular, small economies that otherwise cannot access these economies are supposed to gain by opening up. Thus trade can be beneficial/loss-making with external economies at the international level for nations with possibilities of reaping economies—avoiding diseconomies of scale with integrated markets. The above obtains even for countries having resource endowments and pretrade prices that are identical. In this case, a small country has more to benefit as markets are opened up and external economies of scale are availed of at an international level (Helpman 1984; Eitier 1979).

[1] See Darity and Davis (2005) and Deraniyagala and Fine (2003).

INTRAINDUSTRY TRADE WITH PRODUCT DIFFERENTIATION

As with economies of scale, product differentiation distorts the basic properties of the HOS trade model. As demand is generated in either country for individual varieties produced by the same industry, the process makes space for intrasectoral (industry) trade across nations. Such intraindustry trade in both directions is also possible when markets are segmented and firms adopt price discrimination/dumping, etc. to maximize revenue by taking advantage of the different demand elasticities that prevail for the same good in the two countries.

STRATEGIC TRADE, RECIPROCAL DUMPING, AND INDUSTRIAL POLICY IN ADVANCED NATIONS

Imperfect markets with potentials for reciprocal dumping by nations in each other's market led Brander and Spencer formulate the notion of "strategic trade" (Brander and Spencer 1985; Krugman and Obstfeld 1992). The above relates to situations when demand curves are subject to elasticities that are different in the two countries Using the famous example of the Airbus and Boeing industries, the strategy was one of an aggressive preemption, by creating a market niche through subsidized dumping of exports. A parallel possibility also exists with internal economies of scale at a national level, when countries that are historically ahead of others in producing the good have an advantage over others, with the capacity to produce at a price lower than what other countries could offer at the starting point. Similar to the Listian "infant industry" case, situations as above justify strategic trade policy with subsidies offered in the high-cost country in order to enable the latter reap the scale economies. Alternatively (and also paradoxically) the above also lays the basis for aggressive strategic trade on the part of industrially advanced nations, a point we deal with in the next paragraph.

The strategic trade component of the NTT gained currency, especially in the United States, in the public policy during the 1980s. It was generally recognized that the "vagaries of history" rather than resources determine what a country produces and exports. Thus the role of "history and accident"[2] were both considered crucial in determining the location of an industry in the world map (Krugman 1994). Influential people, including Robert Reich of the Kennedy

[2] This is viewed by Krugman as the economics of QWERTY or path-dependence as in the age-old typewriter keyboard that continues in the latest models of computers!

School in the United States, and Lester Thurow, author of *Zero-Sum Society*, recommended that by the early 1980s, government should intervene to shift resources from "sunset" to "sunrise" industries, thus generating "high value-added products" (Krugman 1994: 248). Around the same time, the Berkeley Roundtable, an influential think-tank at the University of California, pointed at the tendencies for deindustrialization of the United States and recommended active state intervention, advocating industrial policy along the above line (Krugman 1994: 249).

HAS NTT DEPARTED FROM THE OLD TRADE THEORY?

Notwithstanding its innovative critique of the traditional trade theories, the NTT, as has been rightly pointed out, has remained "…fully consonant with 'traditional theory.' It explores creatively and extensively the exceptions that the 'traditional theory' would admit to its standard results…" (Darity and Davis 2005: 2). As argued in an exhaustive analysis and critique of NTT, "…limitations [that have] remained embedded in the new theory because of its excessive fidelity to the old" (Bhattacharjea 2004). Indeed, the free trade doctrines of the traditional (old school) variety or the NTT with their purely positive approach to world trade both have failed to address the dynamic implications of trade opening in terms of growth and development of the trading nations; especially so for the developing countries. It is interesting to note that these static theories of optimal resource allocation under free trade, in the standard comparative cost version or in the HOS theorems, both failed to reckon the awareness shared by Smith and Ricardo on uneven development of nations (Darity and Davis 2005:3). This applies to analysis of increasing returns, innovation, and market-size in Smith, and of technical progress, as well as the Corn Law debate (the latter as a possible hindrance to industrialization) as in Ricardo. Smith, in particular, seems to be aware of the "marked differences" in economic development of nations as "…he refers to 'nations of savages' coexisting with 'civilized nations'." As it has been argued, both Smith and Ricardo, despite their basic differences on the respective notions of increasing as distinct from diminishing returns to scale, "…provides a framework for directly addressing the phenomenon of *divergent* economic development" (Darity and Davis 2005: 6).

TRADE, GROWTH, AND DEVELOPMENT

On balance, the neo-classical trade theories, of the HOS variant or even the more realistic models introduced as NTT, both failed to address the issue of growth and development which include, "viewing change by comparing static equilibrium states, rather than as a process occurring in historical irreversible time." The agenda the NTT theorists had set for themselves clearly excluded situations where "…changes can happen in resource endowments, technological possibilities, or consumer preferences" (Bhattacharjea 2004; see also Ruttan 1998 and Stewart 1991). None of these theories (old/new) paid much attention to questions of changing income distribution with free/restricted trade.

An early attempt to capture the effect of trade on growth included Johnson's "trade-cum growth" and Bhagwati's "immiserizing growth" models, both offered during the 1960s (Johnson 1956; Bhagwati 1958). Despite the limiting assumptions, Bhagwati was able to pinpoint the relevance of terms of trade movements as a factor related to growth rates for trading countries. It is, however, rather paradoxical that "immiserising growth" through deteriorating terms of trade seemed to prevail in the country growing faster or even growing in isolation in comparison to its trade partner! The generalization, as can be pointed out, was contrary to the world of realities.

Terms of trade resurfaced in the literature as a powerful tool to demonstrate the inequities of trade for developing countries. Dwelling on the observed tendencies for a secular decline in the commodity terms, of trade Raul Prebisch (1968) and Hans Singer (1950) both advanced the much-celebrated thesis relating to a secular decline in terms of trade experienced by the primary producing and exporting countries. Supplementary material, which supported the hypothesis, was provided in the Haberlar report on *International Trade* from GATT (1956)[3] on the factors explaining the lack of demand for exportables from the semi-industrialized countries in advanced-country markets. The reasons included the falling or low import content of production in advanced nations as a consequence of technological changes. As it was argued "…industrialization is a significant factor in the long-term tendency for exports of the semi-industrialized countries to rise *even* more slowly than those of non-industrial countries" (Harberler 1968). A major factor included the low price and income elasticity of demand for those exports from the developing countries in advanced-country markets. Further support to the trade and underdevelopment argument was lent by Nurkse in his Wicksell Memorial Lectures

[3] See also Haberler (1968)

(1959), by Singer and also by Myrdal. Nurkse stressed the role of agricultural protectionism in advanced economies, along with lagging demand for imported inputs (both primary and intermediate goods) from the less developed as contributory factors to underdevelopment. Pointing at foreign investments in the direction of the developing countries, Singer documented the damages done to the host countries, not only from the falling export prices and the terms of trade for these primary producing countries, but also from the outflow of funds to service and repay foreign investment. Singer held that foreign investments indirectly foster a base for export-oriented primary production, thus ruling out the prospects of an alternative path of development in these countries based on industrialization. For Myrdal (1957) the "backwash effects" of investments in open economies often overrule the "spread effects," if any (Nurkse 1959; Singer 1950).

NEO-MARXIST APPROACHES TO TRADE

Inequities of trade were also one of the main themes in the Marxist literature dealing with similar issues. Using the labor theory of value, Immanuel tried to point at the asymmetry in exchange across countries, with productivity gains in the developing countries appropriated by the rest of world (Immanuel 1972).

Theories of underdevelopment, which rejected the mainstream neo-classical theories of optimal trade and growth, offered a picture of trade among nations that was very different. These include the classics on imperialism, especially, the underconsumption problem in Luxemburg (1968), which could be remedied by having access to precapitalist markets within the nation or overseas. Trade had a major role in the process, providing access to markets hitherto unexploited. The emphasis on trade continued in the debates that came up in related themes on capitalism, with Sweezy highlighting the primacy of "circulation" (or exchange) as against "production relations" as held by Dobb (1962).[4]

Borrowing the hue from Sweezy, Wallerstein (1979) dwelt on commerce as a major tool in the "peripheralisation" of new territories and transfer of resources to "core areas." Incidentally, the above generated the much-used core-periphery distinction in the literature. "Deindustrialization" via trade and transfers of surpluses from colonies also remain as important contributions in the analysis and documentation of the colonial past of developing countries

[4] See also Sweezy (1976).

(Bagchi 1982; Sen 1992). Trade, along with investment, is used in an even more effective way in Frank's analysis of "development of underdevelopment," which explains much of neo-colonial expropriations of surpluses from the developing areas. Theories as above have considerably influenced the "Dependencia" (Frank 1967; Amin et al. 1981; Amin 1972; Braun 1983) school of thought, which had its origin in Latin America. The thesis dwells on the inequities of the world trading and financial order, a large part of which derives from trade.

DEFENDING FREE TRADE IN THE AGE OF LIBERALIZATION

The wave for liberalization, which has swept the developing world in the process of globalization, has generated some specific tools for policymakers to justify the move for deregulation in the global economy. Trade barriers under what was described as the QR or import-substituting regime were sought to be identified as "social costs of protection," measured by "effective rate of protection," (Corden 1957 and 1966) popularly known as ERP. Such costs could also be identified as the "domestic resource cost" (DRC), which tested the cost efficiency of domestic industries in comparison to international standards. The concept was used to identify the potential exportables by developing countries, which moved from an import-substituting regime to one of export promotion during the 1980s (Bhagwati 1978; Srinivasan 1978; Heller 1992). In absence of programming exercises to compute "shadow prices" that reflect "dynamic comparative advantage" (Chenery 1965), use was made of the CIF prices of importables to arrive at the ERP and DRC calculations. These were used extensively by the free trade lobby in developing countries as tools to question the controlled trade regimes.

Limitations, conceptual as well as operational, can easily be detected in the notions of trade efficiency subsumed in terms of the aforementioned concepts. These limit the validity of the ERP/DRC indices as guidelines for resource allocation in developing countries. We point to the following three problems which include, first, the restrictive assumption of fixed input coefficients in these calculations to measure the gains in efficiency through factor substitution. The assumption reduces to triviality all prescriptive claims of such models on issues relating to efficiency gains within the economy. Second, using international (CIF) prices as a surrogate for "shadow prices" in calculating these indices often leads to serious anomalies, with negative ERP/DRC values, which are meaningless for allocational purposes. Third, possibilities of

monopoly power enjoyed by different protected units may generate a ranking of industries by ERP/DRC criteria that do not reflect inefficiencies under protection (Sen 1982).

THE DEVELOPMENT AGENDA FOR OPEN ECONOMIES AND ITS LIMITED SUCCESS UNDER NEO-COLONIALISM

Despite their subordinate economic and political status in relation to the advanced industrial nations, the developing countries have been able to demand attention, albeit rather unsuccessfully in terms of remedial steps, to the on-going process of unequal world economic order. These include the voice raised by the Group of 77 developing nations in the 1960s, which culminated later as the UNCTAD. At another level, the nonaligned nations tried, over a limited period when the movement was active, to demand fair deals on trade and investment. More recently, developing countries also had been active, though not very successful, in defending their national interest in the multilateral trading institutions against the aggressive unilateralism of the powerful industrialized countries. We will deal with this aspect later when we comment on the asymmetry and inequity of the current international trading system.

FDI, TECHNOLOGY, AND TRADE

Foreign direct investment (FDI), which along with technology flow remains a conditioning factor for trade flows and its pattern, was not lost sight of in the trade theory literature that has come up since the 1960s. Attention was drawn to what was observed as the “product-life-cycle” (PLC) of technology-driven foreign investment and trade flows (Vernon 1970; Posner 1961; Hufbauer 1966). Innovations which led to adoption of new technology in the lead advanced country was considered to introduce, in terms of this theory, “new” products that were produced, consumed, and exported to the rest of world. With the “maturing” of product innovation, technology as well as capital was supposed to move to the rest of advanced countries and to produce similar goods, which in turn are exported back to the lead, advanced nation. Less-developed countries import these goods from the respective producing advanced country/countries during the first two stages of production. However, production gradually starts in the least-developed country as well as the product is “standardized,” thus completing the life cycle of the product. Technology at this stage of the PLC has already traveled, along with

capital, initially from most advanced to other advanced nations, and finally to these least-developed countries who now export the product to advanced nations.

With product specifications (new, maturing, standardized) and the initial control over the market by advanced countries, the PLC theory of technology-driven trade incorporates both product differentiation and market imperfections.

A similar emphasis was laid on technology-driven trade flows and its pattern in models that interpreted the "technological gap" among nations in terms of "demand-lag" on part of consumers and "reaction-lag" on part of producers in the home country, as well as the "imitation-lag" on part of producers in the foreign country (Posner 1961).

While the basic premise of PLC and similar other neo-technology models rest on diffusion (or transfer) of technology across nations, the process is unclear in absence of a reference to MNC practices relating to parent companies and the subsidiaries. Aspects as above have remained an area of research in the branch of economics known as industrial organization theory, which again, deviates even more from the world of realities. A relatively more realistic approach to the FDI-trade nexus consists of the flying geese paradigm (Ozawa 1995), which sought to explain the relocation of production and the shifting export platforms in Asia that had taken place since the 1980s.

On retrospection, the PLC brand of literature seems to have provided a platform for an integrated approach to trade, technology, and FDI while introducing product differentiation as well as market imperfection. Compared to the earlier approaches to trade models in "old theories," which were primarily *location-specific* (comparative cost, resource endowments), PLC theory has introduced *product-specific* (new, mature, standardized) characterizations and also *organization-specific* factors. Incidentally, factors as above (especially the last two) also feature in the NTT models.

WHAT REMAINS OF THE THEORIES OF A CONFLICT-FREE HARMONIOUS WORLD OF FREE TRADE?

Advances in trade theory and policy have not, however, kept pace with issues, which concern the majority of nations in guiding policy, particularly in the developing area. Thus trade policies advocated by mainstream neo-classical economists dwell exclusively on the Pareto optimality conditions in multiple markets that are achievable under free trade. Literature dealing with

second-best suboptimal conditions has treated all deviations from competitive equilibrium as "distortions" in terms of the first-best Pareto optima. It is but natural that policy conclusions that emerge from the above formulations fail to address the world of realities. Contrary to what is claimed in these theories, little has been achieved in terms of a conflict-free, harmonious world of free trade policies. Theories as above clearly fail to provide a manual for policymakers that avoids the terrain of conflicting interests related to trade that arise within and across nations.

As for the advanced nations where these theories are nurtured in official circles even today, rising unemployment figures as well as oversupply of domestic goods are often related to labor market distortions (trade union militancy and wage rigidity, in-migration, lack of skill), cheap foreign goods (produced abroad with cheap labor, outsourcing), or even an overvalued foreign currency (e.g, Chinese yuan, at present). Little attention, if any, is paid to demand deficiency at home, which remains a major culprit of such malaise in the advanced economies.

ANOMALOUS USAGES OF TRADE THEORY IN POLICIES ADVANCED BY INDUSTRIALIZED NATIONS

On the whole, the norms of trade policy that are accepted and pushed by advanced nations seem to rely on two distinct strands of theorization. For developing countries the recommendation is to liberalize and open up as much as possible, in order to avail of the "benefits" of the free trade doctrine of the old variant. For their home economies, the prevalence of unemployment and low growth are taken seriously, and the remedy is sought by using strategic trade of the NTT variant. Arguments as above permeate the policy moves, not only at level of intergovernmental trade deals, but through multilateral trading institutions, such as the WTO, where the stand taken by these nations often reign supreme.

SOME INSTANCES IN THE WTO REGIME

It is not difficult to provide instances of the world trading regime, which are rather anomalous and discriminatory as far as the developing country trade partners are concerned. A major example consists of the unilateralist approach implicit in the upcoming regional trade blocs, including NAFTA and the EU. A provision was there in terms of article XIV of the GATT and its updated version in the WTO to allow exemptions from Most Favored Nation clause (MFN)

for customs unions and free trade areas on the condition that the common external tariff of the union members should not be raised further. While attempts have been made to justify the burgeoning preferential trade arrangements (PTAs) as a form of "open regionalism," which prepares the stage for complete trade liberalization (Council of Economic Advisors 1995), it is not hard to observe regional trade arrangements (say NAFTA, APEC) "…as a process by which a hegemonic power (often manages) to satisfy its multiple trade-oriented demands on other weaker nations more easily than through multilaterlism" (Bhagwati and Krueger 2001; Srinivasan 1998). Pressures as above, with the threat of denying market access to the large industrialized countries, have even countered moves on part of the weaker nations to manage alternative trade forums like the SAPTA in South Asia or the Mercosur in Latin America.

Despite the goals initially set up in the Uruguay rounds of trade talks to bring in efficiency gains by eliminating trade barriers across nations, the rich industrialized nations have managed to rely on various nontariff barriers. These include the various subsidies on agriculture, industrial, and innovative activities in the home countries. Use is also being made of antidumping provisions to weed out potential threats from developing country imports to manufactures of local origin. Ministerial talks that have followed the Uruguay rounds have opened up areas of discord between the members, with developing countries trying to resist the pressures to adopt trade practices with an in-built bias to favor the developed countries. Mention may here be made of the unfulfilled promises of the Doha Ministerial Round (2001) in regard to market access for agriculture, especially in the advanced countries. The clock has rather turned backwards with trade liberalizing forces operating in developing countries instead of the developed ones, where protectionist subsidies have continued to rule supreme. Expansion of the negotiating agenda rather than the consolidation of the prevailing ones was the central issue in earlier negotiations with the broadening of the issues at the Singapore Ministerial Conference (1996). These sought to cover investment, competition policy, government procurement, trade facilitation, and labor and environmental standards. The developed countries, in turn, were neither ready nor inclined to incorporate all these demands, mostly from the developed countries, in terms of the existing WTO framework. The last meeting of the ministerial group at Cancun (2003) similarly has failed to arrive at a consensus on major issues including the Doha and Singapore concerns. For example, it was pointed out that the agriculture section is either too ambitious or not ambitious enough. They differed over whether to launch negotiations on the Singapore issues or whether there is no consensus to do so. They had comments on the

nonagricultural market access text, including the description of the tariff-cutting formula and whether sectoral deals (zero tariffs for all products within specified sectors) should be compulsory for all members.

Several of the ministers held that the text on the cotton initiative did not reflect the proposal to phase out subsidies and for subsidizing countries to compensate the African producers in the interim; a number of African and Caribbean countries in particular said the draft does too little on special and differential treatment for developing countries. Thus, as was put in the official WTO website, "…It is but ironical that a few countries, both developed and developing, expressed concern that the negative sentiments would wipe out what they described as possible significant results in areas such as agriculture, which are particularly important for developing countries. Two large members warned that each delegation would be responsible for what happened that night."[5]

Indications of discords between member countries in the face of "aggressive unilateralism" on part of the more powerful nations both have surfaced in the course of the long-drawn WTO negotiations. Mention may be made of the near collapse of the MFA relating to textiles,[6] the shrinking coverage of products (with the "graduation" provision of the EU) under the GSP, dilution of the Special and Differential Treatment for all developing countries to "best-endeavor clauses," etc.

The strong-arm tactics of the advanced nations within and outside the WTO has continued to prevail with the back up of the never-fulfilled promise of greater market access in agriculture, textile, and clothing, as well as the movement of natural persons under services. In addition, the IFIs including the IMF, the World Bank, and even the G-10-controlled BIS has continued to exercise control and impose regulations in the interest of finance, which has a large impact in shaping world trade. It is important for the advanced nations not to lose the "export platforms" in cheap labor countries and hence to protect the DFIs as well as other forms of finance in these regions. Similarly, countries in the developing area that are still the major suppliers of raw materials to the rest of world also are sometimes covered with debt-

[5] For more, please visit the WTO website at:
http://www.wto.org/english/thewto_e/minist_e/min03_e/min03_14sept_e.htm
and see the *World Trade and Development Report 2003: Cancun and Beyond*, 2003. New Delhi: Research and Information System (RIS) Academic Foundations.

[6] Even after the MFA phasing out on January 1, 2005 under WTO, developed countries want to restrict imports from countries like China.

cancellations that also protect the lending institutions. Much of these may have a price tag of further opening of trade by these countries, which will make it easy for the lending nations to get back the exonerated sum of cancelled debt as export earnings.

CONCLUSION

Concluding, it appears that the evolution of trade theory, from old trade doctrines to the NTT, has impacted policy at two levels. The first relates to the continuing support of the free trade doctrine to determine policy for developing areas. As is expected, the push comes from the advanced nations, both at the intergovernmental level and at multilateral institutions like the IMF and the WTO. The second impact of trade theory relates to policies pursued by the advanced nations, which relies considerably on the NTT doctrines of strategic trade. The uneven power relations between the rich and poor nations of the world permits a continuation of this asymmetrical combination of policies, to which trade theory unfortunately has contributed much. Much of the preoccupation of the policymakers with the micro-theoretic formulations of trade theory, both old and new, are related to a total neglect of the macroeconomic issues relating to the national as well as the world economy. One only expects that the new theories, which are yet to come up, will address some of these limitations.

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