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A CRITIQUE OF MODERN THEORIES OF TRADE[1]

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Abstract

This article recapitulates some of the trade theories reputed to be of the twentieth century. Here, the Heckscher-Ohlin theory (with some of its variants), endogenous growth theory, product cycle theory, and new trade theory were considered. This review thereof, amidst others, highlight some of the assumptions of these theories and thus present some critique of the same theories.

1.0 Introduction

The debate concerning the role of trade as an engine for economic development in world economies had been unending. Earlier theories from Adam Smith (1723 - 1790) and David Ricardo (1772 - 1823) had notably supported international trade to play an important role in economic growth by increasing the size of markets and offering each country the possibility of taking advantage of the increasing returns to scale due to the division of labour and specialization, and that differences in production technologies could inform a country's specialization in the production of commodities she so has a comparative advantage, whereas constant returns to scale at least in every production process is expected respectively (Lam, 2015).

Both Smith and Ricardo, however, agree in consensus that with trade, specialization in the production of a commodity by a country and for which she can produce relatively cheaper than one country or more than one country in comparison is possible, in the same vein as each country then, with a given amount of resources, can consume more than she could without trade (Lam, 2015).

A more recent development to the theories supporting international trade is discussed as follows: Section 2, Heckscher-Ohlin trade theory (with some of its variants). Section 3, endogenous growth theory. Section 4, product cycle theory. Section 5, new trade theory; and Section 6 concludes.

2.0 Heckscher-Ohlin theory of trade

The original development, foundation(s), and or earlier propositions of the Heckscher-Ohlin theory are noted attributable to two Swedish economists, Eli Heckscher and his student Bertil Ohlin (Lam, 2015).

There are six assumptions usually postulated with the Heckscher-Ohlin theory of trade: (1) no transportation costs or trade barriers (implying identical commodity prices in every country with free trade), (2) perfect competition in both commodity and factor markets, (3) all production functions are homogeneous to the first degree (implying constant returns to scale), (4) production functions are such that the two commodities always show different factor intensities, (5) production functions differ between commodities but are the same in both countries, and (6) tastes are the same in both countries (more specifically, both countries have identical homothetic community indifference maps) (Lam, 2015).

Below in this section, is a consideration of the factor endowment theorem, as well as the factor price equalization theorem.

2.1 Heckscher-Ohlin Factor Endowment Theorem

This formulation of the Heckscher-Ohlin theory states that a country's exports depend on its resources endowment whether it is capital-abundant or labour-abundant. If capital-abundant, she will produce and export capital-intensive goods which thereof are relatively cheaper than in one or more than one country. Likewise, a labour-abundant country will produce and export labour-intensive goods which thereof are relatively cheaper than in one or more than one country (Lam, 2015).

It is worth to note that the difference between the Ricardian – two countries, two commodities – model and the Heckscher-Ohlin factor endowment model is the former postulates differences in production technologies between countries, while the latter assumes that production technologies are the same. Also, as with the Heckscher-Ohlin factor endowment theorem aligned to the

Heckscher-Ohlin theory in general terms, there is the assumption of no differences in the aggregate preferences between countries (Lam, 2015).

The crux, however, with the Heckscher-Ohlin factor endowment theorem is that different countries have different resource endowments, and this discrepancy is sufficient to cause a different production possibility frontier in the two countries such that equilibrium price ratios would differ in an autarky (Lam, 2015).

2.2 Heckscher-Ohlin Factor Price Equalization Theorem

This theorem assumes free mobility of factors of production among countries, and as a result, factor prices would be the same in all countries. The Heckscher-Ohlin factor price equalization theorem posits that if the prices of output (or final goods) are equalized between countries in free trade, then the price of inputs (or factors of production) will also be equalized between countries. Thus, wages and rents are implied to converge across countries with free trade, and or trade-in final goods is regarded as a perfect substitute for trade in factors of production (Suranovic, 2006).

2.3 Critique of the Heckscher-Ohlin theory of trade

Some considerations nonetheless notable as a critique of the Heckscher-Ohlin theory of trade are as follows;

In respect to the Heckscher-Ohlin factor endowment theorem, the possible lack of political will on part of the government, the possible lack of motivation on part of industry stakeholders, etc. to explore the available endowed resources are some notions worth of concern. For example, these aforementioned could be prevalent in terms of less-focused concentration to address the limited-diversified productive base of the domestic economy, and which may be as a result of poor ease

of doing business (or obvious structural/institutional rigidities) inclusive of bottlenecks in business registration, non-transparency in the issuance of industry license(s), constraints in raw material sourcing, and poor business logistics and infrastructural support.

Whereas, for the Heckscher-Ohlin factor price equalization theorem, institutional rigidities such as poorly developed financial markets, poorly developed financial system, adverse labour policies for expatriates, etc. and unfavourable macroeconomic climate such as rising domestic inflation, exacerbated the level of unemployment or poor aggregate demand, etc. (or in other words, market imperfections, etc.), amidst others are some observations that could engender unattractiveness of the domestic economy to the reception of foreign capital (non-human and human) inflows (Oluwafemi et al., 2012). Hence, factor price equalization is one to not be expected in the real world.

Some other reasons for which the factor price equalization theorem ran into some difficulty include (1) differences in factor quality, (2) differences in production technology across countries, and (3) more obviously, differences in output prices across countries of the same product.

Thus, the notion of a single price for identical products in different countries is almost impossible to expect, i.e. price differentials among countries, due to market imperfections, do exist.

3.0 Endogenous growth theory

The Endogenous Growth Theory was developed in the 1980s, as a response in criticism to the Neoclassical Growth models which assume a country's long-run growth (and invariably, her capacity for industry to support trade) is exogenously determined by a saving rate (exemplified with the Solow model) and or technical progress (Leichenko, 2000).

Although growth (in the industry) within the neoclassical model is posited as may also occur as a function of increases in human capital, physical capital, or population, these increases are assumed to have diminishing or constant returns to scale, and so cannot bring about sustained growth in per capita income (or output) (Barro, 1993).

A major prediction of the neoclassical model is that the growth rates of countries or regions will converge over time. However, studies have found that a large share of economic growth (or growth in national output to support trade) cannot be explained by technological change and that empirical evidence does not support convergence. Also, the new empirics on regional convergence in the industrialized world reveal a rate of regional convergence that is much slower than the rate proposed by orthodox neoclassical models (Tallman and Wang, 1992; Romer, 1994; Martin and Sunley, 1998).

Thus, endogenous growth theory (EGT) attempts to rectify some of the problems of neoclassical theory by developing models in which long-run growth rates are endogenous to the model, based on certain assumptions about increasing returns, human or physical capital, and technology investment (Lam, 2015).

There are two different propositions of endogenous growth theory, which envisage different sorts of increasing returns: endogenous broad capital models and endogenous innovation models. The endogenous broad capital models can be further separated into two sets: (a) those that simply show capital investment as generating externalities, and (b) those that emphasize human capital and relate the technological change to 'learning by doing' and 'knowledge spillovers'. The endogenous innovation models have been labelled Schumpeterian because they emphasize the returns to

technological improvements arising from deliberate and intentional innovation by producers (Martin and Sunley, 1998).

The EGT suggests that improvements in domestic productivity (and invariably, capable to inform trade relations) can be linked to a faster pace of innovation and extra investment in human capital. Furthermore, the theory predicts positive externalities and spillover effects from the development of a high value-added knowledge economy, which can develop and maintain a competitive advantage in growth industries in the global economy (Lam, 2015).

About emphasis on the importance of spillovers associated with new technologies, endogenous growth theory suggests that differential patterns of growth (and trade relations) may emerge as the result of specialization in different types of export goods. So, while all regions may benefit from the growth of exports, regions that specialize in goods with greater potential for spillovers may tend to experience more rapid growth (in industry and trade relations) than other regions. Several tests, though, of endogenous growth theory have been conducted at the regional level, but these studies have not sufficiently addressed the linkages between foreign trade and regional growth (Leichenko, 2000; Lam, 2015).

In sum, the main points of the EGT are as follows: (1) the rate of technological progress should not be taken as a given in a growth model, as appropriate government policies can permanently raise a country's income (or output) growth rate (as well as her extent of trade relations) particularly if they lead to a higher level of competition in markets and a higher rate of innovation, (2) there are potentially increasing returns from higher levels of capital investment, (3) private investment in Research and Development (R & D) is the central source of technical progress, (4) protection of property rights and patents can provide the incentive to engage in R & D, and (5)

investment in human capital (education and training of the workforce) is an essential ingredient of growth (Lam, 2015).

3.1 Critique of the Endogenous growth theory

Some critique of the EGT includes the following: the quality of labour force (in varied respects such as the various age demographics, citizenry average educational attainment, etc.) vary across countries, hence some countries with a critical mass of the aged population as well as poor educational infrastructure (or highly-privileged educational infrastructure affordable only by a few) will have less amount of labour force relatively that could be engaged in the production process that supports trade. Also, educational institutions of countries evolve differently, and so determine the amount of available human resources that could be engaged in the production process that could further enhance trade relations. More so, adverse immigration policies (or unfavourable labour laws for expatriates) that inhibit the inflow of skilled manpower could be heightened in some countries, for different reasons such as to protect the domestic labour earning opportunities, etc., and even at the expense of the need for labour resources to drive production that could support the country's trade. Furthermore, poor government and corporate concentration on research and development (R & D) could inhibit innovation for business growth, and so a non-optimal production pattern in support of trade relations may be prevalent. Lastly, the poor capacity of the domestic financial sector (to mobilize the needed financial resources) to support business growth could be the case in some countries, and so could delimit the level of private sector-led activities' participation in the country's trade relations (Pritchett, 2001; Oluwafemi et al., 2012).

4.0 Product cycle theory

The product cycle theory as put forth by Vernon, from the viewpoint of the US market, emphasizes the timing of innovation, the effect of scale economies, and the role of ignorance and uncertainty as factors influencing trade patterns. Vernon claims that a large gap (or time lag) exists between the knowledge of scientific principles and the application of these principles in the generation of new, marketable products (Vernon, 1966).

The product cycle thereof encompasses three stages of development: (1) introduction, where an inventing country develops and export a particular product to foreign markets, (2) standardization, where inventing countries lose export market shares to other countries who imitate the innovation, and (3) maturation, where inventing countries become net-importers of the product. The core of this theory is the assumption that the diffusion of new technology transpires slowly enough to create temporary differences between countries in available production technology (Lam, 2015).

A proposition here is that home market characteristics (such as level of domestic demand, level of domestic demand for the new product, etc.) are particularly important during the first stage of the product cycle when a new product is introduced into the inventing country's domestic market. More so, production during this first stage is typically characterized by high per-unit costs, low price elasticity of demand, and monopoly power over the product design. But then, the need for flexibility in the use of inputs, and the need for rapid communication between producers and consumers as the product are test-marketed, are more important than production costs during this first stage, while producers will also export to other countries with levels of income and demand similar to the inventing country (Leichenko, 2000).

At the same time, in other countries, where the new product is imported and introduced, consumer demand gradually picks up and demand-induced domestic production starts. Nevertheless, the inferior quality and high costs of production impede the competition with imports. Hence, imports remain high and a run on the country's foreign exchange resources may occur, and so the necessity for state intervention to implement a certain level of tariffs and other import restrictions to protect the domestic industry from foreign competition. The advantageous position of having an established and often protected domestic market, coupled with the acquisition of standardized production technology, makes large-scale production possible. Thus, domestic products gradually replace imports as product quality improves and price becomes competitive. This stage corresponds with the standardization stage (Dowling and Cheang, 2000).

By the third stage, the growth of domestic demand has slowed down in the inventing countries, and exports of the product have begun in other countries. Production in other countries is kept at a high level through additional production for export, and imports diminish in absolute terms. The strong exports in other countries enable these same countries to import capital goods for the continued expansion of production. Inward FDI in other countries becomes significant, as the same industry in the inventing countries has lost its comparative advantage, and has started to relocate to other countries. This stage in other countries corresponds with the maturation (third) stage in the inventing countries (Lam, 2015).

4.1 Critique of the product cycle theory

A key problem with the product cycle theory, despite the emphasis on the firm's strategy and the changing nature of demand, is that the proposition for the basis of trade is deterministic (or theoretical). Once, a new product is introduced, the transitions from one stage to the next, and the subsequent patterns of production location and trade, are seen as unavoidable. Inward FDIs (to

places of the target market) could be the first stage, in terms of production of the new product, and product re-branding could be used to salvage the effect of product maturity on inventing firm's market dominance.

More so, the theory fails to recognize that in a world of 'imperfect knowledge' – in terms of lack of information about products, preferences, competitors, etc., in foreign markets, entrepreneurs first will produce goods for domestic needs of which they are aware. As a successful firm grows, the local market becomes insufficient for further expansion. The trading horizon of the firm is gradually lifted. Only after what has probably been a considerable period of producing for the domestic market that the entrepreneur become aware of the profit opportunities offered by producing for foreign countries. The export market will not be entered until then.

5.0 New trade theory

The New Trade Theory (NTT) emanates from the new growth theory (NGT) that emerged within the international trade and economic growth and development literature during the early 1990s (Ezeala-Harrison, 1999).

The NGT emphasizes technological progress (and the determinants of technological progress) as well as the externalities that the development and application of new knowledge confer, as explicit variables that determine economic growth. The theory made clear that innovations take place more in some countries than others because of, among other things, differences in the development of science in countries of the world, the relative levels and quality of their research institutions, and the relative levels and quality of their educational systems (Lam, 2015).

The central point of the NGT is that of diffusion of knowledge between firms, as knowledge is given as a key factor of production. Therefore, the NGT implies that firms should invest more in knowledge, as much as in other capital resources to be productive or maintain productivity (Ezeala-Harrison, 1999; Lam, 2015).

The association between NGT and NTT lies in their common emphasis on the magnitude of technology and the diffusion of knowledge in the relative flow of the gains from trade to trading countries. The NTT sought to explain the high levels of intra-industry trade, and the large proportion of world trade that takes place between similar countries. Thus, the NTT suggests that the existence of increasing returns to scale and imperfect competition provides reasons for specialization and trade, even when countries are similar in factor endowments (Krugman, 1979; Helpman and Krugman, 1985).

Although the majority of work within NTT assumes that increasing returns are internal to the firm, some studies have shown that that increasing returns could be external to the firm. Also, evidence has shown that trade, in the presence of external economies of scale, leads to the regional concentration of scale-intensive industries. For example, in economies of agglomeration, which increase with increasing regional size where a centre for production and exporting is set up (e.g. industrial park, export zone, etc.), tend to provide this centre permanent cost advantages over other locations (Krugman, 1991; Krugman and Venables, 1993; etc.).

5.1 Critique of the new trade theory

A notable critique of the NTT is the non-consideration of possible foreign market bias for exports of certain products (and or for some goods originating from some countries), even when they are

produced relatively cheaper. An example, in this case, is the African Growth and Opportunity Act (AGOA) which attempts to mitigate the United States of America (USA) market bias for commodities from selected African (or developing) economies, and at the same time foster trade relations between the USA and these economies. The AGOA came into effect in the year 2000 and amended in 2004 under the President George Bush Administration with tenure extended to 2015, and this agreement is intended to increase exports and economic growth in sub-Saharan Africa by providing trade preferences to eligible countries. Still, skepticism for same commodities from same selected African economies to be of quality (or adhere to the USA regulatory standards), especially on part of the USA citizenry, shrouds the fruitful implementation of this Act (Oluwafemi et al., 2012; Cook and Jones, 2015; 2020).

6.0 Conclusion

The foregoing theories so discussed have shown other plausible reasons, amidst those proposed from the traditional classical perspective(s), as the basis for which trade among world economies takes place.

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