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Krugman Trade Theory and Developing Economies

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This paper examines the founding of a new trade theory which has won Nobel Prize for Paul Krugman. The theory is an explanation of the actual pattern of trade between similarly endowed countries in respect of factor endowments, tastes, technology, etc., as against the classical theory of trade between differently endowed countries. It takes the aspects of monopolistic competition of product differentiation or distinction, large scale production, decreasing costs or increasing returns. The theory has many lessons for the developing economies like India, for which strategic trade policy is a good policy option, for bringing out the variety of trade potentials of the country.

Keywords: international trade, developing economies, economic geography, monopolistic competition

Introduction

The "Why" and "How" of foreign trade is of eternal interest in economic or trade economies on which there are a number of theories or models of which the 2008 Nobel Prize economist Paul Krugman's theory is the latest or the newest. Professor Krugman is celebrated not only for his trade theory but week after week column in the legendary New York Times (NYT) which is of great economic educative value and is read with great interest, following which Professor Krugman is considered a "people's economist" which is a rare honor to the honored economist of an young age of 56 (Born in 1953). One may disagree with many of his weekly points, but not his commitment to the great American cause and its people. For instance, former President Bush might have been thrown into his economic and military adventurism because of that for ever blows of 9/11. Professor Krugman's present concern, apart from his rigorous academic exercises, is the US financial crisis, for which the Keynesian interventionist remedy is advocated (Krugman, 2009). The crisis is a different story (Ahmed, 2009a). Professor Krugman is active in a lot of public action in health.

The question is whether Krugman trade theory holds any light for the developing economies like that of India, struggling hard on the foreign trade front. It may be a matter of surprise that India, which in its pre-colonial times had a world reputation on trade (Nehru, 1946), attracting gold from as far as Rome, is today subject to perpetual trade disequilibrium or imbalance. What is the basis of trade? How are the baskets of export and import goods decided? In the long journey of trade theory, commencing with Adam Smith's (1776) *Wealth of Nations* of Laissez faire and trade based on different strengths of nations to produce different goods, Krugman's new trade model, a new trade model emanating from the same Princeton University, attributed to Marc Melitz, noted to be a rising economist of trade economist (Financial Express, 2009, p. 3) of the present generation or age.

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Thus, different trade models appear to explain the pattern of trade or their times, for any economic theory is well known to be a product of its times, from which there appears to be no ultimate or final truth or theory in economics in any of its fields, including trade, the economics of which is on the upsurge because of the surge in world trade and new patterns of trade as West-West trade. India is also looking more eastward, such as ASEAN, yet, its US, EU/West trade ties are strong, mainly with the US.

Hence, this paper intends to take a view of Krugman's trade theory in the context of the developing economies like India with the following objectives.

Objectives (Os)

The objectives are as follows: (1) to take a historical note of trade theory or economics which is of more than 300 years of standing; (2) to make a comparison of old and new trade theories in the context of the need for an expanding; (3) to make a view of the new trade theory and its stand out features; and (4) to examine Krugman's trade theory in the context of the developing economies in need of a trade take-off or breakthrough.

Methodology

A number of recent journal articles, book chapters, and books were examined. International trade, which needs no saying, should be of just and equitable order, and not an exploitative type. It is an evolving order. The founding father of economics and trade economics like Adam Smith were great visionaries and philosophical economists moved by the vision of the welfare of the entire world and its people. There is a world of perfect competition. Trade was to benefit the whole of humanity. For example, he was opposed to the East India Company's exploitative rule in India. If alive, today, Adam Smith would have taken the side of the underdeveloped and developing world and espoused their cause of trade promotion. Still, the world of trade theories is the developed world of west. It never had the experience of colonialism and colonial trade and other kinds of exploitation. Krugman's theory is also Western oriented.

Hence, the question of the applicability of Krugman's theory of the developing world arises, and it may seem not reflective of the trade conditions of nations like India. Yet, the future of their trade may seem to lie in the direction of Krugman's trade theory, in which trade is a product of new geography.

International Trade-Economics

As no individual, no nation can be a Robinson Crusoe economy. Countries like India have a long tradition of foreign trade across the countries and continents which is perhaps one of the oldest examples of free trade. It is a special case of FT, withholding free trade against continuing trade disequilibrium. So, a sort of assumption of free trade appears to underline foreign trade, which underlies all the trade models from Adam Smith down to Ricardo to Mill to Heckscher-Ohlin to Samuelson and others. Competition is supposed to bring out the best of the individuals and nations. Competition, in other words, is the soul of international trade models and their economics.

Division of labor and specialization holds good for the international economy. Then the question is what goods to export and what to import?

> The key to such questions, and many more, is provided by the "theory of comparative advantage", or "comparative cost". Developed more than a century ago by David Ricardo, John Stuart Mill, and other followers of Adam Smith, the theory of comparative advantage is a closely reasoned doctrine which when stated, is unassailable. With it we can identify

> gross fallacious in the political propaganda for protective tariffs aimed at limiting imports. With it we can identify the germs of truth that sometimes appear in the heated claims for tariff and quota protection. (Samuelson, 1980, p. 626)

Needless to say, "comparative advantage" means "more" production per unit of input or more productivity, and "comparative cost" means "less" input or cost per unit of output. Then the die is cast for international exchange of goods. Nature or divinity appears to have its hand in international trade endowing different regions or countries of the world with natural resources and climatic conditions. "The first link in the comparative—cost chain of reasoning is the diversity in conditions of production between different countries" (Samuelson, 1980, p. 627). That is, different countries are endowed with different factor proportions like labor (I) and Capital (K). There is a win-win situation in trade for every trading nation, whether poor or rich. The basic presumption of the pre-new trade theory is "dissimilar" situation, from which trade arises and moves to the right production frontier or possibility curve, indicating the enrichment of the nation concerned. The "divine" hand of markets or price-mechanism or Adam Smith's "invisible hand" appears to operate the external economy as well as it operated the internal economy.

It is a "pure" theory based on competition, freedom of trade, homogeneity, constant returns to scale, etc., and it is a perfect explanation of North-South trade, trading between two "distinct" trading regions, one abundant in labor and other in capital. A question may arise, what of South-South and North-North trade? The model is also devoid of monopolies or any other market aberrations, and also of market props of subsidies or restrictions of tariffs and quotas, dumping, etc.. It is a free trade model, the wisdom of which is said to have dawned very late. "Gradually, countries have realized that opening up their economies to the global trading system is the most secure road to prosperity" (Samuelson & Nordhaus, 2002, p. 291). And, free trade ideology and policy is said to have dawn very late in the case of the United States of America too, the foremost champion of it today.

"For most of American history, the United States has been a high tariff nation. The pinnacle of protectionism came after the infamous Smoot-Hawley tariff of 1930 which was opposed by virtually every American economist yet sailed through Congress" (Samuelson & Nordhaus, 2002, p. 307).

India and other underdeveloped countries were also skeptics of free trade in the initial stages of their development journey and for quite some time, moved by the theories of unequal exchange and unfavorable terms of trade by Myrdal and others. Hence, the trade policy prescription was import substitution and building up the economic muscle of the country through productivity growth in agriculture and industrialization behind the tariff walls (Myrdal, 1964). China as a developing world, in spite of rigorous communist regime, was the first through open its economy in the 1978 (EPW, 2008). India had it in 1991, even then, some firms and industries may call for nursing full health growth.

Thus, for nearly three centuries, from Adam smith (1776) to Paul Krugman (1979), international economics or international trade theory of Smith's vintage with its framework of "comparative cost" or advantage, with its assumptions of perfect competition of multiplicity of traders and homogeneity of goods and policy of prescription of free trade and economic one world view had ruled the field of international trade, which is quite amazing in itself. No trade model can be faultless, to which the comparative cost one is no exception rather than a rule. Apart from this, there are also doubts regarding free trade and trade liberalization in the home land of free trade, namely, the USA. In any case, the gains from trade for developing economies are noted to be far smaller than held up by the World Bank in relentless pursuit of an orderly world economic and trade order (James & Van Rudiger, 2008a). It may not be free trade for all. Hence, the plea of Nobel Laureate Joseph Stiglitz for fair trade for all (Stiglitz & Chariton, 2005).

Trade Dynamics

There is a world of change in the world economy and its different components of developed and developing economies with a tendency for mutual grouping and group trade. The dynamics, in other words, of international trade have change a good deal, especially in the last 50 years or so. For instance, India, in the last half-century has forged new trade pattern, as from major textile exports to gems-jewelry and engineering goods. There is an eastward movement of trade too with China replacing the USA as the major source of imports. There are principal trade groups of EU, ASEAN, and others with a lot of inward trade. There is, of course, forever India-baiting SAARC in spite of India's membership of it (Ahmed, 2009b). There are well known trade brands which sell across the countries. India's is MARUTI-cars.

All these developments may be an occasion for a new trade theory/model of which Professor Paul Krugman may be the chief Architect. Krugman theory dates back to 1979.

> Apart from the predictions of OTT being increasingly remote from the real world, there was some dissatisfaction with two of its basic assumptions: all goods are produced under constant returns to scale, and perfect competition prevails in all sectors of the economy. As any one who has studied elementary economics quickly realizes, unrealistic assumptions are par with the course, but these two fundamental once were becoming an embarrassment even for some economists. (Bhattacharjea, 2008, p. 25)

The world of competition is an interesting world of its own made up of maximizing people, producers, and consumers. If real, it is the best of economic worlds. For, many, it is the beginning and the end of economics the alpha and the omega. But this world has been breached by imperfect, monopolistic, and oligopoly models. The classical trade model is also deficient in one fundamental respect.

> Notice, however, that in the Ricardian model and its extensions the determinants of comparative advantage like geography and factor proportions lie outside the model. New trade theory of which Paul Krugman can be said to be the founder, brings the determinants of comparative advantage into the model. (Tabarrok, 2008)

That is, competitive advantage is that which arises out of product distinction competitive pricing, catering to the consumer-tastes, etc..

Krugman: World and Theory

The intention of this is not to appraise Professor Paul Krugman, for which one feel too small a fry, but to learn the message of Krugman's economics and the message of it, if any, to one's struggling motherland, India, amidst perpetual trade disequilibrium. It is, in other words, to draw lessons for India. For, India is a special case of development and trade with a great variety, diversity. It is heartening to note that there is great American, enthusiasm for "freer trade with India", inspired and enthused by Krugman's new trade theory, or in response to it. India, with variety of diversity is considered trade-enticing.

> The good news for the world that comes with billions in China and India gradually integrating into the global economy, apart from the improving quality of life they will enjoy, is that people are producers as well as consumers. Many millions more people will decide to become research scientists, engineers, and entrepreneurs, and turn their intellectual energy toward tackling resource and environmental problems. Instead of hundreds of millions planting rice by hand in China or struggling with plows and oxen in India, most will eventually join the ranks of productive workers and

> problem-solvers for the world economy. (Hovey & Rehmke, 2008, p. 190)

Thus, India appears to score in respect of "variety", human, geographic, and produce goods, which appears to underlie Krugman's theory of monopolistic competition of "variety" of the same good(s), which appears to be the basis of "similar countries" trade theory propounded by Krugman. After all, variety is said to be the spice of life. This simple truth is said to be the fact of life and the basis of celebrated new trade model of Professor Krugman. The seeds, according to Krugman himself, of the new trade model are said to be in Dixit-Stiglitiz work on monopolistic competition, according to which MC of variety of brands of the same good(s) confers maximum consumer's utility (Dixit & Stiglitiz, 1977). Professor Krugman states his case for a new trade theory and economics in the following words.

> For some time now there has been considerable skepticism about the ability of comparative cost theory to explain the actual pattern of international trade. Neither the extensive trade among the industrial countries, nor the prevalence in this trade of two-way exchanges of differentiated products, make much sense in terms of standard theory, As a result, many people have concluded that a new framework for analyzing trade is needed. The main elements of such a framework—economies of scale, the possibility of product differentiation and imperfect competition—have been discussed by such authors as Bela Balassa, Herbert Grubel (1967-1970), and Irving Kravis, and have been 'in the air' for many years. In this paper I present a simple formal analysis which incorporates these elements, and show how it can be used to shed some light on some issues which cannot be handled in more conventional models. These include, in particular, the causes of trade between economies with similar factor endowments, and the role of a large domestic market in encouraging exports.

The need for trade appear to be mass economical production making use of the economies of large scale productions, giving IRS Increasing Returns.

> The basic model of this paper is one in which there are economies of scale in production and firms can cost less differentiate their products. In this model, which is derived from recent works by Avinash Dixit and Joseph Stiglitiz, equilibrium takes form of Chamberlinian monopolistic competition: each firm has some monopoly power, but entry drives monopoly profits to zero. When two imperfectly competitive economies of this kind are allowed to trade, increasing returns produce trade and gains from trade even if the economies have identical tastes, technology, and factor endowments. (Krugman, 1980, p. 950)

The assumptions of the model are: (1) large number of goods and same individual utility function; (2) one factor of production-labor-and the "same cost function"; (3) full employment; and (4) profit maximizing firms with freedom entry and exit (Krugman, 1980).

Krugman's is an interesting economy and trade for the world of new economic geography and monopolistic competition. There is a good buy to the classical economic and trade world of fixed factor endowment, perfect competition, constant returns, one-size-fits-all, commodity homogeneity, free trade, south-north trade, not-to-do-anything with trade governments, and such others of the old world, and ushering in of the modern economic and realities of consumers thirst and variety, similar factor endowments, imperfect-monopolistic competition, product differentiation, product or brand monopoly, monopolistic competition or brand rivalry, increasing returns, active government, industrial thrust, south-south, north-north trade and maximization of both consumer utilities and producer-trader profits. Professor Krugman is also credited with propounding a New Economic Geography (NEG) that explains the distribution of different economic activities across the regions in the terms of "generalized external economies rather than those specific to a particular industry" (Krugman, 1991), wherein the Krugman ubiquitous IR-Increasing Returns-turns out to be the main determinant. Professor Krugman's new trade economics is offered as follows: NEG is of the new industrial landscapes and the dynamics of them, or of the location of economic activities, agriculture, and industries.

> According to the modern day version of the theory of comparative advantage, trade follows "factor endowments", a term referring to resources relatively abundantly available in a given country. The problem with this theory called "Heckscher-Ohlin-Samuelson (HOS)" after its original proponents is that it explains only a minor portion of world trade. In fact, an overwhelmingly share of trade flows involves "two-way trade", i.e., the international exchange of goods and services, between countries (and industries) with broadly similar endowments, productivity, and real wages.
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> In order to explain such realities, Paul Krugman made use of the idea of consumer's love for variety. Dixit and Stiglitiz (1977) wrote the seminal article on demand for variety. Usually, "Utility" derives from consuming a particular product, such as TV. Utility increases if you have a TV not only in the living room, but in the bedroom as well. With Dixit-Stiglitiz's preferences, however, consumers value having a choice of brands, models, and accessories. For example, high end consumers in Germany appreciate having a choice between the German BMW and the imported Lexus, and vice-versa in Japan. The resulting trade flows represent intra-industry exchange between economies with similar endowments and hence confirm with observed patterns. Krugman (1979-80) formulated a series of simple models that explained trade flows between similarly endowed countries, based on these Dixit-Stiglitiz preferences. (James & Van Rudiger, 2008b)

There are two worthy works with implication of trade policy, *Is Free Trade Passé* (Krugman, 1987) and *Strategic Trade Policy and International Economics* (Krugman, 1999), and whether they are for free trade or not and whether they support some sort of government intervention in trade are not matters of interest herein, the concern of the note being with the implication of new trade economics for India.

Implications for India

Foreign trade is a perpetual area of concern for India. There is a need for a breakthrough in the external sector. Has the new trade economics anything to offer for the purpose? It needs no saying that the internal and external sectors are intimately linked, the latter depending on the performance of the former. When there seemed an imminent breakthrough in the economy of the country with a growth about to touch a 10 percent level, it is hit with the US financial crisis notwithstanding the all-is-well stance of the government of India (GOI), particularly its Ministry of Finance (MOF), under its Minister P. Chidambaram, who still does not appear to refrain from the pet theme, when exports are believed to be hit by about $30 bn and the growth rate is about three percent. The country is hard hit by internal and external terrorism, the seeming aim of the terrorists being to hit the Indian economy hardest. Trade, first, is to be guarded against terrorism, if the country aspires for the new trade of Professor Krugman. A far-fetched link? No.

There is a good hope for India, according to the new trade theory, though Indian might not have been on Professor Krugman's radar while enunciating his monopolistic competition trade theory, and now also. India is a special case of trade, a big democratic developing nation which calls for all considerations from its trading partners. First, there is a need to build up brand India (Chakravorty & Lall, 2007), which is yet to be into the international trade arena in a significant measure. Next, the new model of industrialization and export promotion of the controversial Special Economic Zones (SEZs)—does not seem to meet the requirement of the NTT's increasing returns to scale. Third, perhaps in "variety" India scores overall, on the basis of which tourism, hospitality, health, IT, BPO, gems, and Jewelry, textiles could be the engines of growth and export drive. The PSBs, which are threatened with uncalled mergers into some four to five big banks, have good brand name to venture outside. Fourth, the theory calls for a total stock taking of the external sector in terms of strength, weakness, opportunities, and threats (SWOT). Fifth, the government should bet on the winning horses of trade in terms of any aid and incentives. Sixth, the economy, industries, and firms need to be built in the level of international competitiveness. Seventh, labor as the most important, if not sole, factor of production needs to be bestowed maximum attention in terms of education, training, incentives, etc.. Eighth, the theory calls the country to build a distinct trade image which calls for foreign attention. Ninth, the strategic trade policy of the theory calls for a policy of awards and rewards to well performing firms, and industries, and upcoming star performers. Tenth, national brands like Reliance, Tata's, SBIs, etc. should be international brands.

But, unfortunately, India does not appear to have established much product distinction which stands out internationally and which is well demanded for. The trade economy needs to meet international consumers' needs. The Krugman theory calls for a re-make modern make of the trade economy.

Conclusions

Thus, Krugman's new trade theory or model stands out as the one which seems to better explain the fundamentals of the present trade patterns, resembling monopolistic competition market pattern based on product differentiation, product loyalty, competitive pricing, dominance of some big firms, tending toward oligopoly, etc..

The theory well explains the dynamics of trade, such as consumer preferences for varieties of similar goods, etc., for developing economies to benefit from.

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