

## The Development of Modern Classical Trade Theories and Contribution to Understanding Trade Patterns and Trade Exchange Processes in the Global Economy

#### www.doi.org/10.62341/nasf1817

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## Abstract

Over the past century, international trade theories have testified to an increasing role in knowledge. Depending on the classical trade, theories of Adam Smith in 1776 and David Ricardo in 1817 based on labor while an element of cost, neoclassical contributions made possible to take the capital and other production factors into account through the concept of opportunity cost and undermining knowledge.

The paper referred to the Mercantilism definition history and how it affects foreign trade factors. Besides to the research paper indicates the modern trade theories of Heckscher-Ohlin-Samuelson, which used two factors model that only included labor and capital. As of the 1960s, parallel to the debate over the Leontief Paradox and new international trade theories began to cover knowledge and related concepts like skilled labor and technology gap, product cycle and others. Moreover, the study builds on a review of the literature on classical trade theories as an example of comparative advantage to the new trade theories currently used by many advanced countries to direct industrial policy and trade. As a result, the study discusses that classical trade theories are still relevant now and considers how modern trade theories contribute to understanding trade patterns and benefitting from them in the world.

International Science and Technology Journal المجلة الدولية للعلوم والتقتية	العدد Volume 34 المجلد Part 1 ابريل April 2024	المجلة النؤنية للطرم والتقنية International Science and Techning Jeremat
وتم نشرها على الموقع بتاريخ:30/ 2024/4م		تم استلام الورقة بتاريخ:7/ 2024م

**Keywords:** International Trade Theories, Development, Classic Theory, Global Economy.

تطور نظريات التجارة الكلاسيكية الحديثة ومدى مساهمتها في فهم أنماط التجارة وعمليات التبادل التجاري في الاقتصاد العالمي.

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#### الملخص:

خلال القرن الماضي شهدت نظريات التجارة الدولية دورا متزايدا حول المعرفة، وذلك من خلال الاعتماد على النظريات الكلاسيكية بقيادة العالم الاقتصادي أدم سميث في عام 1776 بالإضافة للعالم الاقتصادي ديفيد ريكاردو وذلك في عام 1817. وهذه النظريات كانت تستند اساسا على العمالة كعنصر مهم من عناصر التكلفة. في حين جاءت بعدها مساهمات النظريات الكلاسيكية الجديدة وأخذت بعين الاعتبار عنصر اخر من عناصر الانتاج وهو رأس المال من خلال مفهوم تكلفة الفرصة البديلة.

في البداية أشارت هذه الورقة على مفهوم المذهب التجاري وتطوره ومراحل تاريخه من خلال كيفية تأثيره على عوامل التجارة الخارجية. ثم وضحت الورقة النظرية الحديثة للتجارة الخارجية لهيكشر أولين والتي كانت تعتمد على استخدام نموذج ذات عاملين رئيسيين هما العمالة ورأس المال فقط، خلال فترة الستينيات وبالتوازي مع ظهور الجدل حول مفارقة ليونيتف بدأت نظريات التجارة الخارجية الجديدة بالظهور في تغطية المعرفة حول المفاهيم بالعمالة الماهرة، والفجوة التكنولوجية ونظرية دورة المنتج وغيرها.

ناقشت هذه الدراسة واستندت على مراجعة الأدبيات المتعلقة بنظريات التجارة الكلاسيكية كمثال على ذلك الميزة النسبية للنظريات الجديدة المستخدمة في الوقت الحالي في العديد من البلدان المتقدمة لتوجيه السياسة الصناعية والتجارية. وفي نفس الوقت تستند الدراسة

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على ربط نظريات التجارة الكلاسيكية بالتجارة في الوقت الحاضر ومدى مساهمتها في فهم أنماط التجارة الخارجية والاستفادة منها بين الدول حول العالم. الكلمات المفتاحية: نظريات التجارة الدولية، تطور، النظرية الكلاسيكية، الاقتصاد العالمي.

#### 1. Introduction :

International trade theory offers explanations for the patterns assumed by trade between countries in the world (Morgan & Katsikeas, 1997). International trade theory is a predictor of various trade exchange benefits, technology diffusion, and the nature and capacity of human resource skills. Feenstra (2010), observes the levels of trading between countries have been growing drastically, considering trade is an antecedent of the economic growth and sustainability. Tinbergen (1962) notes the essence of international trade is to benefit the participating countries in terms of commodity prices and the advancement of technologies and improve the living standards of citizens. The classical approaches to modern trade are the primary theoretical foundations defined in the previous ages (Lucas, 1988).

The paper explores that the classical trade theories providing some examples of their relevance. Kowalski (2011), new trade theories are derivatives of classical theories, implying classical theories are the pivotal theoretical foundations of the new trade theories. According to (Mundell, 1957) suggests that for a firm to innovate with a successful trading strategy, it must first verse with the trade patterns. Also, it is the ability to learn from the experience of a past trade. The information concerning trade policies should be accurate and premised on evidence to inform an appropriate trade strategy. However, several factors play a crucial role in the success of the commercial exchange operation and they must consider in strategic plans (Appleyard et al, 2010).

The study will discuss that the classical trade theories that reporting by Adam Smith and David Ricardo are still related to international trade at present. In addition, it discusses the modern trade theories that have contributed to understanding trade patterns. The main of



the paper should be limited to the economic aspects of the new trade theories that indicate the significance of the classical theories.

## 2. Brief on Classical Theories of International Trade:

According to classical international trade theories, it could consider that countries conform to an open economy if it changes their policies to eliminate barriers to support trade with other countries (Romalis, 2004). The countries have sought to impose restrictions on international trade, reasoning that this aimed at protecting the economy against external competitors. Since the evolution of globalization that the approach has been subverted by the need to expand and reap from international markets advanced by the view global markets offer opportunities to support domestic economies (Morgan & Katsikeas, 1997). Adam Smith offered the most comprehensive theoretical premises of classical international trade theory, and he was the economist who that asserted international trade theory premised on the principle of absolute advantage. Furthermore, the credit of classical international trade theories also was attributed to Ricardo who approached trade theory based on comparative advantage concepts (Husted & Melvin, 2007).

## 2.1 Mercantilism:

Tinbergen (1962) the shifting trend in which countries have changed from a local economy to an international economy. The pattern has reflected particularly in developed countries between the 16th and 18th centuries. Lucas (1988) notes that Mercantilism has characterized as a scenario in which developed countries strove to export commodities and resources to less developed countries, minimizing importations as much as possible. Mercantilism was the most popular economic school in the countries of Europe, while it was not officially named until Adam Smith published his book (The Wealth of Nations) in 1776 (Thornton, 2007). Furthermore, he highlighted how the European powers aimed to restrict imports and encourage exports. As a result, the aim was to bring gold and silver into the country motivating domestic employment (Judges, 1939). As colonies grew, the world was interconnected and the advanced countries had the incentive to keep trade going between the colonies.

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Consequently, the trading system was more networked between countries. For example, the United Kingdom colonized Australia, India, Canada and significant parts of Africa. However, France colonized Africa, North America and parts of Asia (Lucas, 1988). Moreover, advanced countries such as France, the United Kingdom and Spain have a few raw materials. For example, the United Kingdom relied on its colonies to provide goods such as sugar, tobacco, tropical fruits and gold. The colony country would supply the raw materials that could be made into final goods and sold at a higher price (Romalis, 2004). Therefore, the trading system that colony countries followed in the previous. In addition, it would provide them with a favorable trade balance by controlling the supply of goods and boosting their gold stocks. Consequently, it prevented other colonies from procuring the same commodities. Whereas, the colonists controlled where the goods go and where they come from meaning control of the supply chain between countries. The United States Trade Representative (USTR) publishes reports on the global trade index in 2014 which considers and ranks countries by the qualification of protection and the national trade Estimates Report on Foreign Trade Barriers which dismantles all the foreign trade barriers the USA face by countries and advanced technology industries play a more significant role than commodity based lower value added industries.

Table (1) shows the index (USTR) that the China and India are the world most innovation-mercantilist nation, they only nations in the category have a high innovation mercantilism.

Country	Final Rank	Final Score
China	High	57.5
India	High	44.7
Argentina	Moderate-High	39.6
Brazil	Moderate-High	38.8
Russia	Moderate-High	31.2
Malaysia	Moderate-Low	29.7

 Table (1): Global Mercantilist Index in 2014 from USA Trade

 Representative (USTR)

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Thailand	Moderate-Low	29.5
Turkey	Moderate-Low	29.4
Indonesia	Moderate-Low	28.6
Philippines	Moderate-Low	26.9

Source: Wein, M. (2014). Time for a Global mercantilist Index. *The International Economy*, 28(4), 58.

Whereas, countries including: Brazil, Argentina and Russia also systemically engage in innovation mercantilist practices, placing in the category of Moderate-high. The lowest levels of innovation mercantilism are Malaysia, Turkey, Thailand, Indonesia and Philippines.

Table (2) describes that the information technology and innovation foundation (ITIF) developed and updating ITIF's 2014, which is report and ranks 60 countries on documenting the extent of their innovation mercantilist practices. The ITIF divided nations into four quartiles by global mercantilist index in 2019 High and Moderate High, Moderate Low and Low. The index shows that China still has a high innovation mercantilism but India retreated to the moderate high on innovation mercantilism since 2014.

High	Moderate	Moderate	Low	Low (cont.)
	High	Low		
60. China	59. India	49. Malaysia	39. Japan	19. Chile
	58. Brazil	48. Philippines	38. South Korea	18. Slovenia
	57. Indonesia	47. UAE	37. France	17. Italy
	56. Argentin	46. Kenya	36. Hungary	16. Cyprus
	55. Thailand	45. Mexico	35. Taiwan	15. Austria
	54. Vietnam	44. South Africa	34. Switzerland	14. Spain
	53. Russia	43. Poland	33. Malta	13. Lithuania
	52. KSA	42. Colombia	32. Costa Rica	12. Slovak R
	51. Nigeria	41. Canada	31. Greece	11. Australia
	50. Turkey	40. Peru	30. Hong Kong	10. Ireland
			29. Norway	9. Czech Republic
			28. Luxemburg	8. UK
			27. Bulgaria	7. Finland

 Table (2): Global Mercantilist Index rankings (ordered from worst to best in category in 2019

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	26. Latvia	6. Germany
	25. Iceland	5. Singapore
	23. Romania	4. Sweden
	22. Estonia	3. Portugal
	21. Denmark	2. Netherlands
	20. Belgium	1. New Zealand

Source: Foote, C., & Ezell, S. (2019). The 2019 Global Mercantilist Index: Ranking Nations' Distortive Trade Policies. *Information Technology and Innovation Foundation, November, 18.* 

## 2.2 Absolute Advantage as a Basis for Trade:

Adam Smith's Model advanced the concept of absolute advantage in 1776. The theoretical principle asserts that economic growth is defined by certain advantages that a country enjoys at the expense of other countries that place them in a position to develop at a rate that is faster than others. The model describes the significance of the relationship between two trading countries regarding resource endowments and production costs. For instance, a country that has economic resources available for production is a better advantage in manufacturing products and selling them at relatively low prices compared to other countries involved in manufacturing the same products. However, the approach encourages that need countries, firms to assess and find areas in which they could command a high competitive advantage and specialize in producing commodities that support the competitive advantage.

The theory negatives the premises of mercantilism, which asserted resources were limited and countries could only realize growth by exploiting others. A theory Adam Smith of competitive advantage asserts that the economic growth recognizes by the formation of trading alliances and specialization of production as supported by competitive advantage, which would enable every participating member to benefit by competitive from the trade exchange (Husted & Melvin, 2007). As a result, the theory illustrates by using an example that shows the trade exchange between two countries, the USA and the United Kingdom to compare the two goods as the table shows below.

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Table (3) indicates a case that workers in the USA can produce (5) bottles of soft drinks for every (20) yard of clothes, while workers in the UK produce (15) bottles of soft drinks for (10) yards of clothes within an hour. In the case, the UK enjoys to has a high competitive advantage in specializing in the production of soft drinks. As can be inferred from the case scenario, the USA produces soft drinks at a relatively low cost compared to the UK (Carbaugh, 2006).

 Table (3): A case of Absolute Advantage when each country is more efficient in the production of one commodity.

Output per labor hour			
Nation	Soft Drink	Cloths	
USA	5 bottles	20 yards	
UK	15 bottles	10 yards	

Source: Carbaugh, R. (2006). International economics, pp30.

For that reason, the USA may only opt to specialize in selling clothes to the UK to perfect the distribution of resources for production while gaining. If such a case happens, it would be said to be consistent with Adam Smith's view, which asserts that two trade partners must be able to gain from the trade. After all, the resources are infinite and wealth creation depends on trade partnerships with countries to trade and offset deficits. Furthermore, considering resources can be utilized efficiently when there is specialization, trade partnerships between two countries can play a crucial role in increasing world output and assuring sustainability (Carbaugh, 2006).

## 2.3 Comparative Advantage as a Basis for Trade :

Ricardo's model of absolute advantage asserts that comparative advantage is not all that determines the trade pattern between two countries. Conditions that determine the trade pattern go beyond comparative advantage to include absolute advantage. The absolute advantage principle asserts that countries may import certain goods, even when they are endowed with a competitive advantage in producing the goods. Fletcher (2011), Ricardo explains that there are

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always absolute advantage factors such as opportunity costs, which would compel a country endowed with resources to give up production and opt to import the goods. Consequently, absolute advantage guides that countries should engage in producing goods in which they find the associated processes to be more efficient, productive, effective and sustainable relative to the systems of other countries within the economy (Kowalski, 2011).

Krugman and Obstfeld (2006), the model encourages countries to focus on producing goods that can be easily exchanged with optimum gains. The competitive advantage creates a country to enjoy an edging advantage over the trading and competing partners, which implies that have various advantages to benefit from the market. Lancaster (1980) notes that competitive advantage can be an attribute of the availability of skilled labor and availability of land, supportive politics, climate and other economic factors.

Over time, as the market evolves, they become conscious that will import products that they find inefficient to produce from countries that enjoy the competitive advantage. The comparative advantage is crucial in helping predict the trading patterns between countries, considering commodities move to offset imperfections and deficits in the distribution of resources such as technologies and natural resources (Acharya, 2008).

The sources of the competitive advantage derived from the added values and high tech nature of the produced goods following specialization that characterizes developed countries but is different in developing countries because they are derived from the intensive nature of labor. Nevertheless, it is worth noting that comparative advantage has often failed to a certain extent in explaining the intra industry trade, which repeatedly takes place between developed countries with more or less the same endowments of resources and industrial capacities. In addition, the theory is limited in the sense that it considers labor attributes as the determinant of the costs and exchanges while overlooking the significance of the variations in productivity (Suranovic, 2010). It was not until recently that John Stuart Mill highlighted the role of reciprocal demand and supply as



the determinant factors of cost of production and value of demand for goods.

Table (4) shows that the competitive advantage characterizes each country in producing the goods and services available for them which it seeks trade exchange operations between other countries.

 Table (4): Examples of Comparative Advantages of International

 Trade

Country	Product
Canada	Lumber
Mexico	Tomatoes
Saudi Arabia	Oil
China	Textiles
Japan	Automobiles
South Korea	Steel, ships
Switzerland	Watches
United Kingdom	Financial services

Source: Carbaugh, R. (2006). International economics, pp 30.

## 3. Neo-Classical Theories (Modern Trade Theories):

During the Second World War, the world economy collapsed and it was triggered a significant change in international trade patterns. Under the changing conditions, classical theories became limited in accounting for evolving trade patterns. For instance, this scenario was characterized by the emergence and growth of intra industrial trade, which challenged classical trade theories. For the reason ,the new trade theories changed a little, cutting down their emphasis on comparative advantage and factor endowments while reconsidering the role played in economies of scale, differential of products, and the impact of competition within global trade (Krugman, 1986).

# 3.1 Modern Trade Theory (Heckscher-Ohlin Theory):

The Heckscher-Ohlin model spans four types of theories including the Heckscher-Ohlin theorem, the Rybczynski theorem, factor price equalization and the Stolper-Samuelson theorem. However, the paper should only focus on the Heckscher-Ohlin theorem because; contributions are the most significant in the new trade theories.



Furthermore, according to Smith (2010), the theory arguably offers the most comprehensive account of the trends in contemporary trade theories. The most notable contribution of this model is an acknowledgment of capital endowment variables as a factor that affects growth. Although, it comes second after the production factor based on the Heckscher-Ohlin countries should produce and export products in line with the two factors at different insensitive. There is a correlation between commodity abundance and factor intensity of the production of the exports (Suranovic, 2010).

Table (5) shows the exports between the USA and India in 2015. The pattern exhibited by the trade between India and the USA conforms to the Heckscher-Ohlin model. The USA imports from India were about 38,450.7 million dollars, while the exports to India were 18,403.9 million dollars. However, note that this trade data provides only a rough overview of the USA and Indian trade patterns and does not prove the validity of the Heckscher - Ohlin process.

Month	Exports	Imports
Jan-15	1,554.00	3,633.00
Feb-15	1,663.50	3,311.90
Mar-15	1,790.40	4,093.80
Apr-15	1,921.10	4,116.70
May-15	1,822.10	4,070.90
Jun-15	2,329.00	3,769.40
Jul-15	1,850.60	4,092.20
Aug-15	1,887.60	3,805.50
Sep-15	1,732.20	3,668.60
Oct-15	1,962.70	3,885.30
Total	18,403.90	38,450.70

Table (5) : USA Trade in Goods with India (in Millions of Dollars in2015)

Source: United States Census Bureau, 2015.

Table (5) shows the exports between the USA and India in 2015. The pattern exhibited by the trade between India and the USA conforms

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to the Heckscher-Ohlin model. The USA imports from India were about 38,450.7 million dollars, while the exports to India were 18,403.9 million dollars. However, note that this trade data provides only a rough overview of the USA and Indian trade patterns and does not prove the validity of the Heckscher - Ohlin process.

## **3.2 Leontief Paradox:**

Leontief (1953) conducted an empirical test on the Heckscher-Ohlin model based on input-output analyses, seeking to validate the model based on American trade statistics as of 1947. Interestingly, the results indicated that the United States, even though it was the richest country after the Second World War. It was exporting laborintensive goods and importing capital-intensive goods. During the time, USA labor was to be engaged in more capital per capita compared to other countries across the globe. The theory predicted that the USA economy was characterized by a CA associated with producing capital-intensive commodities. Therefore, it is expected to export these capital-intensive commodities. However, Leontief (1953), upon conducting a study of USA trade and comparing it with other countries across the globe, concluded that USA exports were mainly labor intensive, while exports were capital intensive. Including that the USA exported labor-intensive commodities and imported capital-intensive commodities. Other factors for new approaches to international theories include attribution to potential biases in the capital and the existence of tariffs. The basic premise of the comparative abundance of the capital of the USA has also attracted questions (Calhoun, 2002).

Table (6) indicates the requirement of labor and capital per million dollars in the USA exports and imports. The Leontief findings established that the ratio of capital and the labors of USA exports were lower than the imports of the competing industries (\$14,015) per worker compared to about (\$18,184) per worker, respectively. The Leontief proceeded to conclude exports were less capital-intensive, that why referred to as the Leontief Paradox.

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Table (6): Factor Content of United States Trade: Capital and Labor Requirements per Million Dollar of U.S. Exports and Imports Substitutes

Empirical Study	Import Substitutes	Exports	Import/ Export Ratio Leontief
Capital	\$ 3,091,339	\$2,550,780	
Labor (person years)	70	182	
Capital (person years)	\$ 18,184	\$ 14,015	1.30

Source: Leontief, W. (1953). 'Domestic production and foreign trade: the American capital position re-examined' 'economic International, February 1954, pp3 – 32.

## **3.3 Product Life Cycle**

"Product life theory defines the process by which a product is invented and then over time becomes more standardized as consumer and producer gain familiarity with its features" (Husted & Melvin, pp 134). According to Posner (1961), international trade and technical change, every country is endowed with different technical skills, which play a crucial role in influencing production and international trade. The approach asserts that only a country with technical advantages over others is likely to produce and export goods to other countries. However, its edging comparative advantage is dynamic and likely to change over time. It is when another country establishes another production unit subverting the market order. Substantially, Vernon (1966) extended the argument by Posner developing a product life cycle model to explain the dynamic trade patterns.

While, the model comprises three stages of the development of a product. The product life cycle model asserts that innovations are likely to occur in particular market segments, with them having an initial competitive advantage over others. Other market segments follow suit in adopting the innovation and subvert the initial competitive advantage enjoyed by early adopters. Frequently, the first stage is referred to as the new product, while early adopters implement the innovation and start exporting the product. During this stage, the exporting country takes advantage and monopolizes the market, exploring the market. In addition, the new product stage succeeds the mature market stage.



In the second stage, competitors adopt the innovation and enter the game. They differentiate products raising the competition.

In the advanced stage, the production location often shifts to developing countries to keep abreast of the price and competition wars, whatever is mentioned as the "production relocation". Indeed, the theory justifies the practice in which many industries in the West are shifting their locations to the East.

## **3.4. Porter Diamond Theory:**

Initially, the competitive advantage of nations has been an area of particular interest for historical research. Michael Porter has documented particularly relevant in addressing the question of "why some countries succeed as others fail, as far as international competition "(Allio, 1993). In addition, of, he asserts that national competitiveness is essentially an attribute of productivity. In addition, it could not be associated with factors such as low cost of labor, cheap currencies, and trade surplus. Moreover, the theory asserts that competitive advantage continues to play a crucial role and is more important than the comparative advantage stated by classical economists. Besides the global competitiveness report (1990), the Porter Diamond Model has been endorsed as a framework for assessing competitiveness and has attracted interest from various scholars (Sagheer et al., 2007). The model deviates from other approaches in the sense that it emphasizes a few aspects, which it broadens by listing various elements that have a potential impact on the competitiveness of a country and firms. In addition, the theory proposes four factors a firm structure, conditions, rival demands and support, and related industries. Porter considers two factors could include opportunity and government could be significant in determining trading and rivalry.

Furthermore, the study by Momaya (2001), based on an exhaustive review of the Indian industries, observes that any approach that should aim at the evaluation of competitiveness should begin by seeking to understand the market context and integrate elements such as scope, structure, and supply chain attributes. In Porter's model, industrial competitiveness is subject to four economic attributes listed:



- Demand conditions.
- Firm-level strategies.
- Availability of supporting or related industries.

According to (Sagheer et al., 2007), the government considered an optional dimension into Porter investigated in the Diamond Model. The account by Porter follows from the fact that developed country industries are dominated strongly by market power. Furthermore, the government's role is much less as compared to the developing country. In a developing country scenario, the government plays a key role in strategic interventions in market adjustment, and it is taking a policy decision affecting the industry environment.

In terms of shrimp production, for instance, India often exports food to the USA and ranks fifth among countries that food export to the United States. India prides itself on being the second-largest producer of aquatic food and ranks first as the country that exports the largest volume of cephalopods to Europe. Shrimp production contributes 76% by volume and 83% by value of shrimp exports (Rajitha et al., 2007). However, Thailand has also expanded rapidly as aquaculture - especially shrimp culture has created many other industries related to aquacultures, such as fertilizers, construction and consultation services, feedstuffs, chemicals and accessories. Due to the rapid expansion of shrimp production, the production of cultured shrimp, which was only a little over 10,000 metric tones in 1982, increased to 2,60,000 metric tones in 2003 (ibid).

## 4. Conclusion

International trade theory has evolved, shifting from traditional classical trade to modern international trade theories. While the theory has gone beyond the premises associated with comparative advantage to various underlying elements such as: technologies, the nature of commodities, labor variations and forms of factor endowments. Robert (2010) observes the trading levels between countries have been growing drastically, considering trade is an antecedent of economic growth and sustainability. The essence of international trade is to benefit the participating countries in terms of commodity prices, the advancement of technologies, and improving the living standards of the citizens.

International Science and Technology Journal المجلة الدولية للعلوم والتقنية	العدد Volume 34 المجلد Part 1 ابريل April 2024	المجلة النزلية للطرم والتقلية International Science and Techning Journal
وتم نشرها على الموقع بتاريخ:30/ 2024/4		تم استلام الورقة بتاريخ:7/ 2024م

Furthermore, classical approaches to trade have essentially focused on the conditions of trade, overlooking other underpinning pivotal factors according to (Tinbergen, 1962). The new trade theories are reformed and now perceive the world trade system in its entirety. On the other hands, the approach is equality in competition and opportunity the economies are open and inclusive to all countries. As a result, factors that are particularly influential to the economies include demand conditions, firm-level strategies, and availability of supporting or related industries (Lucas, 1988).These are related to political, economic, social, technological, and cultural factors. The new trade theories revolve around these factors and essentially approach international trade in terms of competitive structure, the scale of production, and technology (Feenstra, 2010).

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