

Article

An Analysis of the Evolution of International Competitiveness Theories

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Abstract: This article provides a step-by-step analysis of theoretical models developed by economists related to international competitiveness and its determinants. The importance of international competitiveness theories in modern economic conditions is scientifically substantiated. Within the scope of the research, the classical theories of international competitiveness, the Heckscher–Ohlin Model, Donald B. Keesing and Peter B. Kenen’s Skilled Labor Theory, Michael V. Posner’s Technological Gap Theory, Raymond Vernon’s Product Life Cycle Theory, Staffan B. Linder’s Theory of Overlapping Demand, Michael Porter’s Diamond Model, John H. Dunning’s approach, Alan M. Rugman and Daniel Cruz’s Double Diamond Model, as well as Dong-Sung Cho’s Nine-Factor Model are comparatively examined. In addition, the study substantiates the practical significance of applying these theories and models in enhancing the competitiveness of the national economy.

Keywords: International Competitiveness, Absolute Advantage Theory, Comparative Advantage Theory, Heckscher–Ohlin Model, Leontief Paradox, Skilled Labor Theory, Technological Gap Theory, Product Life Cycle Theory, Theory of Overlapping Demand, Diamond Model, Double Diamond Model, Nine-Factor Model, Knowledge-Based Approach.

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1. Introduction

The deepening of the international division of labor, the liberalization of global trade relations and the rapid pace of technological development are increasing the strategic importance of the issue of competitiveness at the level of countries and companies. In the conditions of globalization processes and structural transformation in the world economy, the concept of competitiveness is regularly one of the topical topics for scientific research. Therefore, various models and methodological approaches have been developed to understand the essence of competitiveness from a scientific and theoretical point of view and to evaluate it from a practical point of view, which create an opportunity for in-depth analysis of competitiveness [1].

The formation of competitiveness is important in ensuring the stable position of companies and countries in the international arena. Competitiveness is a broader concept compared to the theories of absolute and comparative advantage, and is formed under the influence of social, political and economic factors in addition to production costs.

In the 18th and 19th centuries, the issue of competitiveness was considered within the framework of the theories of absolute and comparative advantage, with the main focus on production costs and the efficiency of natural resource use. However, since the second half of the 20th century, technological development, openness to international trade, and

economic globalization have necessitated the interpretation of the factors determining competitiveness as a complex and multifaceted process. As a result, research and innovation activities, the quality of human capital, infrastructure development, and institutional reforms have become priority areas in the analysis of competitiveness. From this point of view, the analysis of the gradual development of competitiveness theories is of great theoretical and practical importance in ensuring the effectiveness of national economic policy [2].

Review of Relevant Literature.

From the perspective of classical approaches, competitiveness is explained using Adam Smith's theory of absolute advantage and David Ricardo's theory of comparative advantage. In classical approaches, the amount of labor spent on a good is taken into account when determining the cost of producing it. The theory of absolute advantage was put forward by A. Smith in his work "The Wealth and Nature of Nations" written in 1776. According to it, countries should specialize in goods that they can produce at lower cost and export them, and goods with higher production costs should be imported. As a result, both countries benefit from foreign trade. The theory of absolute advantage is based on specialization and division of labor. However, the theory does not consider the possibility that one country has an absolute advantage in both goods [3]. One of the models proposed to fill the gaps in the theory of absolute advantage is D. Ricardo's theory of comparative advantage. The theory focuses not on the difference in production costs between countries, but on the degree of the difference. According to it, a country should specialize in goods that it produces at a relatively lower cost than other countries and export these goods, while importing goods that require relatively higher costs. This will increase both the country's welfare and world welfare. The model developed by Ricardo fills the gaps in Smith's theory. Despite certain differences in Smith's and Ricardo's approaches to competitiveness, a common point for both theories is the connection of competitiveness with production efficiency [4].

Unlike classical approaches, the Heckscher–Ohlin theory assumes that a country's level of factor endowment is the main source of comparative advantage. According to the model, each country should specialize in the production and export of goods that require relatively more of the factors of production that it has, and vice versa, import goods that require relatively less of the factors of production. As a result of such foreign trade, the prices of factors of production between countries tend to become relatively equal over time. However, the Heckscher–Ohlin model has certain shortcomings in explaining the processes of competitiveness and international trade. The model assumes that factors of production are qualitatively the same, and a well-educated and experienced workforce is treated equally with an unskilled workforce. This leads to a failure to take into account the impact of human capital factors on competitiveness. Also, the model does not take into account significant differences in the level of technological development between countries. It should be noted that the Heckscher–Ohlin model, despite its shortcomings, has been accepted as one of the most analytically consistent and sound models [5]. The economist Wassily Leontief was the first to test the Heckscher–Ohlin model. Leontief's analysis found that the United States exports labor-intensive goods and imports capital-intensive goods. However, the United States is a capital-rich country and is expected to export capital-intensive goods. Based on the above results, a new concept, called the "Leontief paradox", appears in the scientific literature. Leontief attributes the US's exports of labor-intensive goods to the fact that American workers are more productive [6].

After the "Leontief Paradox", Donald B. Keesing and Peter B. Kenen were the first to propose the "Theory of Skilled Labor and Factor Proportions", based on the qualification level of labor in international trade, arguing that the labor factor cannot be considered absolutely homogeneous (of the same composition). According to them, countries with a high level of skilled labor should specialize in the production of goods

requiring this factor, and, conversely, countries with a predominance of unskilled labor should focus on the production of labor-intensive goods. In such conditions, the efficient use of resources is ensured, which, as a result, creates the basis for the growth of overall economic well-being. The important feature of the theory is that it scientifically demonstrated the role of a knowledgeable and skilled labor force, which is one of the main factors determining national competitiveness. At the same time, it is important to emphasize that a skilled labor force is not the only factor determining a country's competitiveness [7].

Among the areas where skilled labor is intensively used, first of all, scientific research and experimental and design activities can be noted. In this regard, the "Technological Gap Theory" developed by Michael V. Posner is of particular importance. The theory considers differences in the level of innovation and technology as the main driving force of international trade. According to the theory, the introduction of technological innovations and the ability to ensure the uniqueness and differentiation of products in production create the basis for the formation of comparative advantage. Scientific research and experimental and design activities create a sustainable comparative advantage for firms in international markets by creating new types of products and improving production technologies. In this sense, this technological advantage, which arises at the microeconomic level, has a significant positive impact on the overall competitiveness of the country [8].

One of the most notable international trade theories is the Product Life Cycle Theory, proposed by Raymond Vernon. The theory aims to explain the characteristics of the use of technology and labor in the production process of new products, and is based on the idea that the comparative advantage of a product changes over time and can shift from one country to another. According to the theory, at the initial stage, new products are produced in developed countries with high innovation potential and a skilled labor force. This is because the emergence of new products requires activities such as creativity, design, scientific research and development. Therefore, only firms that can carry out the above activities and pay attention to creativity can introduce new products to the market. However, over time, technology spreads to other countries, and many firms that imitate this product appear on the market. As a result, countries with low production costs gain competitive advantages and attract the production process to themselves. Gradually, comparative advantage and national competitiveness move from the country that created the innovation to other countries. This, in turn, shows that competitive advantage is not a permanent thing, but a dynamic process that changes depending on the diffusion of technology and market dynamics. R. Vernon's theory of the "Product Life Cycle" was later developed in the works of economists such as P. Krugman, G. Grossman, E. Helpman and D. Lai. In the studies conducted by these scientists, the potential for creating technological innovations, the amount of skilled labor, the size of the domestic market, the activities of transnational corporations and the level of state support for research and development are indicated as the main factors determining the competitiveness of a country. Based on the above, it is emphasized that competitive advantage is not static, but dynamic [9].

2. Materials and Methods

This study uses qualitative research methods to study the evolutionary development of international competitiveness theories. The main methodological approach of the study is the method of systematic analysis, which allows combining theoretical approaches and practical skills. The study, through an in-depth analysis of the scientific literature and existing theories, examines the various historical stages of the concept of international competitiveness and their role in economic policy. The study also examines the main factors affecting competitiveness - economic, political and institutional factors - through

an analytical approach. As a theoretical basis, advanced research in the fields of international economics and strategy is analyzed, and this methodology helps to better understand the process of developing competitiveness [10].

3. Results and Discussion

One of the theories that is recognized as a new scientific theoretical approach to the concept of international trade is the “Theory of Overlapping Demand” put forward by the Swedish economist Staffan Burenstam Linder. According to this theory, countries with similar income levels are more inclined to trade with each other, since the similarity in the choice preferences of consumers and the composition of demand determines the directions of foreign trade. Linder focused on demand factors, not supply factors, and put forward a demand-based model of international trade. In the model, the demand factor based on consumer choices is shown as the main source of comparative advantage. Scholars such as Bela Balassa, Herbert Grubel, and Irving B. Kravis have evaluated the “Overlapping Demand” theory from various perspectives in their studies. Also, concepts such as the theory of economies of scale developed by Krugman, intra-industry trade, and product differentiation were also inspired by Linder’s demand-based approach. It can be said that the “Theory of Matching Demands” created a theoretical basis for the explanation of international trade through demand factors and served as a methodological basis for subsequent modern models [11]. Among the scholars who created the scientific foundations of the intra-industry trade theories that began to take shape in the second half of the 20th century, Paul R. Krugman occupies a special place. He applied imperfect competition and economies of scale to international trade and theoretically justified the emergence of trade relations even between countries with similar factors of production. Thus, in contrast to the traditional approach based on comparative advantage, new trade theories were formed that explained product differentiation and global competition.

The work “The Competitive Advantage of Nations”, created by Michael Porter, one of the founders of modern competitiveness theory, as a result of his long-term empirical and institutional research, marked a new direction in international trade and competition theories. Porter promotes the concept of competitive advantage instead of the concept of comparative advantage in classical economic theories. The Figure 1 “Diamond Model” developed by Porter occupies a special place in the economic literature as an important theoretical approach aimed at explaining the competitiveness of countries and industries [12].

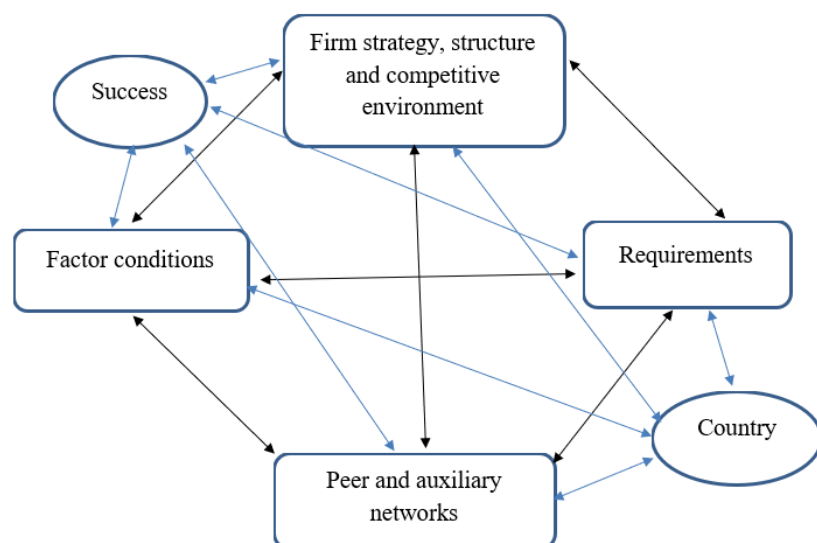


Figure 1. Porter’s Diamond Model.

According to the model, the main source of national competitiveness is formed through the interaction of the following four main factors:

The level of provision with production factors includes the country's infrastructure, material, information, and capital resources, and human resources. Competitiveness is based not only on natural resources or labor resources, but also on factors such as a knowledgeable and specialized workforce, research and innovation infrastructure, which are created through special efforts and are constantly updated. Competitive advantage is ensured through the constant updating of existing factors and the development of specialized factors [13].

The strategy, structure, and competition of the firm are among the decisive factors determining the competitiveness of the national economy. According to Porter, there is no single management system for all industries; therefore, firms should form their strategies and structures in accordance with the economic, social, and institutional characteristics of the country. The presence and strength of competition in the domestic market stimulate innovation and serve to increase efficiency and competitive advantage.

The characteristics and dynamics of demand in the national market are considered another important factor ensuring the competitiveness of firms. As Porter emphasized, for competitive advantage, demand must be high not only in quantity but also in quality. The presence of qualified and demanding consumers in the domestic market encourages firms to innovate, improve product quality, and technology. Thus, developed domestic demand serves to achieve superiority in foreign markets.

Another important factor ensuring the competitiveness of the national economy is the presence of related and auxiliary industries. These industries, through vertical and horizontal integration, ensure effective cooperation and innovative exchange, create a synergistic effect, and strengthen competitive advantage. Therefore, in assessing the competitiveness of a particular industry, the activity of related and auxiliary industries and their level of provision of innovations and technologies are of great importance.

Porter also highlights two indirect factors that affect national competitiveness: the state and luck (chance). The luck factor is outside the control of firms and countries; that is, it has a chance nature, and can affect the competitive environment through sharp changes in demand and supply ("shocks"), international political decisions, technological disruptions, and new inventions. The main task of the state, which is considered the second indirect factor in the "diamond model", is to create the institutional and organizational environment necessary for effective competition. The main direction of state policy is to form conditions that stimulate competition, train specialized human capital through the education system, and strengthen cooperation between industry and higher education institutions [14]. Another noteworthy modern theory of international competitiveness is the approach of John H. Dunn, according to which transnational corporations (TNCs) play a strategic role in the process of global competition. He emphasized that TNCs entering host countries contribute to economic development not only by importing capital, but also by disseminating technological innovations, increasing labor productivity, and improving production efficiency. In particular, the introduction of innovations and know-how increases the competitiveness of local enterprises, creating a multiplier effect in the economy. At the same time, the creation of new jobs serves to raise the standard of living of the population, improve social welfare, and stimulate domestic market demand. However, it should be noted that in the conditions of global competition, the activities of transnational corporations alone are not enough. The level of national competitiveness is closely related to the system of public administration, legal and institutional quality, as well as the implemented economic policy. Creating an effective investment environment is a key condition for the competitiveness of host countries, since heavy tax burdens or legal uncertainties limit the activity of investors. Therefore, in international practice,

simplifying the investment environment, strengthening legal guarantees, and ensuring institutional stability are recognized as priorities for increasing competitiveness [15].

The critical views expressed regarding Porter's Diamond Model paved the way for the further development of competitiveness theories. One such model is the "Double Diamond Model" developed by Alan M. Rugman and Daniel Cruz. In this model, transnational companies are included in the model as an important element shaping national competitiveness. According to the authors, if a certain corner of the country's diamond is weak, it can be compensated for through cooperation with other countries. For example, Canada, which was weak in terms of demand, took advantage of external market opportunities by concluding a trade agreement with the United States, and the lack of domestic demand was compensated for by international economic cooperation. Although the Double Diamond Model served as an effective theoretical basis for explaining the situation of Canada and similar countries that are highly dependent on external markets, it did not achieve the same success in explaining small countries. It is well known that the performance of firms in small, highly integrated countries such as Korea and Singapore is influenced not only by local but also by global resources and market factors. The Double Diamond model failed to fully reflect the conditions of countries with such characteristics, and subsequently gave rise to the development of new models [16].

Among the theories of national competitiveness, the "Nine Factor Model" developed by Dong-Sung Cho is of particular importance. Cho, inspired by M. Porter's "Diamond Model", emphasizes that it is effective mainly in the conditions of developed countries. In his opinion, the four main factors identified by Porter may not be fully formed in underdeveloped and developing countries. Therefore, Cho proposes the "Nine Factor Model" in order to comprehensively explain national competitiveness. The main purpose of the model is to identify the factors that ensure competitiveness in developing countries and determine ways to develop them. In the model, competitive advantage is explained by three groups of factors: The first is material factors, which consist of the business environment, related and supporting industries, domestic demand, and natural resources, and form the organizational and infrastructural foundations of the national economy. The second is human factors, which include a skilled workforce, innovative entrepreneurs, strategic managers, and effective politicians. They are considered the main driving force of national competitiveness. The third is external factors, which include processes beyond the control of the state and firms, such as global economic changes and technological disruptions, and directly affect the competitiveness of the country. Cho emphasizes that all of the above factors act in an interconnected and complex manner. The scientific significance of the model is that it provides a complementary and practically applicable version of the Porter Diamond Model for developing countries. In the scientific literature, this approach is often referred to as a "modification of the diamond model for developing countries". The model has a number of similarities and differences with Porter's Diamond Model. In both models, "luck" is considered an external factor. At the same time, there are important differences in the grouping of factors and their composition in Cho's model. While natural resources and labor are considered as a general component of the Porter Diamond model, they are considered as separate categories in the nine-factor model. In particular, natural resources are identified as "endowed resources", while labor is assessed as a "human factor". In addition, Cho's model includes new factors such as politicians and bureaucrats, which are one of the main differences between it and the Diamond model. These factors are considered to be important institutional factors that affect national competitiveness, especially in developing countries [17].

Another noteworthy theory of competitiveness is the knowledge-based approach proposed by Robert B. Reich. According to it, knowledge is defined as the most important factor of production for economic development and national competitiveness. According to Reich's theory, knowledge is embodied in the labor force and materialized as a result of its innovative activity, ensuring the country's competitive advantage. Thus, knowledge

appears as a source of long-term and sustainable advantage over traditional factors of the national economy. Reich emphasizes that in the conditions of globalization, the competitiveness of firms is determined not by the achievements of the country in which they are located, but by their knowledge-based and innovative potential. From this point of view, he believes that the main task of the state is to develop human capital and knowledge potential.

Another economist, Rosabeth M. Kanter, supports the knowledge-based approach, emphasizing the need for regions and countries to create an infrastructure and institutional environment that attracts qualified personnel and a knowledgeable workforce to attract global firms and accelerate international integration processes.

According to Kanter, the ability of regions to achieve competitiveness in the global market depends on strategic advantages such as developing and strengthening basic capabilities, supporting cooperation between firms, ensuring labor productivity by improving the quality of the workforce, implementing effective policies that attract investment, and developing a corporate governance system. In general, the knowledge-based approach represents a qualitatively new stage in the theories of national competitiveness. It considers knowledge and innovation as the main sources of economic development, and emphasizes that states and regions can take a worthy place in the world economy by investing in human capital [18].

4. Conclusion and Suggestions

In conclusion, it can be said that in the theories of international competitiveness put forward until the first half of the 20th century, differences in production costs and natural resources were the main sources of determining national competitiveness.

Starting from the second half of the 20th century, the intensification of globalization processes, the popularization of information and communication technologies, and the expansion of the economic activities of transnational companies emerged as new factors affecting international competitiveness. In this process, inter-sectoral trade, investment flows, and global value chains have fundamentally changed the competitive relations between countries. As a result of technological progress, open foreign trade policies, and economic liberalization, factors such as research and innovation activities, a skilled workforce, and economies of scale have become increasingly important in shaping competitiveness.

By the 21st century, the issue of international competitiveness is becoming more multifaceted. In particular, innovations, digital economy, green technologies, and sustainable development principles are becoming priority areas that determine national competitive advantages. At the same time, effective participation in global value chains, development of human capital potential, and deepening institutional reforms are also shaping modern forms of competitiveness. From this point of view, the gradual development of international competitiveness theories is not only of historical significance but also determines practical directions for modern national economies. In particular, in the case of Uzbekistan, such tasks as the effective use of available resources, the development of innovation potential, increasing the level of integration into external markets, and ensuring sustainable economic growth are the main conditions for strengthening international competitiveness.

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