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THE FORMATION AND DEVELOPMENT OF THE CLUSTER CONCEPT IN THE CONTEXT OF COMPETITIVENESS THEORIES: A COMPARATIVE ANALYSIS OF SCIENTIFIC SCHOOLS

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Abstract: In the contemporary global economy, the formation of competitive clusters has become a key driver of sustainable regional development. Clusters—geographically concentrated networks of interrelated firms, research institutions, and infrastructure organizations—are considered the foundation of innovation and competitiveness. This article analyzes the main theoretical schools that contributed to the development of the cluster concept: the American, British, and Scandinavian schools. Each school's distinctive features, theoretical perspectives, and practical implications for regional economic growth are explored. The paper concludes with a discussion on the application of these theories in the context of Uzbekistan's economic development.

Keywords: cluster, competitiveness, Porter's diamond model, innovation system, value chain, scientific schools, regional economy, integration, knowledge economy.

In the modern era, the economic development of nations is closely linked to the establishment of competitive clusters and their efficient management. As globalization intensifies, the key determinants of regional economic growth—efficiency, innovation, and integration—have become increasingly important. The cluster approach, which integrates production, services, science, and education within a specific region, serves as a modern model of economic organization and competitiveness.

The formation of cluster theory has been significantly influenced by various scientific schools, each contributing distinct conceptual frameworks. Among them, the American (Porter's school), British (value chain approach), and Scandinavian (innovation system approach) are particularly notable. This article examines these schools' main ideas, their theoretical foundations, and their relevance for modern economic development.

I. The American school: Competitive advantage and Porter's diamond model

The American school of cluster theory is most prominently represented by Michael Porter, whose seminal work "The Competitive Advantage of Nations" (1990) laid the foundation for the modern understanding of clusters. According to Porter, the competitiveness of a country or region is determined by four key components, known as the Porter's Diamond Model:

1. Factor conditions – quality and specialization of natural, human, financial, and infrastructural resources;
2. Demand conditions – the sophistication and intensity of local market demand;
3. Related and supporting industries – presence of competitive suppliers and complementary industries;
4. Firm strategy, structure, and rivalry – internal competition, corporate culture, and management practices.

Porter argues that clusters represent geographically proximate groups of interconnected firms and institutions that simultaneously compete and cooperate. This duality enhances innovation, resource efficiency, and job creation. The American approach emphasizes practical economic policy, integrating cluster development into national and regional competitiveness strategies—exemplified by successful models in the United States, Canada, and South Korea.

II. The British school: The global value chain approach

The British school, represented by scholars such as J. Dunning, R. Kaplinsky, K. Freeman, J. Humphrey, and H. Schmitz, focuses on the organization of production on a global scale. Their studies analyze the activities of transnational corporations (TNCs) and the dynamics of global value chains (GVCs)—a concept that encompasses all stages of production, from raw materials to marketing and final sales.

According to this school, competitiveness is no longer determined solely by national or regional factors but by a country's position within global economic networks. British scholars emphasize that clusters grow when local producers integrate effectively into international value chains.

Key propositions of the British school include:

- Clusters evolve by linking local production to global value chains;
- Developing countries should focus on innovation-driven, export-oriented cluster growth;
- TNCs play a critical role in transferring knowledge and technology to domestic firms.

III. The Scandinavian school: The knowledge economy and innovation systems

The Scandinavian school, represented by B. Lundvall, B. Johnson, B. Asheim, and A. Isaksen, developed the concept of national and regional innovation systems. Their research highlights the central role of knowledge and innovation in shaping economic performance. The "knowledge economy" concept, introduced by this school, argues that productivity growth increasingly depends not on labor or capital, but on the generation and diffusion of knowledge, creativity, and technology.

The Scandinavian approach emphasizes:

- Innovation systems as a synergy between education, research, business, and government sectors;
- Clusters as a platform for effective knowledge exchange and technological learning;
- Long-term benefits of innovation-driven development, particularly for economic stability and social capital accumulation.

Comparative Analysis

School	Key Representatives	Core Concept	Strengths	Limitations
American	M. Porter, M. Enright	Competitive advantages and cluster-based development	Practical applicability; fosters regional competitiveness	Less emphasis on global integration and innovation diffusion
British	R. Kaplinsky, H. Schmitz	Global value chains and transnational linkages	Promotes international cooperation and export growth	May reduce local autonomy within global networks
Scandinavian	B. Lundvall, B. Johnson	Knowledge economy and innovation systems	Strengthens knowledge flow and social capital	Requires advanced education and R&D infrastructure

The comparative study of competitiveness theories demonstrates that clusters are fundamental to shaping national and regional competitive advantages. The American school views clusters as strategic tools for national economic growth; the British school emphasizes integration into global production networks; and the Scandinavian school prioritizes innovation, learning, and social collaboration.

In the context of Uzbekistan, the combined application of these approaches can foster regional cluster development—particularly in industry, agriculture, tourism, and information technology sectors—and enhance the overall competitiveness of the national economy.

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