

İNOVASYONEL EKONOMİ TEORİSİNDE BİLGİ VE TEKNOLOJİLERİN ROLÜ

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ÖZET

Bu çalışmada inovasyonel ekonomi teorisi çerçevesinde bilgi ve teknolojilerin rolü ve önemi bilimsel ve teorik açıdan ele alınmıştır. Bilgi temelli ekonomi, inovasyon kapasitesi ve teknolojik gelişmenin ekonomik büyüme ve rekabet gücü üzerindeki belirleyici etkileri analiz edilmiştir. Ayrıca küreselleşme koşullarında inovasyonun geliştirilmesine yönelik teorik yaklaşımlar incelenmiş ve ulusal ekonomiler açısından çıkarımlar sunulmuştur.

Anahtar Kelimeler: İnovasyonel ekonomi, bilgi ekonomisi, teknoloji, inovasyon, rekabet gücü, ekonomik büyüme.

ABSTRACT

In this study, the role and importance of knowledge and technologies within the framework of innovation-based economic theory are analyzed from a scientific and theoretical perspective. The decisive impact of knowledge-based economy, innovation capacity, and technological development on economic growth and competitiveness is examined. Moreover, theoretical approaches to innovation development under globalization conditions are discussed, and implications for national economies are presented.

Keywords: Innovation economy, knowledge economy, technology, innovation, competitiveness, economic growth.

1. GİRİŞ

In the 21st century, innovation, knowledge, and technology have emerged as the main driving forces of global economic development. The intensification of global competition, rapid digitalization of economic systems, and accelerated scientific and technological progress have compelled national economies to adopt new development models. In this context, innovation-based economic theory has become a fundamental scientific framework for ensuring sustainable economic growth.

While traditional economic theories emphasized land, labor, and capital as the primary production factors, modern economic conditions highlight knowledge and technology as independent strategic resources. Human capital, scientific research activities, and innovation capacity play a decisive role in economic development, particularly within knowledge-based economies. These views are strongly supported by endogenous growth theories.

The concept of innovation economy was first introduced by J. Schumpeter, who linked economic development directly to innovation processes. According to Schumpeter, new products, new technologies, and organizational innovations create a process of “creative destruction” within economic systems. This approach was further developed by scholars such as P. Romer and R. Lucas, who emphasized knowledge and technology as internal (endogenous) sources of economic growth.

Today, the level of innovation adoption determines countries’ competitiveness within the global economic system. Therefore, both developed and developing countries prioritize scientific research, high-technology industries, and modernization of education systems in their economic policies.

2. THEORETICAL FRAMEWORK OF INNOVATION ECONOMY

Innovation economy refers to an economic system that ensures growth through new knowledge, technologies, and scientific achievements. Innovation is not limited to technical progress but also includes organizational, institutional, and social transformations.

According to Schumpeterian theory, innovation encompasses new products, production methods, markets, and raw material sources, enabling qualitative transformation of economic systems.

3. ROLE OF KNOWLEDGE IN INNOVATION-BASED ECONOMY

Knowledge is considered the core element of innovation economy. Human capital, education quality, research and development (R&D), and scientific activities serve as endogenous growth factors.

Endogenous growth theory (Romer, Lucas) demonstrates that knowledge and technology stimulate economic development through internal mechanisms. Knowledge, as an investable resource, contributes to the creation of high value-added products and long-term economic sustainability.

4. TECHNOLOGICAL DEVELOPMENT AND COMPETITIVENESS

Technological progress is one of the main determinants of competitiveness in innovation economies. Information and communication technologies, digitalization, artificial intelligence, and automation significantly enhance productivity and efficiency.

Technological advancement influences not only manufacturing sectors but also services, education, and governance systems, thereby contributing to comprehensive economic growth.

5. IMPLICATIONS FOR NATIONAL ECONOMIES

For developing countries, establishing an innovation economy requires substantial investment in knowledge and technology. Collaboration between research institutions, higher education organizations, and the private sector is essential for fostering an innovative environment.

In the case of Uzbekistan, innovation-driven development strategies emphasize the advancement of knowledge economy as a national priority.

6. CONCLUSION

The findings indicate that knowledge and technology represent fundamental strategic resources within innovation-based economic theory. Although traditional production factors remain relevant, their effectiveness increasingly depends on innovation and technological progress. Knowledge investments enhance productivity, promote high value-added production, and strengthen international competitiveness.

Furthermore, innovation-driven development is closely linked to institutional frameworks, state policies, and social factors. Supporting research, encouraging innovation activities, and integrating education with science are crucial for sustainable economic growth.

Overall, understanding the role of knowledge and technology within innovation economy theory provides a solid scientific foundation for improving national economic policies, implementing effective reforms, and securing a competitive position in the global economy.

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