

Section 3. Innovation management

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*Chubinidze Nino,
Doctor of Business Administration (Ph. D.)
Associate Professor
of Education School of Caucasus University
Pantsulaia Nino,
The Doctoral Student of Business School
of Georgian-American University*

DEVELOPING AND MANAGING INNOVATIVE HUMAN CAPITAL IN A KNOWLEDGE ECONOMY

Abstract. The article discusses the knowledge economy and notes that it is the highest stage in the development of post-industrial and innovative economies. After studying Western literature, the authors of the article came to the conclusion that the terms “post-industrial economy” and “innovative economy” are often used interchangeably in Western sources. According to the authors, the knowledge economy is the highest stage of the innovative economy, the formation, and development of which is considered to be the main factor of human capital.

Keywords: Knowledge-Economy, Innovative Economy, Knowledge-Based Economy.

Introduction. The term “knowledge economy” was first coined by the Austrian-American economist Fritz Mahlup (1962), who justified his influence on the production activities of economic agents. Approaches to the effectiveness of further knowledge creation i. Nonaka argued. In particular, the main criterion of production efficiency is the ability of the entrepreneur to behave in a formalized way. It should be noted that Nonaka has not proposed a model for evaluating the effectiveness of introducing new knowledge into the activities of entrepreneurial entities. Today, the term, along with the term “knowledge-based economy”, is used to define the type of economy in which knowledge plays a crucial role and knowledge production is a source of growth. Widely used concepts – “Innovative Economy”, “High-tech

civilization”, “Knowledge Society”, and “Information Society” – are very close to the concept of “Knowledge Economy”.

Discussion. The development of modern market relations, the formation of positive trends in economic growth, and the formation of a new degree of well-being in the population are based on the universal and multifaceted application of knowledge-based achievements of the economy.

The world economy at the beginning of the XXI century is characterized by the formation of a knowledge society, also called the “new economy”, in which the development of such factors as the power of the human mind and the technologies that ensure its multiple growths. Humanity is approaching the transition to an innovative phase of development. Its

characteristic feature and fundamental basis is the growing attention to knowledge as a direct production force and the main production resource.

The problem of the effective use of the conditions of knowledge, incentives, and significant expansion of the demand for new technologies, as well as the impact of the “new economy” on the social and economic reality, is regular and relevant.

It is worth noting that for a long time (from Alfred Marshall to the middle of the twentieth century) prominent world economists, recognizing the important role of new knowledge in the activities of economic entities, considered only one type of knowledge – formalized knowledge needed in production. Thus, until the 1960s, there were no attempts to classify knowledge in world scientific thought. Insufficient attention to the concept of knowledge of economic science was due to the general trends in the development of economic relations and production processes. The introduction of new knowledge into production began only after the 60s of the last century. It was during this period that the first attempts to assess and take into account the new knowledge factor in the process of analysis appeared in developed countries, which led to the beginning of the development of a knowledge-based economy.

The modern “knowledge economy” is based on four pillars. these are:

- **Education.** Only an educated and well-educated society can create and use everything new;
- **Information infrastructure.** This includes communication and information exchange networks;
- **Rules of the game in the field of economics,** which facilitate the adaptation of new ideas and technologies and investments in the economy;
- **Existence of an “innovative system”.** Implies the existence of a developed network of universities, laboratories, and scientific centers.

The world is becoming more and more educated from year to year. According to the UN, over the past decade, the world community has made significant strides in combating literacy. If in 1960 36% of the world’s population did not even have basic education, by 2000 this figure was already 25%, and today it is 21%. And that’s when, from 1960 to 2000, the Earth’s population grew from 3 billion to 6 billion, and today it is 7 billion. For industrialized countries today, the illiterate population is 1–2%.

According to the Organization for Economic Cooperation and Development, a growing proportion of the world’s population is pursuing higher education. On average, 32% of able-bodied people in the 25–65 age group have received higher education. The most significant proportion of people with higher education come from countries such as Canada (43%), the USA (38%), and Japan (36%). The lowest are in countries such as Mexico (6%), Turkey and Portugal (9% in both).

The concept of “knowledge economy” or “knowledge-based economy” expresses the new rule of production of material wealth, which is of paramount importance as we enter the new millennium.

Knowledge Economics in the Information Society. In recent times, the terms: innovation, intellectual capital, information technology, and knowledge have become relevant in the economic and political life of the country. In his speech at the international summit in Davos, the Georgian representative said that “in the near future, Georgia should become a country whose prosperity should be conditioned by intellectual resources, in particular” “smart economy”, which creates the latest knowledge and technologies.

In the stream of scientific publications of the last few years, the concepts of “information society” and “knowledge economy” often compete with the one that better expresses the modern paradigm of social development. In our opinion, these two concepts have different meanings, but they have a lot in common.

We think that the concept of “information society” has long lost its technological content and today simply refers to a certain stage of development of society. This stage of development is related to the formation of a new technological set based on information and communication technologies. Existentially, it characterizes the operating vector of human civilization.

The concept of “knowledge economy” in a broad sense is divided into three main areas today:

- Scientific research and experimental-design work and innovations;
- Education, which promotes the formation of human capital;
- Information and computer technologies.

Although these spheres still maintain their independence and function by their own laws, there is still an organic connection between them and it is impossible to imagine one of them without the others. Giving separate examples to prove this is already considered superfluous today. In fact, we are witnessing an increasingly close convergence of these three spheres of public activity, as diffusion into other areas of information technology is impossible without the appropriate professional level of the creators and minimal information education of the users. In addition, the creation of new information and communication technologies requires new scientific knowledge and mechanisms for turning this knowledge into commercial products. That is, we return to the knowledge economy as a key condition for the development of information and communication technologies and the information society as a whole.

The outer contour of a three-dimensional figure represents the potential boundaries of the spread of information technology (excluding other sectors of the economy). The common area between the three sectors is what we call the core of the knowledge economy formation.

We want to believe that this scheme is the most likely scenario for the future development of society, which will become a catalyst for the rapid growth of

information and communication technologies. But it should be noted that the information society can exist without the transition to a knowledge economy, and the existence of the latter beyond the developed information society is unthinkable. In this regard, it is particularly interesting to measure the dynamics of the formation of the knowledge economy. One of the methods used in world practice is the volume of investments made in the knowledge economy. Experts from the Organization for Economic Co-operation and Development (OECD) measure knowledge investment in higher education, research and development programs by summing up GDP expenditures.

The leaders in terms of investment in knowledge are the OECD member countries: the United States (6.6% of GDP). They are followed by Japan (5.0% of GDP) and EU countries (3.8% of GDP). Analysis of this indicator shows that since 1994 it has been growing in virtually all developed countries and the main source of growth is the funds invested in software development. Judging by the volume of investments, the US and Japan are developing their knowledge economies much faster than the EU countries. At the same time, EU countries, aware of their own backwardness, have come up with a new initiative – to increase funding for research and development and technology by 5.5% of GDP by 2021.

The most promising way today is the development of information and communication technologies, including software and knowledge production becoming the main source of economic growth. The pace of development of this trend is even indicated by the fact that 90% of science and engineering in the history of mankind are our contemporaries, while 90% of the total volume of knowledge has been created in the last three decades. The list of the world’s leading countries in terms of the share of high-tech products in GDP looks like this: South Korea, Sweden, Switzerland, Germany, Japan, USA. Interestingly, the EU countries are significantly ahead of Japan and the US in high-tech production, although the investments made by the latter are higher than in the EU countries.

Conclusion. Knowledge production is clearly localized in the world and its consumption is remarkably evenly distributed. World-renowned centers of knowledge production are the states of California and Massachusetts (USA), the university cities of Oxford and Cambridge (UK), Paris (France), Moscow, St. Petersburg, and Novosibirsk (Russia). Differences between knowledge economy indicators in the United States are much smaller than in other sectors of the US economy. At the same time, almost 2/3 of the venture capital is located in only three states – California, Massachusetts, and New York.

Both the conventional economy and the knowledge economy must be measured. In the United States, for example, this is the number of patents issued. In addition, the number of knowledge consumers is considered an official figure in this field. But supply and demand in this field today often do not coincide.

At the end of this paragraph we would like to mention the following:

- As world experience shows, large companies should first create smaller firms for their own benefit. And the goal of state innovation and economic policy, in general, should be to build a modern, knowledge-based economy that ensures a high standard of living, economic, political, and social security, development of basic sciences, and high-tech education sectors, as these areas are the most important knowledge economy today. Systematic directions;
- Today, the most promising way to develop the state and the economy is to promote the development of information and communication technologies, including the production of software;
- The competitiveness of the country in the modern global economy depends significantly on the competitiveness of the country's workforce, which leads to the formation of new mechanisms for the development of human capital.

References:

1. Ben-Porath Y. The Production of Human Capital and the Live. Cycle of Earning, *Journal of Political Economy*, August, 1973.– 363 p.
2. Lundvall B. A. *National Systems of Innovation. Towards a Theory of Innovation and Interactive Learning*,– London: Pinter Publishers, 2002.
3. Machlup F. *Knowledge: Its creation, Distribution, and Economic Significance*.– N. Y.: Princeton, 2014.– 237 p.
4. Mincer J. The Production of Human Capital and the Life-cyclic of Earnings: Variations on a Theme.– Working Paper of the NBER,– No. 4838. (2014).
5. Mulligan C. B. X. Sala-i-Martin. *Measuring Aggregate Human Capital*.– Working Paper of the NBER,– No. 5016. (2015).
6. Solow Robert M. The Economic of Resources and the Resources of Economics, *The American Economic Review*,– Vol. 64.– No. 2. *Papers and Proceedings of the Eighty-sixth*; 2019.