









The National Research University Higher School of Economics Institute for Statistical Studies and Economics of Knowledge (HSE ISSEK) presents the results of a human capital trends study. The study methodology included big data mining using the HSE ISSEK-developed iFORA system, expert sessions, and a Delphi survey of more than 400 leading international and Russian scientists specialising in human capital.

The project is being implemented by the World-Class Human Capital Multidisciplinary Research Centre and the UNESCO Futures Studies Chair (UNESCO Futures Literacy Chairs network). A complete list of trends is available in a unique open-access database at https://ncmu.hse.ru/chelpoten_trends.

This trendletter is based on data obtained from issek.hse.ru, deloitte.com, economy.gov.ru, globalaffairs.ru, globalinnovationindex.org, mos.ru, oecd.org, unctad.org, unesco.org, thecreativeindustries.co.uk, ecpe.unicam.it, ecbnetwork.eu, and marketsandmarkets.com.

The Trend's Structure

- Increased economic importance of creative activities, the growth of creative entrepreneurship
- Prosumerism and involvement of audiences in content production
- Synergy between creativity and cutting-edge technologies in CreaTech

Creative industries are the most rapidly growing sectors of the global economy, with a large part of the added value generated through creative activities and the use of intellectual property. According to the United Nations Conference on Trade and Development (UNCTAD), over the past 20 years, the growth rate of the creative economy exports (products and services), at 7%, has frequently outpaced that of other industries.

A distinctive feature of creative industries is an individual approach to product development and the predominantly intangible nature of the products. Their main development trends include the growing share of creative activity results in the added value generated, and the large-scale introduction of digital technologies. Human capital is the main resource of the creative economy. It is expected to contribute to accomplishing sustainable development goals including quality education, gender equality, economic growth, and innovation-based development.

The pandemic has accelerated the emergence of a new consumer segment: prosumers (a producter - consumer blend), who are actively involved in creating the products and services they require. Prosumers contribute to the development of new technological solutions; their presence is growing in the manufacturing industries (digital design), education (distance learning), and the energy market (decentralised energy).

The creative industries account for a significant number of new jobs, particularly for young people. There are more job opportunities available to people aged 18-25 in the creative economy than in any other sector. In Japan, 10-14% of the working population are engaged in creative activities, in the UK about 10%, in Australia 8%, in Germany 7%, and in France and the Republic of Korea - 4% each.

While in the world's largest economies creative industries are considered growth drivers, in Russia they are still seen as subsidised sectors: their share in the country's GDP is 2.7% and they employ about 4.7% of the national workforce (61% of which represents medium and small businesses).

Creative potential combined with cutting-edge technologies (AI, virtual reality, 5G, etc.) led to the emergence of the CreaTech (Creative Technology) sector. For example, the advances in the AI field made the automated creation of entertainment content possible. The demand for complex 3D graphics in computer games has driven the development of the GPU, which is also important for solving resource-intensive AI- and digital currency-related problems. Currently, CreaTech companies are among the most rapidly growing and most valuable in the world. The leaders in investments are the US, China, the Republic of Korea, the UK, and India. In 2020-2025 the compound annual growth rate in the CreaTech sector ma reach 5%, and the relevant market may grow to 2.6 trillion USD by 2025.

Economy

Key Estimates

10%

The creative economy's share in global GDP could reach 10% by 2030 (this forecast was made before the COVID-19 pandemic)

43.3 billion USD.

The global market for emotion detection and recognition technologies will reach 43.3 billion USD in 2027 (23.6 billion USD in 2022)

The Trend's Characteristics



Impact on human capital¹

1

2

3

Weak signal²

Advances in the development of robots' emotional intelligence



Strongest manifestation period

2026-2030 rr.

3

Wild card³

Artificial intelligence gaining creative abilities comparable to human ones



Effect of COVID-19 pandemic

Did not affect the trend

Consequences of the wild card event actually taking place

Human workers in creative industries are replaced by algorithms



Presence in Russia

Less pronounced compared to the world

 $^{^{1}}$ 1 – weak, 2 – medium, 3 – strong.

² Weak signals are insignificant (rarely mentioned or discussed) events which indicate the trend may radically change in the future.

³ Wild cards" are difficult-to-predict events which, if they do happen, can significantly affect the trend.

Economy

Drivers and Barriers



Drivers

- Strengthening of human-centric approaches in the economy
- Digitalisation of the economy
- Knowledge and information becoming a core productive asset
- Broad use of personal devices with internet access
- Changing consumer preferences
- Wide adoption of the sustainable production and consumption concept

Barriers Barriers

4

- Lack of a favourable legal environment
- Insufficient attention and support from the state
- Inadequate intellectual property protection and insufficient development of relevant markets
- Lack of financial resources to promote the development of creative industries
- Lack of entrepreneurial, digital, and professional competencies
- Lack of clearly defined creative economy boundaries and problems with measuring it

Trend Effects



Opportunities

- Export diversification
- Growth of innovative micro and small businesses, bringing promising economic segments out of the shadows
- Emergence of innovation ecosystems and development clusters
- Job creation
- Revitalisation of deprived areas
- Attracting foreign investment
- Supporting talent development
- Increased inclusivity, supporting vulnerable population groups
- Wide adoption of new values and meanings



Threats

- Communication of wrong values and attitudes to the masses through creative industries
- Growing demand for personnel in traditional sectors of the economy
- Growing income inequality among population groups
- Growing social tension
- Growing cost of living in areas with creative venues