

DEVELOPMENT OF EDUCATIONAL SERVICES THROUGH CONVERGENCE IN THE DIGITAL ECONOMY

Mukhitdinov Khudayar Suyunovich¹, Amirqulov Shukhrat Olimovich²,
Norqobilova Firuza Abdihomidovna³, Olimova Bahora Shukhratovna⁴,

¹Professor of the department of business and innovative management,
xsmuxitdinov@gmail.com.

²Associate professor, shukhratamirqulov@gmail.com

³Head of the department of business and innovative management,
feruzanorqobilova9111@mail.com.

⁴Independent researcher, bahoraolimova@gmail.com.

^{1,2,3,4}Karshi engineering economics institute,

Article History

Received: 27Aug 2023

Revised: 28Sept 2023

Accepted: 06Oct 2023

CC License

CC-BY-NC-SA 4.0

Abstract: The region was given an understanding of the possibility of developing convergence processes in improving the quality of educational services and using the economy of knowledge to develop educational services. ConvergenceIn the analysis of the definitions given to the concept, it was approached as a numerical process. In particular, it is based on improving the quality of education by introducing digital technologies.

Keywords: Convergence processes, knowledge economy, digital transformation, professional education, labor market, Creativity, critical thinking, digital concept, empirical and cognitive, interactive, heuristic, creative, adaptive.

Introduction

In improving the quality of the regional education service, digital technologies, artificial intelligence, computer equipment and robotics will be used to train specialist personnel for new (future) professions that cannot be performed in the medium and long term, taking into account the forecast indicators of economic development. development of long-term innovative educational program models,by reforming professional education, training qualified and middle-level specialists based on the requirements of the labor market, and improving the quality of all-round education, is currently an urgent issue.

The latest technologies of the digital economy include big data, neurotechnologies, artificial intelligence, distributed ledger systems (blockchain), quantum technologies, new manufacturing technologies, industrial Internet, robotics, sensors, wireless communication, virtual and augmented reality. The advanced technologies of the digital economy can be categorized into the following four groups (Figure 1).

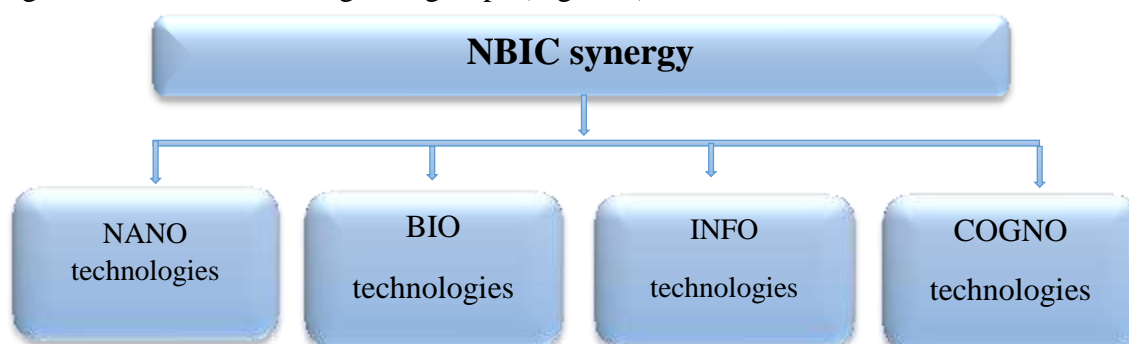


Figure 1. Advanced technologies of the digital economy

A number of practical technological solutions are expected to be implemented using these technologies, and as a result, there will be changes in economic sectors. NBIC synergy is the direct or indirect influence of technologies on the "psychology of innovation" of people and their willingness to develop innovative products and create demand in local and global markets. Synergy of convergence and NBIC - leads to the formation of new elements of the economy of technologies - nanoeconomy, bioeconomy, information economy, cognomics (economy using cognitive technologies), as well as new forms of social development, culture change, establishment of values in society, new social psychology of social development. It causes new norms of behavior, the emergence of spiritual and religious problems. This creates new professions of the future.

Convergence (Latin convergo "unification") - the process of convergence, approach (in another sense), compromise; the opposite of divergence. This term is widely used in various natural sciences and humanities.

The modern dictionary of foreign words gives the following definition in relation to the economy: convergence is related to the convergence of different economic systems, the reduction of differences between them, and the elimination of common socio-economic problems. The existence of the same objective laws of development, in general, convergence in economic theory means the process of convergence of economic parameters to a certain level.

Methods

In our country, NBIC-convergence is considered a completely new interdisciplinary practical process that has not yet been comprehensively scientifically analyzed, and it can be the basis for many scientific researches and achievements in the near future. It is the research of NBIC synergy and convergence process that determines the superiority of our advanced economists and experts over Western scientists in the development of innovative educational program models of our country. Therefore, based on the priority goals and objectives of the implementation of the "Digital Uzbekistan - 2030" strategy, the development of digital infrastructure defined [1]:

- regional and international telecommunication networks through the modernization and development of optical fiber communication lines, international switching centers, O transit relations of the Republic of Uzbekistan with neighboring Central Asian countries to expand the carrying capacity;
- increasing the volume of services provided, reservation, reliability of systems provision, as well as the possibility of using broadband services for settlements and social objects to provide ma data transmission network to expand
- mobile and Encourage the investment activity of fellow communication operators of encouragement creation of additional mechanisms;
- mobile communication network It has 4G and 5G technology development on;
- highway and railway to cover tourist objects with mobile communication networks provide;
- the Internet is a global information network improvement and optimization of connection traffics;
- regardless of geographical location, o of the citizens further development of broadband wireless and mobile technologies to meet growing information needs;
- want transmission of television signals to consumers, terrestrial television broadcasting, cable television, IP-television, etc all types of television and radio broadcasting, television and radio services using data transmission networks, mobile communication, Internet technologies improvement of digital broadcasting including digital broadcasting;
- «cloudy»based on calculations development of data storage and processing centers, according to user requirements, O permanent connection to the information resources of the Republic of Uzbekistan provide;
- maintaining the opportunity for free development of the market, improving the conditions for the development of the telecommunications sector, conducting business and developing the telecommunications infrastructure mury to reduce pressure;

- all state bodies, their structural and territorial branches, to use electronic state services within the framework of electronic government inter-departmental communication data transmission network development of this network in connection with ;
- to maintain, process, protect information and ensure the usability of electronic state services for state bodies, individuals and legal entities in the territory of our country improvement of mechanisms of provision;
- digitalization of government bodies and electronic government services within the display«software as a service supply», «platform as a service»,«infrastructure as a service»wide introduction of technologies;
- through the introduction of digital technologies in the management of urban infrastructure, transport logistics, urban infrastructure, the quality of the urban environment, the efficiency of urban development management, the connection with public, business and residential areas to solve problems«smart»and«safe»consistent implementation of city projects;
- the technological basis for the development of broadband connection is required to consumers, the main and so on additional services, including services of automation of technological processes, improving the life of the population as part of the implementation of smart systems in support, step-by-step access to the implementation of individual infrastructure projects development of multiservice networks using a single infrastructure for provisioning;
- improving the efficiency of existing communication (wireless and optical), wired and wireless communication technologies and systems, as well as new geographic information and navigation systems, development of communication and navigation technologies, including;
- communication operators o to create the necessary conditions for the development of competition between

In accordance with this, the task of creating new educational programs aimed at inculcating these skills in the citizens in the near future will be of great socio-economic importance.

In particular, the use of NBIC-convergence in the economy of Uzbekistan makes it possible to:

- 1) organization of centers for creation of new, creative and innovative socio-economic models, including scientific research, education, standards, informatics and bioeconomy;
- 2) creation of technological platforms covering the use of convergent cognitive technologies, brain mapping activities and cognitive computing in the cross-section of NBIC to solve global social problems, including manufacturing and global virtual factories, society;
- 3) achieving risk management and integration of science with society by creating common universal convergence database programs and developing convergence assessment methods;
- 4) monitoring and accelerating human capacity growth, community stability, decision analysis and conflict resolution using the convergence-divergence cycle.

Convergence theory originated in Ancient Greece in the 5th century BC due to the views of Heraclitus of Ephesus and went through several stages of development. Heraclitus saw the basis of the development of the world in the principles of interaction and unity, unity and division of wholeness: "All things are separated from each other and reunited." It was this article that formed the understanding of the natural development of society as a struggle between unity and contradictions, which preceded the modern theory of convergence. Convergence theory originated in Ancient Greece in the 5th century BC due to the views of

Heraclitus of Ephesus and went through several stages of development. Heraclitus saw the basis of the development of the world in the principles of interaction and unity, unity and division of wholeness: "All things are separated from each other and reunited." It was this article that formed the understanding of the natural development of society as a struggle between unity and contradictions, which preceded the modern theory of convergence. Later, these ideas were reflected in Hegel's dialectic. In economics, the term "convergence" was recognized in the 1960s and 1970s. In 1961, J. Tinbergen's "Do Communist and Free Economies Show Patterns of Convergence?" progressive socialization of capitalist production occurs in connection with the

scientific and technical revolution, the increasing economic role of the bourgeois state and the introduction of elements of planning in capitalist countries.

The first theory of convergence is related to the civilizational approach, the theory of "mixed economy" and the formation of "welfare states" models that appeared in industrial countries in the middle of the 20th century. The civilizational aspect of understanding the theory of convergence means that due to the progress of science and technology, as well as rational ways of doing business, the development paths of opposite economic systems will converge to a single trajectory over time. In this approach, the main attention was paid to the study of socialist and capitalist societies, in particular, to the development of directions for their two-way convergence and the formation of a new mixed economy.

Digitization, convergence and transformation are still going on in the world. Even in advanced countries, the learning process is not complete, and the level of digitization varies gradually from network to network. Some sectors are already heavily influenced by ICT (financial services, telecommunications, retail, media sector), while others are at the beginning of this path and are introducing digital technologies only in some processes. The ongoing process of convergence in the global economy for the training of specialist personnel in new (future) professions that cannot be performed by digital technologies, artificial intelligence, computer equipment and robotic machines, taking into account the forecast indicators of economic development in the medium and Intangible value results are obtained, such as innovative educational program models and their development methodology for long-term perspective.

Including:

- "digitalization", "decarbonization" and "reformation" - "ticket" models for the future will be analyzed based on national interests as global future trends in the next 10 years;
- Global trends for the future of 2030-2050 of modern technologies such as Big Data, Cloud Technologies, Internet of Things (IoT) and Genome Technologies against the background of its development, econometric analysis is carried out and national forecast indicators (models) are developed;
- correlation-regression analysis of job loss trends in many professions due to the widespread penetration of digital and artificial intelligence technologies and robotic machines into economic sectors and the social sphere, and the factors affecting these processes are determined .

is causing fundamental changes due to cost savings related to information collection, processing, transmission and distribution. But they should not consider the process of digital transformation as a simple introduction of information technologies. It is also wrong to believe that developing and launching a corporate website, a Telegram bot, a mobile application, and access to social networks allow organizations to consider themselves digital.

We know that today it is difficult to imagine doing business in any field without a computer. In order to be a literate person of the 21st century, first of all, it is necessary to be computer literate and master information technologies. Every specialist, regardless of the field he works in, should know how to use and use advanced technologies of the digital economy and have the skills to work in them, in order to perform his duties at the level required by the times. For this reason, the essence, purpose and tasks of the fundamental reforms implemented in the field of education in our independent Republic have been clearly defined. In particular, in the "National Program of Personnel Training" "The system and content of personnel training is based on the prospects of social and economic development of the country, the needs of society, science,

This process should be distinguished by the practical provision of the rights of individuals to education and business education processes in accordance with the interests of the state and society.

Today, digital technologies apply to almost any field of activity. It came to education, and we see that modern schools and HEIs use interactive whiteboards, students create electronic diaries, create audio and video content, implement joint projects, we see teachers giving advice through social media and so on. Now, in the process of convergence, education organized on the

basis of modern technologies, which are formed by the business of education, allows the use of methods that cannot be implemented with traditional education. That is, in the process of convergence, the convergence of types of education is becoming an important issue.

According to scientists, digital development should be at the center of human learning. Creativity and critical thinking are important in human development today. Accordingly, the digital concept is divided into 3 types: knowledge, skill and attitude approximation. Modern education should organize education using new innovations and technologies. Newly produced technologies should serve to improve the quality of education and organize educational processes.

Factors leading to convergence or divergence in the world economy are discussed. Thus, geographical and ethnic factors such as: climate, natural resources, culture and religion tend to prove the unreliability of traditional explanations for the economic success or failure of states. The authors argue that the prosperity or decline of countries depends primarily on the nature of their economic and political institutions.

Allen RC According to the conclusion of [4], the economic growth and prosperity of the states increases not only within the framework of inclusive institutions, but also within both types of institutions. The analysis shows that the authors argue that the emergence of inclusive institutions in Western Europe and the persistence of marginal institutions in other parts of the world lead to a global problem of inequality. As noted above, some countries fail because of the poor quality of their economic and political institutions. Nevertheless, the tragedy of global poverty, according to [5], will never be solved until Western organizations, which spend trillions of dollars to improve the state, realize the ineffectiveness of their constant efforts to alleviate the problem of poverty. Africa and other regions with similar levels of development lack the human capital, infrastructure and technology to effectively absorb large financial injections. Instead, the West will have to develop a more pragmatic and constructive approach, as its scholars suggest, and look for ways to improve the welfare of poor countries.

In turn, Sala-i Martin XX As noted by [6], income inequality and increasing social exclusion, sustained rapid population growth in Africa and South Asia, population aging in developed countries, as well as global production systems, rapid technological changes, global population decline, Middle the number of skilled occupations, as well as economic and geopolitical multipolarity and growing environmental problems are seen as major obstacles to the world's economic prosperity. It suggests that the above-described problems facing the world economy can be understood and solved within the framework of sustainable development and convergence.

Sustainable development creates a holistic framework that brings together three complex systems: the global economy, global society, and the physical environment of the earth. The goals of this system are the eradication of poverty and hunger, health and education for all, reduction of economic inequality, sustainable growth, effective management, etc. To the opinion of Sala-i Martin XX According to [7], this strategy is the way to achieve economic prosperity, social inclusion and environmental sustainability in the world.

Maddison A. [8] analyzes the growth of Europe at the beginning of the 16th century. He pointed out that the main source of economic success in Europe in the Middle Ages was the international trade with Venice, which played an important role in opening trade relations between Europe and the Mediterranean in the years 1000-1500. has brought to convergence. In turn, Portugal led to the rapprochement of countries through trade between Europe and the Atlantic islands, Africa, China and Japan. At the same time, the Netherlands intensified its maritime activities, which, together with the development of the Dutch economy and its international specialization, made the Netherlands the most dynamic European country from 1400 to the middle of the 17th century.

Despite these clear and undeniable economic gains, "huge disparities" in per capita gross domestic product (GDP) between "First World" and "Third World" regions began around 1820 and continued for the next half century. continued apace. This phenomenon, brought

about by the advent of capital abundance and fossil fuels, brought countries closer[9]. But since the late 1980s, another phenomenon has occurred, known as the "Great Convergence", which is associated with the economic growth of the developing countries of the third world significantly exceeding the economic growth rates of Western countries [10] etc.). Both of these phenomena will be discussed in more detail later in this work.

J. Tinbergen [11] proposed an "optimal order" convergence theory based on the concept. He says that it is formed due to the synthesis of two systems: "capitalist efficiency" and "socialist equality". "Optimal system" is based on business cooperation and peaceful coexistence of countries.

It should be noted that among researchers, views differ not only on the working system of convergence, but also on its limits. For example, the American economist and sociologist J. Galbraith [12] connected the convergence of the bipolar system primarily with large investments. Simultaneously with the development of convergence theories, the opposite direction - divergence, was formed, implying inconsistency between the systems and the analyzed indicators. *Divergence* (lat. *divergere* — difference) high price indicators and high level divergence of indicators appeared. This concept is characteristic of economic determinism and was developed most in the works of F. von Hayek on the "vacuum hypothesis".

All these convergence theories are seen as the convergence of capitalist and socialist systems towards a better society. Later, the theoretical content and practical meaning of the term "convergence" lost its political aspect. Convergence, in fact, is a process of application of economic support that occurs in different economic and social forms and is based on the use of different methods. In world practice convergence in the development of the educational system is to bring the economy of knowledge closer, and scientific research works are being carried out intensively in the convergence of directions such as high-tech medicine, robotics, artificial intelligence, modern digital communication, nanotechnologies, microchips, electric vehicles. This, in turn, brings science and production closer to each other to ensure their coherence, and in the innovative field, high business of education showing its effectiveness. However, in the world to this day educational business processes Important issues related to the diversity of the approach to the knowledge economy, the mechanism of its implementation at different levels, and the fact that no specific guidelines have been developed on this issue have not been resolved. Convergence of the educational system remains important in the socio-economic development of any country. Through the convergence of the educational system, the issues of developing the conceptual foundations of the knowledge economy have been studied to a certain extent by foreign economists as a separate research direction. In particular, the problems of the human factor were first discussed by U. Petty [13], A. Smith, D. Ricardo [14], the differentiated role of education in economic development, quality indicators of the individual, the human as a subjective factor in the economy views L. Walras, D. M. Clark, D. Mill, U. Rosher [15], problems of forming a knowledge economy based on high technologies D. Bell [16], D. K. Galbraith [17], P. Balaji [18], Dretske Fred [19] new industrial society E. Tofler, F. Perrou [20], investments in human capital F. Mahlup, G. Becker, T. Schulz, D. J. Minser, T. Stewart [25] and researched by other scientists.

Like the practical activities of developed countries in the field of education, our educational system focuses on the competent development of the individual in the social, economic and business spheres, in the conditions of informationalization of the society, and in the convergence of pedagogical and information technologies.

Competence is the professional and personal qualities and characteristics of a person, which includes knowledge, skills and experiences of their application in practical activities, as well as the ability to work independently and creatively.

New directions in the socio-economic development of modern countries are primarily innovative economy based on Y. Schumpeter's idea [28], it consists of the network economy advanced in the concepts presented in J. Hawkins' scientific works called the theory of knowledge economy or creative economy [29] and the digital economy introduced by D. Tapscott [31].

In the analysis of the definitions given to the concept of knowledge economy, it can be observed that it is approached as an economic relationship. For example, YV Smagin: "... knowledge economy is a modern economic attitude based on experts who can introduce new technologies. In this case, new relations will emerge in the solution of local and global issues and in the introduction of tomorrow's technologies into the economy" [32]., - describes. In this case, when the knowledge economy reflects the process of selling and buying human capital, then the economic relationship to it comes from the fact that it can be approached as a business process. Investment in human capital contributes to the development of the knowledge economy, where it can take the form of an attitude. Because, in order to increase the human capital and keep the innovative economy in balance, it is necessary to enter into money and property relations. The author says that it is wrong to call the knowledge economy a form of economic relations by YV Smagin, because the knowledge economy is based on human behavior and capital. And it reflects a continuous process that is self-reproducing.

Academic SSG "Ulomov" for the innovative development of Uzbekistan "Smart entrepreneur", "Smart economy", "Smart medicine", "Smart education", "Smart family", "Smart neighborhood", "Smart technologies" and "Smart children" [33] noted that it is possible to create a knowledge economy through of course, it is correct to use the term "intelligent" in this opinion, because "intelligent activity" occupies the main place in the modern economy of knowledge.

B.SH. Usmanov, when approaching the economy of knowledge, emphasized that it is important to pay attention to the field of science and education as the main priority [34]. This helped the author to focus on the field of science and education as the main priority

In essence, convergence in the digital economy is manifested through the convergence of innovative products and services based on advanced technologies, the creation of completely new simulation models [35] and advanced analytical methods. Education service convergence all existing models of specific educational service delivery, including investment in service delivery technologies about the process, that is, to approach changes such as direct structure, development strategy, working with customers, product promotion and service methods, educational business and even service culture it is necessary to understand that.

Results and discussion

New Uzbekistan for 2022-2026 development strategy and, in accordance with the tasks defined in the Address of the President of the Republic of Uzbekistan to the Oliy Majlis and the People of Uzbekistan, to further raise the standard of living of the population, bring the quality of education in line with advanced international standards, achieve sustainable economic growth and bring our reforms to a new level output was determined [2].

Improving the efficiency of the activity of the neighborhood institute, turning it into a support link of public management and control.

Expanding the powers of neighborhoods and strengthening their financial independence in order to solve socio-economic problems in the regions on the spot.

Ensuring the participation of citizens in the life of their neighborhood and direct communication between state bodies and neighborhoods, digitalization of processes aimed at working with residents in neighborhoods.

Creating a system of applying to all state agencies from the neighborhood, providing state and social services directly in the neighborhood.

Strengthening the system of state support based on the "growth points" of the neighborhoods and the specialization of the population living in them in business activities. Targeted training of highly qualified specialists for neighborhoods, formation of skills in all neighborhood chairpersons and deputy mayors in the basics of management, employment, banking and finance, real estate, land, animal husbandry and poultry. Establishing effective activity of the institute of district (city) governors assistant on the issues of entrepreneurship development, employment provision and poverty reduction.

Because in the process of educational business, the information system, the total information resources, information technologies and means of communication organized in an

organizational manner, which enable information collection, storage, search, processing and use, regardless of the field of application, the general information systems. Although the structure, some of the systems supporting it are considered as a set of technical, software, informational, organizational and legal provisions, the practice of new pedagogical technology based on the ideas of convergence, information technology and computerization is traditional. It develops in the approximation of lim technologies.

In this article, the mechanism of convergence and implementation of "integration of science, education and production" should be implemented in two stages. The first stage (2022-2025) is the part where scientific research will be carried out in this direction, in which all existing enterprises and economic subjects in Uzbekistan will be approached. The demand for specialist personnel of consumer sectors is thoroughly studied, systematized, and proposals for higher education institutions are developed. also Minister of Higher Education, Science and Innovation of the Republic of Uzbekistan in order for higher education to be fully prepared for the transition to this stage by the league, to increase the level of coverage of the country's youth with higher education, to increase the admission rates to correspondence and evening forms of education, to introduce the form of distance education, by increasing the share of professors and teachers who have advanced their qualifications or completed internships abroad, the ground is being prepared for ensuring the integrity of science and production.

In the second stage (2025-2030) Minister of Higher Education, Science and Innovation of the Republic of Uzbekistan Ligi works in cooperation with qualified specialists in the field of information and communication technologies. It is developed on the basis of web technology and object-oriented programming languages. It uses ASP.NET Core MVC modern framework expressed from modern programming language base, php, html, Java, React js programming languages and Oracle MS SQL Server, database management systems. Such a framework ensures the smooth operation of the created platform on Linux and Windows operating systems. A database is created for data storage and processing in the system. Android Studio for the Android system and Swift for the iOS system are used to create the mobile application.

As a result of the implementation of these two stages, not only the place and rating of Uzbekistan in the human development index, but also the global level of higher education will increase, a full transition to University 3.0 will be ensured, the economy production of innovative goods and services is achieved at the expense of personnel with intellectually high potential operating in the branches.

Convergence of the educational system, looking at it as a digital-information society, bringing it closer in the field of production and education services, as a result of the convergence of information and knowledge (science, intellectual capital), business education was created in the region. (Table 1).

(Table 1).

Analysis of the quality of providing educational services to the population of the region

Years	The quality of providing educational services to the population of the region $Tox=y$	The number of professors per thousand students of the region's population is $JO s=x1$	The number of PhD teachers per thousand students of the region's population $PhD s=x2$	The number of DSc prof teachers per thousand students of the region's population is $DSc s=x3$	The number of students in the province is JTc thousand. people JTc s=x4
2004	3.9	679	264	28	10.4
2005	7.8	827	294	33	9.5
2006	11.9	852	309	39	8.4

2007	15.2	846	312	34	9.7
2008	18.9	890	330	31	11.7
2009	32.3	864	327	34	11.6
2010	39.3	826	331	30	11.4
2011	38.9	839	497	51	10.5
2012	46.2	858	295	27	11.2
2013	69.6	915	272	25	11.8
2014	89.8	984	263	23	12.6
2015	106.5	1044	259	25	13.3
2016	131.1	1086	254	28	14.1
2017	163.9	1154	269	28	15.9
2018	227.8	1196	288	34	18.1
2019	292.8	1404	253	45	22.4
2020	373.4	1555	255	47	27.8
2021	562.8	1502	256	49	28.2
2022	631.9	2502	256	49	28.2
2023	631.9	2805	359	75	48.282

Summarizing our analysis, the number of students in the region is 48,282, and the number of professors is 2,805. Scientific potential is 27%. We can see a sharp change in 2023 compared to 2022 (Figure 2).

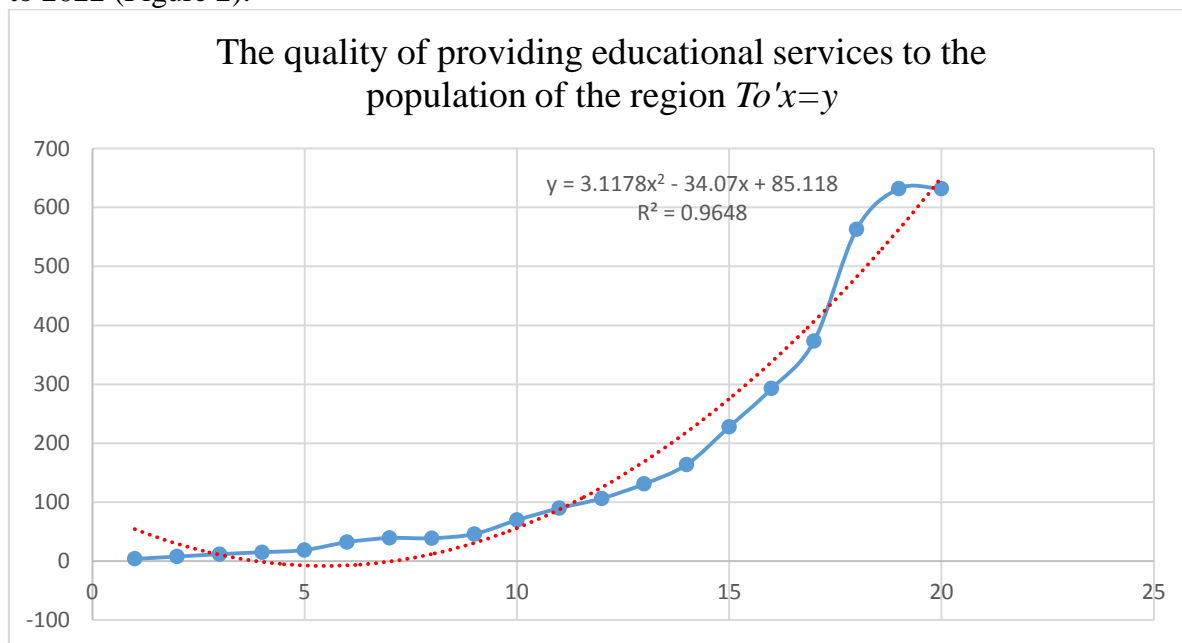


Figure 2. Dynamics of the field of educational services for the residents of Kashkadarya region.

The correlation matrix between the factors affecting the development of each branch of the education service sector for the population of Kashkadarya region was calculated in the Eviews 9 program. For example, the number of teachers per 1000 students in the region, the total costs related to improving the well-being of the region's population as influencing factors in the

modeling of the network of providing quality education services to the population of the region , we have selected the expenses for public education in the region and the provision of household goods and computer repair services to the population. We conduct an autocorrelation analysis to determine the absence of multicollinearity between these factors (Table 3).

Table 3**Correlation matrix of education services for residents of Kashkadarya region**

Covariance Analysis: Ordinary					
Date: 09/09/23 Time: 13:47					
Sample: 2004 2023					
Included observations: 20					
Covariance					
Correlation					
t-Statistic					
Probability	Y	X1	X2	X3	X4
Y	42833.38				
Correlation	1.000000				
t-Statistic	-----				
Probability	-----				
X1	105462.6	297182.3			
Correlation	0.934750	1.000000			
t-Statistic	11.16171	-----			
Probability	0.0000	-----			
X2	-2458.849	-2958.860	3073.028		
Correlation	-0.214317	-0.097911	1.000000		
t-Statistic	-0.930902	-0.417405	-----		
Probability	0.3642	0.6813	-----		
X3	1904.964	5274.700	254.0375	152.4875	
Correlation	0.745381	0.783554	0.371106	1.000000	
t-Statistic	4.743777	5.350419	1.695545	-----	
Probability	0.0002	0.0000	0.1072	-----	
X4	1842.360	4904.897	-44.58392	97.84433	91.82571
Correlation	0.928969	0.938937	-0.083929	0.826868	1.000000
t-Statistic	10.64758	11.57710	-0.357342	6.237790	-----
Probability	0.0000	0.0000	0.7250	0.0000	-----

In order to create a multi-factor empirical model of the factors affecting the development of each branch of the public education service, all the above factors are taken and their importance in the model is checked. If there is no autocorrelation in the residuals of the resulting factor, then the value of the calculated DW criterion was around 1.5.

Table 4**Building an empirical model for the provision of quality educational services to the population of the region**

Dependent Variable: Y		
Method: Least Squares		
Date: 09/09/23 Time: 13:48		
Sample: 2004 2023		

Included observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.179989	0.081627	2.205032	0.0435
X2	-0.893989	0.448079	-1.995161	0.0645
X3	4.203353	3.560960	1.180399	0.2562
X4	5.536571	5.715199	0.968745	0.3480
C	-19.42899	103.1679	-0.188324	0.8531
R-squared	0.919561	There is a mean dependent		174.7950
Adjusted R-squared	0.898111	SD dependent		212.3388
SE of regression	67.77874	Akaike info criterion		11.48269
Sum squared resid	68909.36	Schwarz criterion		11.73163
Log likelihood	-109.8269	Hannan-Quinn criterion.		11.53129
F-statistic	42.86927	Durbin-Watson stat		1.474293
Prob(F-statistic)	0.000000			

It was found that the value of the DW criterion, based on the empirical models built for each branch of the service industry, is higher than the table value. This indicates that there is no autocorrelation in the resulting factor residuals. Fisher's and Student's tests were calculated and the calculated value was compared with the table values, and their magnitude was determined from the table values.

$$Y = -19.42899 + 0.179989 * X_1 - 0.893989 * X_2 + 4.203353 * X_3 + 5.536571 * X_4$$

$$t \quad (-0.188324) \quad (-2.205032) \quad (-1.995161) \quad (1.180399) \quad (0.968745)$$

This post-industrial digital-information society is based on the intensive and effective use of science, education and innovation aimed at accelerating economic growth.

Conclusion

In conclusion, in the context of the digitalization of the economy, the convergence of the educational service has many advantages, it has various services, entertainment, educational, scientific and informational content, and the quality, speed and speed of these processes. provides comfort. Convergence in education reduces the cost and value of fees and becomes a new source of income. Payment for services rendered in the online environment will be significantly lower than in the traditional economy (especially due to reduced costs of services related to realization), while public and commercial services will become more accessible to all. In addition, in the digital world, goods and services can quickly find their buyer in the global market and become popular from anywhere in the world. The services provided will be able to be processed in a short period of time in accordance with the wishes of consumers.

REFERENCES

1. O'zbekiston Respublikasi Prezidentining Farmoni, №PF-194, Qabul qilining sana 22.08.2022
2. O'zbekiston Respublikasi Prezidentining Farmoni.pf-27.28.02.2023 Y.
3. A.A.Abduqodirov, R.R. Boqiev, M.E.Mamarajabov. Akademik litsey va Kasb-hunar kollejlarda "Informatika" fanidan takomillashtirilgan fan dasturi.
4. Allen R. C. Global Economic History. Oxford : Oxford University Press, 2011.
5. Gerschenkron A. Economic Backwardness in Historical Perspective. In B. F. Hoselitz (Ed.). The Progress of Underdeveloped Areas. Chicago : University of Chicago Press, 1952.
6. Sala-i Martin X. X. The classical approach to convergence analysis // The Economic Journal.1996. Vol. 106. N 437. P. 1019–1036.
7. Sala-i Martin X. X. The classical approach to convergence analysis // The Economic Journal.1996. Vol. 106. N 437. P. 1019–1036.

8. Maddison A. The World Economy, Vol. 1: A Millennial Perspective, OECD Publishing, 2001.
9. Allen R. C. Global Economic History. Oxford : Oxford University Press, 2011.
10. Sala-i-Martin X. X. The World Distribution of Income: Falling Poverty and ... Convergence, Period // The Quarterly Journal of Economics. 2006. Vol. 121. N 2 (May). P. 351–397.
11. Tinbergen, J. Do Communists and free economies show a Converging Pattern? // Soviet Studies. Vol. 12. Issue 4. 1961. Pp. 333-341. URL: <http://dx.doi.org/10.1080/09668136108410255>.
12. Broadberry S., Wallis J. J. Growing, Shrinking, and Long Run Economic Performance. Historical Perspectives on Economic Development, Technical Report. National Bureau of Economic Research, 2017. *Novoe industrialnoe obshchestvo: Per. s angl. / Dzh. Gehlbreit. M.: ООО «Izdatelstvo AST»; ООО «Tranzitkniga»; – SPb.: Terra Fantastica, 2004. – 602 s.*
13. Петти У. Экономические и статистические работы. Т. I-II. Перевод под ред. Смит М.Н. Москва: Государственное социально-экономическое издательство, 1940. -с. 323;
14. Рикардо Д. Начало политической экономии и налогообложения. - М.: Эксмо, 2016. 1040-стр.; Смит А. Исследование о природе и причинах богатства народов. – М.: Эксмо, 2016. -с. 255.
15. Вальрас Л. Элементы чистой политической экономии. - М.: Изограф, 2000. -с. 448 (*Éléments d'économie politique pure*, 1874); Clark J.M. Preface to Social Economics. - New York: Farrar & Rinehart. P. 193; Милль Дж.С. Система логики. т.т. 1-2. -М., 1914. -с.880; Рошер У. «Система помощи бедным и политика борьбы с бедностью» (*System der Armenpflege und Armenpolitik*, 1894. -р. 345).
16. Bell D. Notes on the Post-Industrial Society // The Public Interest. - 1967. №7;
17. Гэлбрейт, Дж. К. Новое индустриальное общество // The New Industrial State (1967). 2004. -с. 608. ISBN 5-17-024777-X;
18. Balaji P. The transformation and structure of the high technology industrial complex. California: University of California, 1999;
19. Dretske Fred I. Knowledge and the flow of information. // Stanford: CSLI publ., Cop. 1999.
20. Тоффлер, Э. Третья волна. The Third Wave, 1980. - М.: АСТ, 2010. -с. 784. (Philosophy). 5100 экз. ISBN 978-5-403-02493-8;
21. Перру Ф. Экономическое пространство: теория и приложения // Пространственная экономика. № 2. 2007. -с.77-93.
22. Махлуп Ф. Производство и распространение знаний в США. -М.: Прогресс, 1966. - с. 23;
23. Беккер Г.С. Человеческое поведение: экономический подход. – М.: ГУ ВШЭ, 2003. -с. 672. ISBN 5-7598-0173-2;
24. Shulz T.W. Human Capital: Policy Issues and Research Opportunities. – In: Human resources. N.Y., 1975. -р. 5.;
25. Mincer J. Investment in Human Capital and Personal Income Distribution // Journal of Political Economy, Vol. 66, No. 4 (Aug., 1958), -р. 281-302;
26. Стюарт Т. Интеллектуальный капитал. Новый источник богатства организаций. // Пер. с английского В.Ноздриной. - М.: Поколение, 2007. -с. 27..Мильнер Б. З. и др. Управление знаниями в корпорациях. -М.: Дело, 2006. -с. 144.;
27. Шумпетер Й.А. Теория экономического развития. Капитализм, социализм и демократия.М.:Эксмо, 2007,862 с.
28. Howkins J. The Creative Economy: How People Make Money from Ideas. London: Penguin, 2001, 263 p.
29. Benkler Y. The Wealth of Networks: How Social Production Transforms Markets and Freedom. New Haven,Conn: Yale University Press, 2006, 515 p.

30. Tapscott D. The digital economy: promise and peril in the age of networked intelligence. New York; Montreal: McGraw-Hill, 1996, 342 p.
31. Смагин Ю.В. Экономика знаний и реальность. Метиор-Сити. Наука развития. № 4, 2016. -С. 39.
32. Ғуломов С.С. “2017-2021 йилларда ҳаракатлар стратегиясини сифатли амалга оширишда интеллектуал салоҳият ва инновациялар роли” // Иқтисодиёт ва таълим, 2018. 7-19-б.
33. Усмонов Б.Ш. Олий таълимнинг инновацион фаолияти ва унинг иқтисодиёт ривожланишидаги ўрни. // Иқтисодиёт ва таълим, 2018. 9-б.
34. Мухитдинов.Х.С., Раҳимов А.Н., Мухитдинов.Ш.Х. Аҳолига хизмат кўрсатиш тармоқларини имитацион моделлаштириш “Иқтисодиёт ва таълим” илмий-амалий журнал №3 Тошкент-2020. –Б.151-153.