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EMPLOYMENT DEVELOPMENT IN THE BANKING ECOSYSTEMS IN THE FOCUS OF PUBLICATIONS

The article is devoted to the study of the dynamics of publication activity in the field of «Digital financial system and employment», in accordance with current state programs, existing literary, bibliometric databases, and other official sources. Methodology – during the factual material processing, such traditional scientific methods as chronological, logical, systematic approaches, and generalization methods were used. Originality / value of the study – the study examines the transformation process of the labor market and employment in digital business. The article contains a source analysis based on the analysis of scientific publications sampling aimed at understanding modern processes and trends in the labor market paying attention to processes of digital development in the financial and banking sector.

Findings – authors of the presented article carry out the study in the field of economic, financial processes of employment, which were published mainly during 1998-2021. According to the study results the relevant conclusions and recommendations were made.

Keywords: employment, financial ecosystem, digital competencies, digital transformation, creative forms of employment, innovative professions of the future, marketplace, atlas of professions, big data, smart systems.

Кілт сөздер: жұмыспен қамту, қаржылық экожүйе, цифрлық құзыреттер, цифрлық трансформация, жұмыспен қамтудың креативті нысандары, болашақтың инновациялық кәсіптері, сауда алаңы, кәсіптер атласы, үлкен деректер, зияткерлік жүйелер.

Ключевые слова: занятость, финансовая экосистема, цифровые компетенции, цифровая трансформация, креативные формы занятости, инновационные профессии будущего, торговая площадка, атлас профессий, большие данные, интеллектуальные системы.

JEL classification: J21, J44

Introduction. One of the main directions of the modern business environment development is professional employees with digital competencies in the financial sphere. Currently, Internet platforms based employment in most countries of the world, including Kazakhstan, is insufficiently regulated by law.

In the modern era, digitalization processes are increasingly capturing and developing economic processes, which is due to certain milestones in the innovative technologies development, allowing this to diversify the processes taking place in the economy, as well as to differentiate the portfolio of services offered by the market.

The financial sector is particularly actively involved in this process. A study by Accenture confirms that 88 % of banks are focused on creating partner ecosystems and marketplaces. Analytical summaries of the study conducted by company's employees have led to the conclusion that about 90 % of financial organizations have an interest and desire to develop ecosystems aimed at meeting customer needs through partnership programs in collaboration with each other and commercial banks.

The process presented is not possible without the participation of competent professionals possessing innovative thinking and specialized training in the functioning of the digital economy and financial ecosystems. The entire population of the country and the world is experiencing a crisis related to the COVID-19 pandemic, which has severely undermined the economy and labor markets globally. The number of people losing their jobs is continuously rising. According to the ILO Official Bulletin (Jan 25, 2021), there was a record decline in the employed population worldwide in 2020, equal to the loss of 114 million jobs compared to 2019. The creation of digital ecosystems allows a change in the way employment

is shaped by the «professions of the future» and the need to change the approach to training future professionals to work in the digital environment.

The study relevance and priority stem from at least two reasons. The first reason is the lack of specially prepared reviews of the literature and other sources in the framework of modern methodologies in the labor market development and employment in the banking sector under conditions of digital transformation and the formation of banking ecosystem. The second reason is a substantial growth of publications related with the implementation of digital processes in the financial sector in the XXI century.

The majority of modern authors, financial analysts, and experts confirm the timeliness of research in this area in order to determine digital forms of employment in the financial sector and the list of the so-called «professions of the future». The article presents and reveals a detailed analysis of a source base on this issue, so the authors' opinions are presented in the main part of the study.

Literature review. How will the development of banking ecosystems make it possible to transform the labor market needs and provide the formation of completely different forms of employment demanded by modern society? This study takes place if we consider it in terms of a certain system, which consists of a mechanism for managing the processes of digitalization in the economy, modular development of banking ecosystems, and the creation of creative forms of employment.

The present article consists of three sections corresponding to these objectives.

The review used:

- 1. Strategic documents of the Republic of Kazakhstan [1,2,3,4];
- 2. Various literary sources [5,6];
- 3. Bibliometric databases Science Direct and Springer [7,8,9,10,11,12];

4. Expert opinions and speeches of leading financial analysts and top managers of the largest banks and financial institutions [13,14,15].

The most interesting studies in the field of digital employment and employment in ecosystems are observed by the following authors, such as James F. Moore [5], Nicholas Negroponte [6], Askar Akaev [9], Mario Pianta [11], Gaisina Dilyara Valeryevna [13] and others.

Based on the analysis, the authors are focused on identifying major trends in the development of new forms of employment in financial ecosystems.

Main part. The leading and basic documents, within the framework of which it is relevant to conduct this analytical review, are the state programs and strategies. The study of these sources is indisputable due to the justification of the priority of studying the issue in the framework of the state strategic plans realization and the implementation of major socio-economic objectives.

In the «Kazakhstan-2050»strategy the 4th priority direction is presented for execution –«Knowledge and professional skills – key guidelines of the modern education system, training and retraining of staff». Correspondingly, a completely different approach to the training of new format specialists with a maximum set of digital competencies who will be able to occupy a worthy niche in the financial market [1].

The main objectives of the «Digital Kazakhstan» program were «acceleration of the progress in Kazakhstan's economy and improvement of the population quality of life, as well as the creation of terms for the conversion of the economy to a basally new path – the digital economy of the future». Among the most important tasks are «Development of financial technologies and cashless payments, as well as Digital literacy increase in secondary, technical and professional, higher education» [2]. This once again confirms the axiom presented for the study of the need to revise the existing dogmas to the education methods, lifelong learning, which will allow solving unemployment problems that threaten the population in the future digital space [2].

In order to understand the development trends of the future labor market, it is necessary to determine the ideological directions in various professional areas, to determine the actual specialties and skills. In Kazakhstan, it is planned to develop the project «The Atlas of New Professions of Kazakhstan». The developer of which is the BTS Digital educational center in joint cooperation with the Ministry of Labor and Social Protection of Population of the Republic of Kazakhstan [3].

Within the Atlas of New Professions and Competencies in the Republic of Kazakhstan formation, leading trends have been developed and identified, which include:

- ✓ The proliferation of robots and smart systems
- ✓ Expansion of digitalization and big data applications
- ✓ Depletion of raw materials natural reserves
- ✓ Strengthening environmental regulations and the development of recycling

✓ The emergence of new work requirements for Generation Y and Z workers

✓ Changing consumer preferences of the population [3].

It is especially important to analyze and synthesize the available references to the studied definitions– «Ecosystem», «Business ecosystem», «Financial ecosystem», «Digital financial system and employment».

The concept of «ecosystem» has been used for a number of years not only in biological research, but also in business. In 1930 scientist Arthur Tansley from Britain used the term "ecosystem" to describe a system of interactions within the environment between individual organisms, as well as with the environment itself.

Accordingly, the beginning of a certain system was laid, in which various objects can interact, regardless of their origin, form of expression and purpose. It is in the semantic content of this interpretation that the «ecosystem» is manifested and begins to be used in many industries, including financial. For, in his words, «in order to thrive, these organisms compete and collaborate with each other on available resources, co-evolve, and jointly adapt to external disruptions», which just captures economic processes to a greater extent.

To confirm these facts, it is necessary to refer to the research of business strategist James Moore, who back in the early 1990s defined the conceptual and strategic planning of the business ecosystem, which even now has a fairly voluminous spectrum in the field of high technologies. He suggested: «consider individual companies not as a single player, they should be considered like a representative of the business ecosystem, accumulating many partakers from various industries. Like a biological ecosystem, a business ecosystem smoothly becomes a structured community, and not just a collection of random elements» [5]. For Moore, a «business ecosystem» is an economic community where elements interact in the form of various individuals and organizations. An integral characteristic of this economic community is the production of values in the form of services and goods that are consumed by the participants in the ecosystem. The elements of this ecosystem are manufacturers, suppliers and their competitors and others. In the process of developing new directions for the development of central companies within the ecosystem, these elements change their roles and strengthen their capabilities. At the same time, some elements of the system claim to be a leader that can be appreciated by the community, as it allows other members of the community to understand the overall strategy and develop through interaction and support [5].

James Moore differentiated the use of a number of similar environmental comparisons by suggesting that the «the particular niche' a business occupies is challenged by newly arriving species» [5]. To a greater extent, this meant that large business entities, therefore, needed to become proactive in developing mutually beneficial relationships with customers, suppliers and competitors.

The position of J. Moore is quite interesting, detailed, and suitable for the modern understanding of ecosystems. Indeed, the term has long ceased to position itself only in terms of an ecological concept. This interpretation is used in business and a number of other industries, and with its help a modern trend has been formed, which determines the use of harmonious digital systems for the development of a number of business areas. That is, business, including financial business, has as its main goal the creation of such innovative digital systems, which could perform a full range of services, and in related industries.

University of California researcher B. DeLong identified the significant role of the business ecosystem in creating new technologies following the example of Silicon Valley, since this business system has relevant key characteristics and processes such as «early test marketing, short product-development cycles, early corporate independence, options-based compensation, venture funding, rapid prototyping» for the development of new technologies and their subsequent commercialization.

It is rather complicated in the analysis of the concepts under consideration that the «Financial or banking ecosystem» is not a fundamental unit. Accordingly, it emerged spontaneously under the influence of rapidly integrating digital technologies into the science and banking business practice. In parallel, the studied component of this process is the processes of employment in financial ecosystems.

Introduced into wide circulation back in the mid-90s of the last century by Professor N. Negroponte of the Massachusetts Institute of Technology, the concept of digital economy has long entered the lives of the world's population. However, in the original version, the process of digitalization was shown as auxiliary or accompanying one, but nowadays, this process has begun to exist independently, forming supply and demand, parallel economy, virtual, augmented reality, modifying the entire social fabric of modern society [6].

The banking sector is increasingly rapidly turning into Fintech, which is described in many contemporary sources. Digital education formats are developing rapidly. Thus, 24 million people use the services of one of the most famous educational online platforms Coursera. There are more than 2000 courses in 160 specializations. In their preparation take part more than a hundred and fifty educational institutions. There are cloud universities in many countries of the world today.

The ecosystems development in business in the West was first discussed more than 20 years ago, when the private capital market in Kazakhstan was still in the formation stage. Ecosystem is a new term related to the digital environment, which has appeared recently. It should be noted that now there is no unified approach to the concept of «digital ecosystem», «financial ecosystem» or «banking ecosystem», everyone puts their own specific understanding into this term. The dominant idea in most of the presented approaches is that the ecosystem is seen as a number of processes that organize interaction or complement each other in the innovation sphere.

Now the concept of ecosystem is used in relation to the digital economy of a country or region, the economy of a business entity, as well as to companies providing financial services based on information and communication technologies.

Ecosystem represents a new business concept that may become dominant in the market in the future. The analytical assessment of McKinsey experts: «By 2025, ecosystems may account for about 30 % of global GDP (about 60 % of all non-productive income of companies in the world) » [7]. Sberbank experts' analytical estimate: «By 2025, Ecosystems will account for ~30 % of global revenues».

Having examined the term «Digital financial system and employment» on the Science Direct portal, the system found 338 publications with a full or partial match of this term for the period 1998-2000, if narrowed down to «Digital financial system», the number of publications has been increasing in the last 2 years and amounts to 12000 results. Most articles focus on the analysis of financial inclusion, financial literacy, and digitalization of financial and business processes, on the impact of digitalization on business performance. There are also references to the impact of digitalization on the efficiency of employees working in financial services, digital financial inclusion, and sustainable employment.

The search query «Digital employment in finance» was stated on the Springer portal, a similar combination is found in 7 565 results. However, not all the results of the stated claimed search are relevant to the study purpose, however, but they have partial overlap and can be part of ergonomic and reliable information. These are, for example, articles exploring labor market outcomes in the business models of the digital platform in the economy; the impact of digital transformation on productivity and unemployment: empirical assessment and modeling business diversification and multifaceted markets; jobs, skills and extractive industries: overview and analysis of the Digitization situation and the future of work.

In their research, Zhechen Geng and Guosheng He study digital financial inclusion and sustainable employment. To study the impact of digital financial services coverage on sustainable employment in certain countries, with full consideration of end ogeneity and verification of their sustainability, the results showed that inclusive digital finance contributes significantly to sustainable employment, and this effect is heterogeneous. Digital financial inclusion contributes to sustainable employment in lower-middle-income countries, but the effect is negligible. In upper-middle-income and high-income countries; however, the effect is significant, more so in the former than in the latter. Such results help to orient the study of employment in digital ecosystems and to conduct detailed research on the symbiosis of the financial literacy of the population in Kazakhstan. The results also help to draw conclusions about the positive or negative impact of these factors on improving employment processes and increasing incomes of different categories who are employed in the financial sector [8].

The «Employment in the digital economy»query sorted 3 828 results. The analysis of this terminological combination shows researchers are concerned about the topic of employment and training in the digital economy in many countries of the world and this topic is key in the analysis of the processes of training and employment of competitive specialists with innovative knowledge and professional competencies.

For example, the article by Askar Akaev, Alexander Petryakov, Reiff-Stephan Jorg, and Laszlo Ungvari «Education System and Labor Market in the Context of Digital Transformation» consider today's fairly flexible economic systems, in which the requirements for qualifications are constantly changing. The authors identify the key factors for the sustainability of the educational process: the continuity of educational process and the acquisition of new knowledge. In addition, the authors also indicated that there are new technological challenges that require appropriate adaptation of the higher education system, which still lags behind the requirements of the new technological revolution. It is possible to strengthen training for obtaining highly qualified specialists and gaining competitive advantages in international markets, among other things, by introducing STEM (Science, Technology, Engineering and Mathematics) [9].

Sanae Tashiro and Stephen Choi's study«Labor market outcomes under digital platform business models in the sharing economy: the case of the taxi services industry» was quite informative. Naturally, the

industry affiliation of research is different, but there are general conceptual foundations that allow us to assert that the influence of online platforms and various digital platforms has a certain impact on the supply of labor. At the same time, it changes the behavior of employees who behave differently within the traditional employment system than within the online business platform in the economy [10].

In his research on «Technology and employment. Twelve stylized facts for the digital age» Mario Pianta identifies 12 main factors, summarizing which we can draw the following conclusions: society itself generates technologies, technologies in turn lead to savings in human labor, which subsequently causes technological unemployment and inequality under the influence of demand and structural changes. Thus, there are business cycles, different technology strategies, changes and decisions that, individually or in combination, affect employment in different ways, and their role may differ depending on the industry, occupation or economic level. In addition, changes in employment are not limited to labor markets, but can also be influenced by the diffusion of technological innovations [11].

In 2017, John Zysman and Martin Kenney devoted their research to intelligent tools and digital platforms, analyzing the implications for work and employment. Their main idea is that it is necessary to act in such a way that citizens, as workers and consumers, can participate in shaping the future, not just allow it to happen to them. It is not about the emergence of robots, but rather about how to guide the evolution of platforms, the development and implementation of intelligent tools and systems (ecosystems) [12].

However, no basic definition corresponding to the specified search parameters was found in any of the considered sources. That is, there are elements covering related industries, directions, so, it should be noted a high degree of relevance of studying the requested terminology in order to generalize them and present the author's definition – «banking ecosystem».

An important source is the information identified in the expert assessments of financial analysts within the framework of this topic.

Gaisina Dilyara Valeryevna, Head of the FS Consulting Practice, Price water house Coopers, defines ecosystem as: «1) a set of participants –participants interacting with the organization and directly or indirectly involved in the «value chain» (universities, sales agents, communities), as well as customers; 2) as a marketplace – a platform offering various seamlessly integrated products and services, covering the widest range of customer needs of one profile; 3) as a self-developing organization – an organization that uses innovative approaches to management and sees the company as a «living organism(including the concept of a «turquoise organization»)». The transition to an ecosystem is a natural response to the changing needs of all market participants, as well as to the development of technologies [13]. Only a significant and maximum growth in relevant competencies will allow an entity to form a prosperous ecosystem, the dynamic development of which will lead to the emergence of new professions in this field.

Ilya Polyakov, Chairman of Rosbank Management Board, emphasizes in his interview that «the development of banking services in an open banking format (open banking) increases competition for customers and sets strict requirements for service efficiency and the level of technical maturity. Traditional internal tools for creating products do not provide the required speed and quality of changes, therefore, financial and technological companies are actively involved. This is not typical for conservative banking sector and requires a change in the approach to assessing the institution of partnership. There are also examples when open banking leads to the fact that large players pull over the client flow from small ones. All banks are actively investing in digitalization. On the other hand, there is a shortage of staff in this area, so there is a serious struggle for the best specialists. Everyone tries to be an attractive employer for the younger generation. Rosbank is trying to attract young talents that will help us accelerate our digital development» [14].

Anton Meltsov, Executive Sales Director at IC Freedom Finance, notes that «according to Boston Consulting Group forecasts, the shortage of IT personnel in Russia on the horizon of five to seven years may reach one million people. The state is not able to provide training of modern highly qualified personnel for this industry alone. This task is undertaken by private companies, primarily IT giants, who are well aware of the personnel specifics of their industry».

According to Irina Velieva, Deputy Director of the Financial Institutions Group at S&P Global Ratings: «synergy may consist in saving on operating costs (rent of premises, personnel) and an increase in commission income from cross-selling. Also, in general, the group can benefit from the fact that the client spends most of his financial «life» within one ecosystem and spends a higher share of his income on the services of this group».

Irina Kushnareva, First Deputy Chairman of the Council at the Agency for Regulation and Development of the Financial Market of the Republic of Kazakhstan, believes that «the principal advantage

of an ecosystem is experience and loyalty of the client. According to her, with the possibility of convenient «seamless» receipt of various services in one place, it is unlikely that the client will look for other providers even if there are competitive offers.

It is worth highlighting the results of the Korn Ferry (NYSE: KFY) study, which points to the looming shortage of specialists around the world, which companies will acutely feel by 2030. There is currently and is expected to be an oversupply of low-skilled specialists, and a shortage of qualified specialists with higher or secondary specialized education. It will be aggravated by the fact that increasingly intensive digitalization and the complexity of business processes require higher qualification, technical knowledge, and skills as well as managerial skills from employees. The share of rank-and-file personnel in the total revenue structure is decreasing, while the share of high-level specialists is growing. That is why investing in education and digitalization is the key to maintaining the competitiveness of business and the country as a whole. According to Rahim Abildayey, an expert at Korn Ferry Hay Group: «Already today there is a certain shortage of personnel in a number of specialties in Kazakhstan, which is also confirmed by the fact that one of the main directions of the "Digital Kazakhstan" program is the development of human capital. Companies are often forced to conduct a thorough selection at the selection stage, to attract specialists from near and far abroad in order to find the necessary personnel» [15]. That is why it is necessary to develop absolutely new, high-tech competencies necessary for employees of financial ecosystems. a set of necessary competencies in the future competencies are presented in Figure 1. Acquired competencies are key to shaping a successful future and full employment. Megatrends such as globalization, technological progress, and demographic changes are changing society and the nature of work, generating a growing demand for higher skill levels and new skill sets.

Summarizing all the above, it should be noted the importance of studying various literary sources, expert opinions, strategic programs, strengthening the theoretical significance of the study in order to identify the main «bottlenecks».

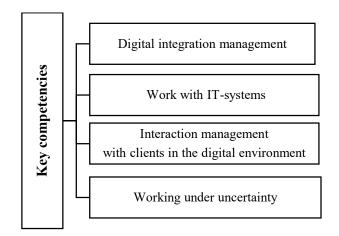


Figure 1. List of key competencies required for future graduates to be successful in financial ecosystems* * Compiled by the authors

As we can see from expert opinions, the main problem in the development of quality ecosystems is the insufficiency, and sometimes the lack of highly professional, competitive personnel who would ensure maximum continuity and efficiency of these systems.

Conclusion. During the analysis of the mentioning terminology main sources in the study of employment in banking ecosystems, it is necessary to highlight a number of results obtained.

This review demonstrates the consensus in the recent literature regarding the understanding of «digital employment» and the «financial ecosystem» as a new and advanced form of activity in the modern labor market. In order to implement managerial impacts (regulation, incentives) on «ecosystems», a common conceptual framework, principles, and approaches must be developed for all markets, including financial markets.

To summarize all of the above, there are a number of factors and conclusions to be drawn:

1) to note the study's theoretical significance in order to identify the main «bottlenecks», issues in the field of research of digital services in the financial sector, taking into account IT technologies, the range of services, interaction with consumers, and the quality of staff work;

2) integration into a system that allows determining the most relevant directions of employment market development, considering diversification of professions of banking sector employees in conditions of dynamic development of banking ecosystems in the platform economy;

3) the determination of the state policy directions of the Republic of Kazakhstan on the development of higher education is the continuous improvement of the education quality, modernization of its content and forms of organization of the educational process; the introduction of educational innovations and information technologies. Educational innovations in higher education institutions include innovative educational programs. Innovative educational programs should provide a type of education that will prepare a person for life in dynamic, rapidly changing environment;

4) the priority of universities training in Kazakhstan to ensure full-fledged employment in the financial sector of highly specialized professionals with digital skills in finance, to be able to find employment and become truly competent professionals, especially during the development of business ecosystems.

The methodology of the Atlas is based on the Technological Foresight of Competencies (Skills Technology Foresight), developed in 2014 by the International Labor Organization, the ASI and the Skolkovo Moscow School of Management, which suggests the need to introduce such financial professions as a multicurrency translator, intellectual property appraiser, manager of crowdfunding and crowdfunding platforms. The Atlas identifies more than 160 new as well as outdated professions in 19 major industries and technological areas. In order to understand future market trends, to know the priority areas in various professional areas, and to identify relevant specialties and skills, Kazakhstan plans to develop the «Atlas of New Professions in Kazakhstan» project.

5) the development of the competence model of future specialists and the effectiveness of their application is a fundamental resource in the realities of rapidly developing employment conditions and the increasing complexity of the digital space.

Also it is crucial to study issues in the field of digital services research in the financial sector, taking into account IT technologies, the range of services, interaction with consumers and the quality of staff work. All this, being integrated into the system, will allow to determine the most relevant directions for the development of the employment market, taking into account the professions' diversification of banking sector employees in the conditions of dynamic development of banking ecosystems in the platform economy.

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БАНКТІК ЭКОЖҮЙЕЛЕРДЕГІ ЖҰМЫСПЕН ҚАМТУДЫ ЖАРИЯЛАУ БЕЛСЕНДІЛІГІНІҢ НАЗАРЫНДА ДАМЫТУ

Аңдатпа

Мақала жарияланым белсенділігінің динамикасын зерттеуге қолданыстағы әдеби, библиометрикалық деректер базасына сәйкес басқа ресми дереккөздерге "цифрлық қаржы жүйесі және жұмыспен қамту" бағыты бойынша жарияланым белсенділігінің динамикасын бақылау. Нақты материалды өңдеуде қолданылатын әдіснама - хронологиялық, логикалық, жүйелік тәсіл, жалпылау әдістері сияқты дәстүрлі ғылыми әдістер қолданылды. Зерттеудің бірегейлігі / құндылығы цифрлық бизнестегі еңбек нарығы мен жұмыспен қамтуды трансформациялау процесін қарастыру және зерттеу болып табылады. Мақала қаржы - банк саласындағы цифрлық процестердің дамуы жағдайында еңбек нарығындағы қазіргі заманғы процестер мен үрдістерді түсінуге бағытталған ғылыми жарияланымдардың іріктемесін талдауға негізделген дереккөздік талдауды қамтиды.

Зерттеу нәтижелері - ұсынылған мақаланың авторлары негізінен 1998-2021 жылдар аралығында жарияланған жұмыспен қамтудың экономикалық, қаржылық процестері саласында зерттеулер жүргізеді. Зерттеу нәтижелері бойынша тиісті тұжырымдар мен ұсыныстар жасалды.

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РАЗВИТИЕ ЗАНЯТОСТИ В БАНКОВСКИХ ЭКОСИСТЕМАХ В ФОКУСЕ ПУБЛИКАЦИОННОЙ АКТИВНОСТИ

Аннотация

Статья посвящена исследованию динамики публикационной активности в области «Цифровая финансовая система и занятость», в соответствии с действующими государственными программами, существующими литературными, библиометрическими базами данных и другими официальными источниками. Используемая методология при обработке фактического материала - использовались такие традиционные научные методы, как хронологический, логический, системный подходы и методы обобщения. Оригинальность / ценность исследования заключается в рассмотрении процесса трансформации рынка труда и занятости в цифровом бизнесе. Статья содержит источниковый анализ, основанный на анализе выборки научных публикаций, направленных на понимание современных процессов и тенденций на рынке труда в условиях развития цифровых процессов в финансово - банковской сфере. Результаты исследования - авторы представленной статьи осуществляет исследования в области экономических, финансовых процессов занятости, которые были опубликованы в основном в период с 1998 по 2021 годы. По результатам исследования сделаны соответствующие выводы и рекомендации.

