

Grigory N. Lanskoj¹

ARCHIVES AS SOURCE AND INSTRUMENT OF DIGITAL ECONOMY

ABSTRACT

The paper is dedicated to the definition of place of archives in their institutional and informational quality in the system of digital economy. Digital economy is defined in the context of analyzing the theme as community of forms and spheres of economic development, regulated by usage of electronic and particularly digital technologies. Firstly, possibilities of development of archival theory and practice are presented in it, divided by specificity and content of digital economy. They are directly connected with the inclusion of new computer technologies in the sphere of archival work, and as a result, with part-automation of some types of work which can be based on realization of cognitive possibilities of artificial intellect. This process is analyzed also in the context of appearance of new professional competences, belonging to future generation of e-archivists, specialists in working with archival documents, created, and integrated to developing digital economy. The paper furthermore studies methodical and theoretical problems in the sphere of archival and documentary sciences which form conditions of digital transformation, of social and economic relations. Among these problems, the paper indicates a change of community of definitions formed in «paper» (analogue) period of development of archives and records management services, formation of cloud systems for preservation and inventoring of archival documents, modernization of new conditions of authorizing access of different categories of users to informational resources, disposed in electronic systems on the basis of the publicity principles and the necessary security of some types of documents.

KEY WORDS: archives, archival documents, informational systems, technologies, digital economy, preservation, description, access, public communication.

ARCHIVI COME FONTE E STRUMENTO DELL'ECONOMIA DIGITALE

SINTESI

Il contributo è dedicato alla definizione del posto degli archivi nella loro qualità istituzionale e informativa nel sistema dell'economia digitale. L'economia digitale è definita nell'ambito del tema di analisi come comunità di forme e ambiti di sviluppo economico regolati dall'uso delle tecnologie elettroniche e in particolare digitali. In primo luogo vengono presentate le possibilità di sviluppo della teoria e della pratica archivistica supposte dalla specificità e dal contenuto dell'economia digitale. Sono direttamente collegati con l'inclusione di nuove tecnologie informatiche nella sfera del lavoro archivistico e di conseguenza con l'automazione parziale di alcuni tipi di lavoro che possono essere basati sulla realizzazione di possibilità cognitive dell'intelletto artificiale. Questo processo viene analizzato anche nel contesto della comparsa di nuove competenze pro-

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fessionali appartenute alla futura generazione di archivisti elettronici come specialisti nel lavoro con documenti d'archivio creati e integrati per lo sviluppo dell'economia digitale. Successivamente vengono studiati problemi metodici e teorici nell'ambito delle scienze archivistiche e documentarie che si formano o sprofondano nelle condizioni di trasformazione digitale del sociale e nei loro termini di relazioni economiche. Tra questi problemi in carta sono indicati il cambio di comunità di definizioni formata nel periodo «cartaceo» di sviluppo di archivi e servizi di gestione dei record, formazione di sistemi cloud per la conservazione e l'inventario dei documenti d'archivio, l'ammodernamento di nuove condizioni di autorizzazione all'accesso di diverse categorie di utenti alle risorse informative disposte nei sistemi elettronici sulla base della composizione dei principi della pubblicità e della necessaria sicurezza di alcune tipologie di documenti.

PAROLE CHIAVE: archivi, documenti archivistici, sistemi informativi, tecnologie, economia digitale, conservazione, descrizione, accesso, comunicazione pubblica.

ARHIV KOT VIR IN INSTRUMENT DIGITALNEGA GOSPODARSTVA

POVZETEK

Prispevek je posvečen opredelitvi mesta arhivov v njihovi institucionalni in informacijski kakovosti v sistemu digitalnega gospodarstva. Digitalno gospodarstvo je opredeljeno v kontekstu kot skupnost oblik in področij gospodarskega razvoja, ki se urejajo z uporabo elektronskih in predvsem digitalnih tehnologij. Najprej so v njej predstavljene možnosti razvoja arhivske teorije in prakse, ki jih predvidevata specifičnost in vsebina digitalne ekonomije. Neposredno so povezani z vključevanjem novih računalniških tehnologij na področje arhivskega dela in posledično z delno avtomatizacijo nekaterih vrst dela, ki lahko temelji na uresničevanju kognitivnih možnosti umetne inteligence. Ta proces je analiziran tudi v kontekstu pojava novih strokovnih kompetenc, ki pripadajo prihodnji generaciji e-arhivistov kot strokovnjakov za delo z arhivskimi dokumenti, ki so ustvarjeni in vključeni v razvoj digitalnega gospodarstva. V prispevku so proučeni metodični in teoretični problemi na področju arhivskih in dokumentarnih ved, ki se oblikujejo v pogojih digitalne transformacije družbe in v njihovih ekonomskih odnosih. Med problemi, obravnavanimi v prispevku, se navaja sprememba skupnosti definicij, ki so se oblikovale v »papirnatem« obdobju razvoja arhivov in storitev upravljanja z dokumenti, oblikovanje oblaknih sistemov za hrambo in popisovanje arhivskih dokumentov, posodobitev pogojev dostopa do informacijskih virov za različne kategorije uporabnikov, razporejene v elektronske sisteme na podlagi pravilnikov o dostopu javnosti in potreb po varnosti nekaterih vrst dokumentov.

KLJUČNE BESEDE: arhivi, arhivski dokumenti, informacijski sistemi, tehnologije, digitalno gospodarstvo, hramba, opis, dostop, javno komuniciranje.

INTRODUCTION:

Digital transformation in spheres of social relations, economical development, political practice, cultural and educative activity forms objective reality for creation, preservation, diffusion and using of informational resources. Firstly this evident and directly developing process covers sphere of records management. In it is possible to see first steps of transition from paper to electronic tradition of documenting information with different level of publicity. Practically for equipment of these changes it is necessary to renew technical and technological resources accessible for collaborators professionally obliged to create documents for administrative and other, connected with them purposes and to make their registration in electronic informational systems. It is possible to say that all period of second half of XX century was indicated by creation of conditions and than by intensive development of electronic transformation in sphere of records management speed of which depended only from intensity of scientific progress of informational technologies and level of professional training in this sphere. In this context model of post-industrial society created in sociological studies of 1960 and 1970 years in USA and in some countries of Western Europe was founded on diffusion and accessibility of new technologies for public interests and on following stage for human interest (Toffler, 1980). In sphere of archival work process of digital transformation later in comparison with sphere of records management which can be explained by two occasions. First of them includes in necessity of infrastructural elements of preservation, inventorying and description of electronic documents in archival systems especially in form of trusting access to their content for peoples responsible for their security, officially authorized and all resting categories of users. Second occasion is also objective by its content and connected with statute of archival services as ending participants of process of migration of sources of documentary information from their creation and using in current administrative practice to inclusion of their part to community of objects of historical and cultural heritage. In result of influence of these two occasions and of known professional conservatism of many archivists problem of connection of archival practice with realities of digital economical and social process was analyzed firstly on theoretical (Avtokratov, 2001) and only than on methodical and practical levels.

METHODS:

Methodology of paper is based on using of system approach for study selected problems. In paper it is used in three directions. Thirst of them is oriented to analysis of archives in quality of informational system which includes composition of different types of archival documents, metadata system and informational technologies using for stages of archival work. The second direction is connected with study of digital economy as specific sphere in which production, diffusion and using of electronic informational sources can be indicated as specially organized strategy of industrial activity. In this context it is possible to make objective evaluation of efficacy of such aspects of work of archivists as preparing digital copies and images of documents, communication with visitors of lecture halls organized in virtual form or organized in traditional form with computer equipment. Thirdly system approach is used in paper for demonstration of direct connection between stage of creation and current (operative) using of records) and stage of their transition to archival services of "historical" public type and disposition in them for definitive or long preservation. Application of this approach to aim of presenting study gives possibility to show necessity of organization of whole cycle of work with documentary sources in electronic sphere in case of technical and technological existing of this possibility. Also in paper is used complex approach. It is oriented to study

of objective and subjective factors important for development of archives in realities of digital economy. Between objective factors are firstly indicated methodical principles of work with documents created in electronic form. Their difference is depended not only from level of technical and technological progress in different countries but also from attraction of representatives of different national scientific schools to theoretical points and methodological approaches belonged to new post-industrial realities of archival work. Also between objective factors in paper is indicated existence of open public archival informational systems in countries with different type of political regime. In paper is presented direct connection between development of political governing practice, digital economy and functioning of public archival services.

Using of system and complex approach is logically connected with choice of synthetic and comparative methods for prepared study. Synthetic method had been used for integration of concrete types of archival work to presentation of whole cycle of managing records from their collect and preservation to organization of communication of different categories of uses with them. Application of this method for study gave possibility to show connection between state of documents in period of their practical evaluation and sometimes necessary selection and objectives of their using in court and than in large perspective. Comparative method had been used for indication of difference of approaches to archival work in democratic and autocratic systems of public relations. In condition of diversifying democracy using of technologies and services of digital economy is finally oriented to organization of public access to archival documents indicated as part of national heritage (Code du patrimoine, 2021). In conditions of permanent or cycled development of autocracy from period of creation until their preservation in state or other institutionally depending archival services security of content of big and important part of electronic documents rests in priority in comparison with interests of public access to informational resources. In a whole level of openness of socially important documentary information can be indicated as the main criteria in using of comparative method for analysis of different traditions in work of archival services in conditions which form during diversifying and development of different branches of digital economy.

RESULTS:

Despite on different nature of processes in sphere of economical development and direction of functioning of public archival services it is evident that changes in industry of new informational technologies take influence on practice of work of archivists on the same level as theoretical and methodical approaches adopted in sphere of archival science. It is possible to say that digital transformation gives possibility to make new conditions not only for practice of managing electronic and than other types of records but also for evolution of mind of specialists internally prepared for attraction of achievements of informational sciences. In Russia on theoretical level conditions for this line of professional attraction were formed in the end of 1970 – beginning of 1980 years (Gloushkov, 1982). Also in this period in practice of documentary studies were included basic principles of information theory according which analysis and using of historical and particularly archival documents must be based on features of type of information presented in these documents. In this occasion on base of special historical studies there was created community of quantitative methods (statistic method, method of content analysis) oriented for work with big statistic data. For realization of these methods were used electronic computers technical and program features of which developed in context of scientific progress.

Indicated processes in sphere of historical studies (mostly devoted to study economical history traditionally basing on statistic sources (Koval`chenko, 1982)) formed in 1990 years base for reminding of approaches to analysis of documentary sources in global context of diplomatic science (Duranti, 1998). Than development of archival studies devoted to using of computer technologies in work with concrete documents became to develop in Russia and from other part in countries of Northern America and Western Europe in different directions. Main feature of studies of Russian archivists was connected with traditional interpretation of evaluation documents and planning of objectives of their using. For example they actively included in their conceptions definition of "documentary" (Kozlov, 2017) and social memory (Ilizarov, 2021) as mostly important object concentrated and needed for study in archives. Such methodological approach was oriented for making possibility of part separation of human and technical problems.

Human problems were analyzed in context of developing methods and practices of preservation, description, using of documents mostly on their traditional – original – supports. Digital transformation of these supports in form of creation copies for presentation in informational systems of archival services was interpreted in theoretical studies as process which changes only formal external features of documents without influence on their content. In this occasion global theory of document (identified in American and European scientific literature as "diplomatic science") formed in Russia is based on viewpoint according which cognitive and social functions of documents don't change in conditions of technical progress and exist independently from transformation of material base of objects previewed for archiving. In this context forms and types of archival work also rest traditional during all period of development of archival services and can be only corrected by their mechanism and intensity in result of using new computer technologies. This for example means that transformation of approaches to description, evaluation, organization of public access to electronic and to digital documents has only technological content and doesn't have big distinctions from the same directions of work with archival documents on traditional material supports. That's why in contemporary development of informational relations in Russia on administrative and public levels it is possible to see big difference between conceptions of work with documentary sources in community of archivists and in sphere of work realized by specialists in sphere of informational technologies.

In practice of work of archival services in many European and American countries it is possible to see more synchronous tendency in theoretical and practical directions in work of specialists occupied by decision of mostly important problems of archival work. In conditions of presenting in some studies attraction of basic importance of human interests in this sphere of professional activity (Delmas, 2006) this situation in sphere of archival methodology and practice can be explained by two occasions.

First of them includes in more uniform realization of new generation of international norms based on EAD standard (Society of American Archivists, 2002) in countries with close level of resources and possibilities of technical and technological development. Realization of this standard in sphere of creation metadata systems formed conditions for transition to contemporary conditions of creation and using open archival informational systems (OAIS) which got in last years big diffusion. This process indicated by definition of global normalization of archival theory and practice gave possibilities to many countries for progressive development of different stages of work with archival documents. The second occasion for existence of synchronous tendencies in sphere of archiving informational sources with using of achievements of digital economy is connected with forming continuity in processes of records management in institutions obliged for

creation, for long-term preservation and organization of access to majority of records which have social, historical and cultural importance. Actually model of this connection was formed for documents of administrative origin forming and managing of which is important particularly from point of developing technological system of electronic government (Hajtnik, 2019). But is evident that in close perspective forming of whole, methodologically determined system of transformation of all types of documentary sources from sphere of their creation to quality of objects of public access in archival services can be realized in electronic – “cloud espace”.

DISCUSSION:

The main problem for discussion includes in balance of advantages and threats connected with process of influence of realities of digital economy on forming, legal estate and using of archives. Analysis of this problem is certainly based on confession of inevitability of scientific and technical progress but in the same time objective evaluation of process and existing results of digital transformation shows not only positive aspects in practice of public informational relations. In presentation of its threats and dangers it is firstly possible to see stereotypic elements. For example it is possible to see viewpoint according which forming of digital copies from originals of documents on traditional (paper, photographic, tape) supports can decline physical estate of them and of texts of bad visual quality presented on these supports. Adherents of this opinion (between which there are mostly specialists in preservation of documents) indicate that traditional supports can be more stable in comparison with new supports using for creation of digital copies or electronic originals of documents. In this context they are also prove danger connected with beginning on experimental level practice of substitute scanning of some categories of archival documents. In our viewpoint mostly important problem supposed by realities of digital economical development is connected with following rights of material and intellectual property on content of archival documents replaced in open informational systems. Insufficient regulation of realization of these rights in normative acts and different level of technological program equipment in sphere of informational security regularly forms among archivists intention to limit process of location of digital copies in informational systems accessible for public using.

Recognizing objectivity of indicated skeptical arguments it is necessary to indicate evident positive results of influence of digital economy on development of archival services and work with informational resources for preservation and using of which these services are responsible. Firstly technological instruments formed in process of digital transformation became base for enlarging of variability in sphere of preservation archival documents and in equipment of communication with them. Secondly in result of digitalization metadata systems to archival documents can be completed by images of these documents created in good quality. Also using and development of computer technologies forms large possibilities for projecting and creation of virtual halls and other infrastructural objects for communication with archives independently of their physical disposition.

CONCLUSION:

Finally it is necessary to indicate that in developed quality archives can be really presented and analyzed as important sources and instruments of digital economy products of which it is possible to see in many countries with stable industrial basis. Concentration in community of archives of important documentary objects belonged to historical, cultural and largely to social heritage gives possibility to show possibilities of using

digital technologies in sphere of finding and using valuable retrospective information as it possible to see for example in practice of recovery of architectural monuments (Borodkin, 2015). Also computer technological progress accelerates possibilities of search necessary information in metadata systems especially in case of existence in them possibility of access to electronic documents or to digital copies of traditional types of documentary sources. In the same time it is evident that in technologically developed estate archives can be effective instrument for functioning of digital economical system. From one part they can be used as places for secure disposition of informational resources which are highly important for state, society and concrete peoples. In this quality they take significant place in process model of electronic records management actually introduced in some countries. From other part in digital estate archives enlarge sphere of operative communication between their users and social institutions obliged or realized educative and other informational functions. In the same time it is necessary to indicate that utility of digital economy in archives depends from many important factors. Mostly important among them are technological equipment of informational relations in archival sphere and level of legal culture of creators and especially of users of documentary resources disposed in electronic – «cloud» - space.

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