
Chapter 4. POLITICAL SCIENCE, PSYCHOLOGY AND SOCIOLOGY

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ANALYSIS OF PUBLISHING ACTIVITY ON HUMAN RESOURCE MANAGEMENT SYSTEMS OF ENTERPRISES IN THE BASES OF ELECTRONIC RESOURCES IN TERMS OF INFLUENCE OVER ITS INNOVATIVE RECEPTIVITY

***Abstract.** This article is dedicated to research of the electronic resources of the world and Ukrainian university libraries in the area of Human Resource Management Systems (HRMS) for purposes of identifying trends, regularities and forming complex measures regarding their efficiency improvement. In the course of research the analysis of indicators of publishing activity performance was made. Increment rate indicators were calculated. Growth trends of HRMS publications in the world and Ukrainian scientific libraries were determined.*

JEL Classification: M12, A10

Introduction.

Human Resource Management System (HRMS) of the companies at this stage of development of the world and Ukrainian economy is considered to be the most important management and marketing element to increase returns of investing of resources and improve efficiency of companies and enterprises. In this conception the personnel innovative receptivity (IR) is considered to be the most important aspect for all the innovative measures. So performance of group and individual research in this area, aimed to search and introduction of the effective approaches involving personnel into business processes of companies and enterprises, allows extend competing efficiency of the company within the scope of innovative economy.

In particular, as of today such markets as industrial automation market, non-conventional renewable power generation market (NCRPG) pick up momentum, and throughout the world ambitious plans on expanding of new capacities are being developed.

The growth of capacities and skilled personnel formation are the important factor of accelerated development and success of the innovative technologies. It should be appreciated that we have been passing through the 4-th industrial revolution lately. Industry 4.0 is a new round of the industrial revolution, which is characterized by integration of production and network communication, demanding from the enterprises to have all eyes about one and introduce new technologies. Raising of competitive capacities of the companies not only in the area of industrial automation, but as well in the other areas of economy, such as NCRPG etc. is considered to be substantial part of knowledge, which is under consideration in the research provided, as well as it is useful to remember that innovation-director HRMS is an important part of this process.

The main objective of this article includes determination of demand and orientation of HRMS formation in the world practice and in Ukraine.

1. Analysis of world academic publications in HRMS

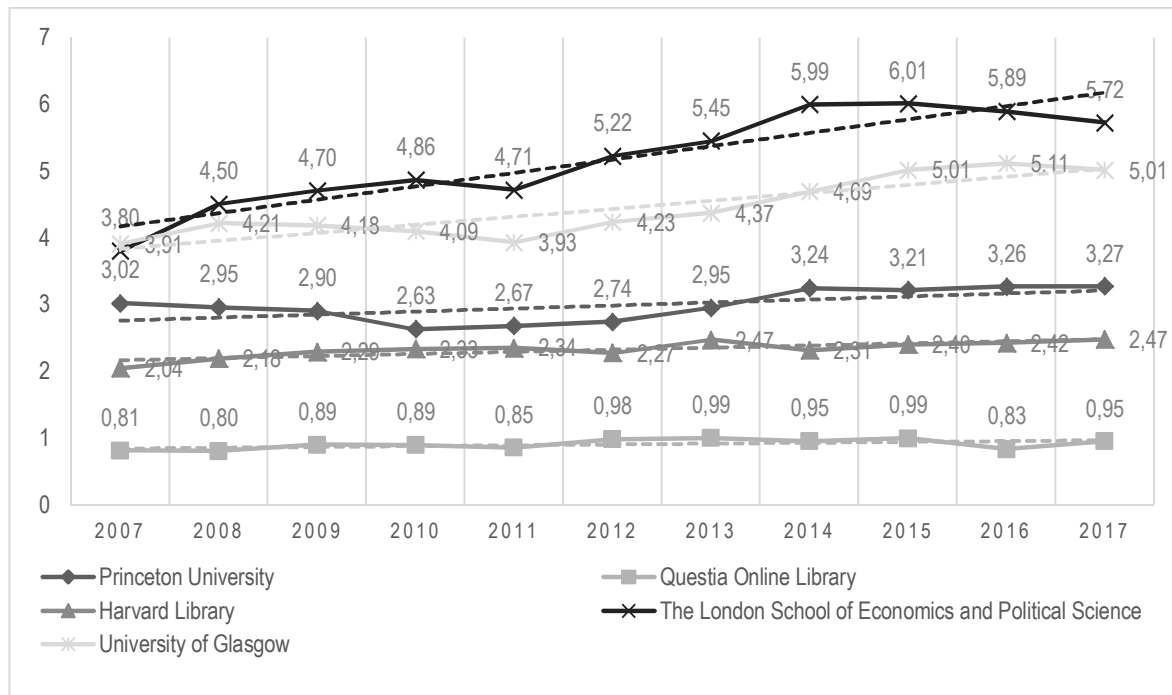
The part of definite academic publications is considered to be one of the major indicators of publishing activities in the scientific libraries, specifying interest in HRMS. The object of this research includes a number of databases of the largest world academic electronic libraries, such as: Princeton University (Electronic archive «of Princeton University», 2018), Questia Online Library (Electronic archive «of Questia Online Library», 2018), Harvard Library (Electronic archive «of Harvard Library», 2018), The London School of Economics and Political Science (Electronic archive «of the London School of Economics and Political Science», 2018), University of Glasgow (Electronic archive «of University of Glasgow», 2018) (Table1).

Table 1. World scientific libraries

Scientific libraries	Location	Since
Princeton University	USA, New-Jersey, Princeton,	1746
Questia Online Library	United States, Illinois, Chicago	1998
Harvard Library	UnitedStates, Massachusett, Cambridge	1638
The London School of Economics and Political Science	Great Britain, London,	1895
University of Glasgow	Scotland, Glasgow since	1451

The results of the appropriate data analysis are presented in Fig. 1. Sampling from the scientific libraries was taken from the journal articles, dissertations, conferences (Journal article, Dissertation/thesis, Magazine Article, Conference Proceedings), HRMS search (human resource management system). Research were performed according to data from 2007 to 2017. When analyzing the indicators of the world databases, we can note that in 2017 the share of HRMS publications increases almost in all the libraries in relation to 2007, consequently, we can see that almost all the world scientific publications pay greater attention to HRMS. Having analyzed performance of the above mentioned databases in Figure 1 in more details, we can see that The London School of Economics and Political Science ranks first as one of the oldest schools in Great Britain, specializing in study of social sciences and ranks second in the world (Harvard University) in the field of social sciences (Social Sciences and Management, 2017).

Economic subjects in this school rank fifth in top 10 the best in the world (London School of Economics and Political Science, 2018). And so the share of HRMS publications ranges from 3.8 to 5.99% in different years.



Note: vertical axis Y shows: share of publications in %, horizontal axis X – year.

Fig.1. Performance of HRMS based publishing activity according to scientific world libraries

University of Glasgow ranks second per share of publication; this fourth ranking University by seniority in Great Britain is included into 1% of the best higher education institutions of the planet. The share of publications per HRMS ranges from 3.91 to 5.11% in different years.

Harvard Library ranks third and one of the oldest Universities, found in 1638, the share of HRMS publications ranges from 2.04 to 2.47% in different years. In this library hundreds of millions publications have been collected. This publication is most cited, articles of Harvard Business Review on the subject of personnel management tell about: organizational culture, increase of communication abilities for the managers, regarding salaries, delegation of authorities, regarding working place. Volume of articles of Harvard Library, according to HRMS subject contains more than 2 mln. scientific articles from all the world. This publication is the oldest, published since 1636, having 73 libraries and is specialized in business education, and so performance of publication of these articles has been almost straight and stable over the last 10 years (as we can see in Fig.1.).

Questia On line Library in Fig. 1. is significantly below relative to the others (from 0.8 to 0.95%). This is due to that Questia On line Library a relatively new publication since 1998, and it has collected total around several dozens of millions of publications, and in the other libraries – hundreds of millions.

In this library special emphasis shall be on the books and articles in the journals on the humane and social studies (Questia, 2013). For characteristic of intensity of variations in time and validity of the further analysis, based on the diagram results obtained, the indicators of publishing activity performance according to the above presented databases were calculated. This data is given in Table 2.

Table 2. Indicators of publishing activity performance of the world databases over 2007-2017 on HRMS subject

Databases	In_{2007} , %	In_{2017} , %	Mean absolute increment, %	Basis absolute increment, %	Time series trend, %
Princeton University	3.02	3.27	0.03	-0.04	decreasing
Questia Online Library	0.81	0.95	0.01	0.10	increasing
Harvard Library	2.04	2.47	0.04	0.31	increasing
The London School of Economics and Political Science	3.80	5.72	0.19	1.50	increasing
University of Glasgow	3.91	5.01	0.11	0.57	increasing

Note: where, In_{2007} – base value of share of publications on HRMS subject over 2007; In_{2017} - base value of share of publications on HRMS subject over 2017.

As we can see from Table 2, indicators of the world databases in 2017 the share of HRMS publications was increased almost in all the libraries relative to 2007, consequently, significantly intense interest in HRMS and increase of studies in this area all over the world is observed. Let's analyze performance of the above mentioned databases in more details. We can see from Table 2, that steady growth of publishing HRMS activity from 2007 to 2017 is noted, where maximum basis absolute increment is fixed in 1.5% in The London School of Economics and Political Science, that in the absolute numbers constitutes 8 545 publications from 49 207 in 2007 to 57752 in 2017. This points to the fact that the global community gives much attention to HRMS over the last 10 years, as this is the direct index of the successful development of the enterprise. And only at Princeton University we can see minor recession by -0.04%. In the absolute numbers this is reflected in 2007 from 161 195 to 206 715 in 2017 growth by 45 520 publications, this not too little. And at the same time total number of publications from 5 344 675 in 2007 was increased to 7 347 069 in 2012 and came down to 6 327312 in 2017. Against the background of significant number of publications falling to -0.04% is far from significant.

2. Analysis of University libraries of Ukraine academic publications in HRMS

If we continue analysis we should present research of repositories of the scientific electronic University libraries of Ukraine, as follows: Electronic National Technical University "Kharkiv Polytechnic Institute" Institutional Repository NTU "KhPI" (eNTUKhPIIR) (Repository of the National Technical University, 2018), National Technical University "Igor Sikorsky Kyiv Polytechnic Institute" (ELAKPI) (Electronic

archive of scientific and educational materials of Ihor Sikorsky KhPI, 2018), Zhytomyr Ivan Franko State University (Repository of Zhitomir Ivan Franko State University, 2018), National University of “Kyiv-Mohyla Academy” (eKMAIR) (National University of "Kyiv-Mohyla Academy", 2018) (Table 3).

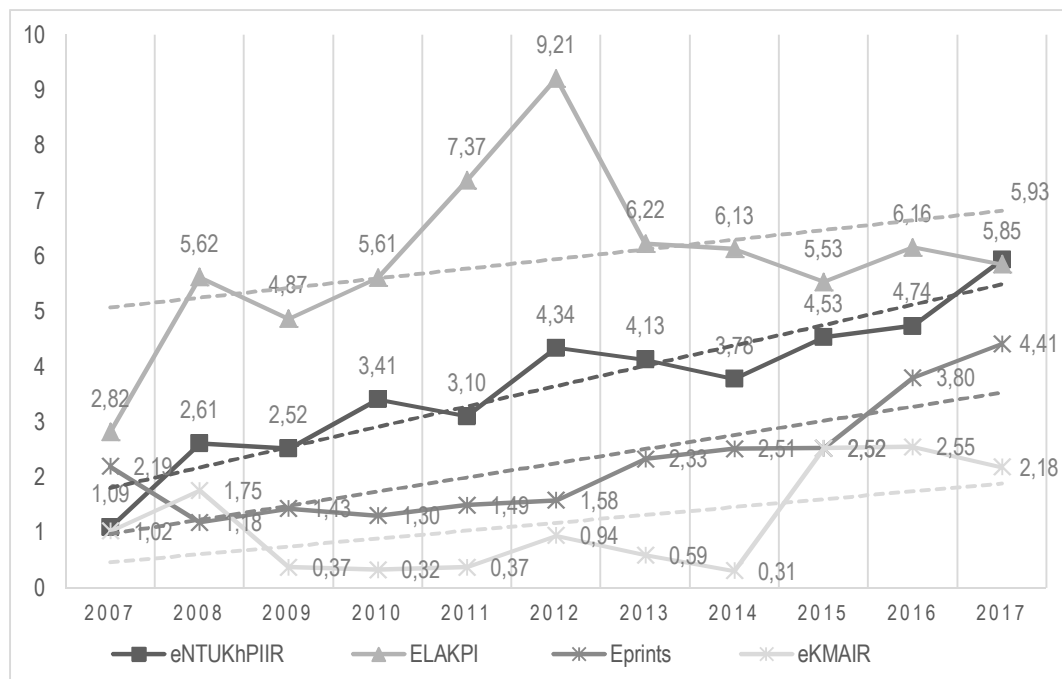
Table 3. Ukraine scientific libraries

Scientific libraries	Abbreviation	Location	Since
National Technical University “Kharkov Polytechnic Institute”	eNTUKhPIIR	Ukraine, Kharkov	1885
National Technical University “Igor Sikorsky Kyiv Polytechnic Institute”	ELAKPI	Ukraine, Kiev	1898
Zhytomyr Ivan Franko State University	Eprints	Ukraine, Zhitomir	1919
National University of “Kyiv-Mohyla Academy	eKMAIR	Ukraine, Kiev	1632

Search words: “Human Resource Management System”.

Next we will give performance of ratios of the share of HRMS publications to total number of publications in the electronic databases of the Ukrainian University libraries (fig.2). On the basis of data in fig. 2, we can see that ELAKPI repository ranks first in quantity of HRMS publications to total amount, meaning that interests in business education and education in the area of economy and management has been increasing lately. This University is located in the capital of Ukraine – city of Kyiv and more and more students, postgraduates and professors have paid attention to HRMS study in it over the last 10 years.

When going to analysis of the share of publications in the Ukrainian electronic bases on HRMS subject, we should note growth of scientific articles from 2007 to 2017 almost in all the repositories just in eKMAIR in 2017 we can see a small decrease meaning development in this area and urgency of this research.



Note: vertical axis Y shows: share of publications in %, horizontal axis X – years.

Fig 2. Performance of ratios of the share of publications on HRMS subject to total amount of publications in the electronic bases of the Ukrainian university libraries

In 2007 HRMS publishing activity was at a low level from 0.58% to 2.82%, however over 10 years by 2017 the share of publications of yEprints, ELAKPI and eNTUKhPIIR reached the high level from 4.41; 5.85 and 5.93% accordingly (fig.2), thereby bringing our country to the world level of publishing activity in this area. For reliability of these findings and further analysis let's perform computation of indicators of publishing activity performance. (Table 4). On the basis of this Table 4, we can make a conclusion that the share of HRMS publications holds out the world level, and considerably higher and in ELAKPI basis absolute increment reaches to 3.44%. When paying attention to the indicator of the share of publications for 2017 relative to 2007, we can see considerable growth of publication over this period, they approach to the world indicators, and some of them are higher than the world indicators, in particular repository eNTUKhPIIR has indication as 5.93%.

Table 4. Indicators of publishing activity performance of the world databases over 2007-2017 on HRMS subject

Databases	In_{2007} , %	In_{2017} , %	Mean absolute increment, %	Basis absolute increment, %	Time series trend, %
eNTUKhPIIR	0.47	5.93	0.48	2.82	increasing
ELAKPI	2.82	5.85	0.30	3.44	increasing
Eprints	2.19	4.41	0.22	0.06	increasing
eKMAIR	1.02	2.18	0.12	0.17	increasing

Note: where, In_{2007} – base value of share of publications on HRMS subject over 2007; In_{2017} – base value of share of publications on HRMS subject over 2017.

This is due to that the volumes of the world and Ukrainian databases differ remarkably. The world libraries have databases, which contain millions, and in Princeton University billions of the scientific publications and articles, in its turn the Ukrainian repositories have tens of thousands of such-like publications. The important shade of increasing performance of characteristics is considered, that just since 2011 development of the Ukrainian repositories and scientific libraries, their filling in with digitized material and forming of the electronic archives have started, this will result in a huge faltering growth of total number of publications, influencing performance signs. At the same time, in general this exerts not much influence on performance.

When analyzing indicator of mean increment of the share of publications, we can note, that their share increases in the range from 0.12 to 0.48%. Maximum value is observed at eNTUKhPIIR, meaning consistently increasing development trend to study and research in this area of knowledge. The scientists of the analyzable universities have started to pay a great deal of attention to HRMS development and influence to innovative receptivity of personnel.

On the basis of research of sources of the scientific publications of the area of knowledge under consideration we can make a conclusion, that fairly in Ukraine there are conditions, allowing applying HRMS. But this process is delayed by a set of the institutional and economic factors: few investment programs in this area of activity, volatility of the financial credit area, lack of the nationwide assistance, absence of the proper interest of the managers to pay attention to form development of just HRMS companies, but not to chase after every minute profit.

To realize HRMS and NCRPG advantages to the full extent system approach to management of personnel and productive-economic activity is required.

However in the modern innovative conditions NCRPG development is connected with integrated approach in the energy saving complexes, where it is necessary to use innovative-oriented HRMS while introducing these technologies, meaning goal-oriented innovative receptivity field of energy saving technologies within the framework of Human Resource Management Systems.

From our point of view within HRMS framework you should reformat realization priorities of subsystems and functions for integrated support of the process of the effective use of NCRPG technologies.

At the bottom of the new management paradigm we should consider synergetic approach in management. Synergetic approach is considered as the further development of system approach, giving to the specialist new possibilities to research and carry out management behavior (Gaponenko, Pankrukhin, 2011). To our view synergetic approach when an NCRPG technology supposes evaluation of the end-to-end social-economic and environmental and technogenic performance that at present under conditions of Ukraine is implemented weakly. One of the problems includes underdevelopment of the innovative HRMS component.

On the basis of the foregoing we can conclude, that just a synergetic approach in management of the plant and integrated use of NCRPG potential is an important aspect of improved performance in the market positions, competitive growth of the domestic plants, and consequently improvement of the innovative receptivity of the plants to NCRPG technologies (Diuzhev, Boichenko, 2018).

In addition, the situation with fragmentation and low availability of scientific databases in Ukraine and CIS countries does not contribute to increasing the susceptibility of HRMS. If there are generally accepted electronic databases of libraries in the world society, then in Ukraine there are only some small database sizes in a number of universities. Besides, such large state and national Ukrainian libraries as the State scientific and technical library, the National library named after Vernadsky, the State library named after Korolenko, and others, which have millions of funds of scientific and technical literature, but digitized material is not enough, of course, and this material that is not always available to the public.

It turns out that it is easier to find data in the foreign electronic sources than in the information field of Ukraine (Duizhev, Suslikov, Boichenko, 2017).

At the moment, they have just started discussing the question of the formation of a common catalog of public libraries of Ukraine, a single library card, optimization of library networks, optimization of library collections, the formation of copyright protection when digitizing and other important aspects that will help solve the problem of publishing activity (Dyuzhev, Suslikov, Bolshakov, 2017). All of this suggests that scientific work and research in the field of HRMS will lead to increase in a number of innovative perceptivity personnel.

Management as a control system in a more comprehensive sense means management, control, creation and maximum effective use of socio-economic systems and models of different levels. Therefore, management with its inherent consistency and sequence should be the basis for the management system in NCRPG enterprises, which will lead to the fullest possible use of resources and reduce the negative impact on the environment (Diuzhev, Boichenko, 2017).

Management activities in the management system of the enterprise are the work aimed at achieving the stated goal, which is a series of continuous interrelated actions. Accordingly, the fundamental principle of management is an integrated approach to linking goals with the resources and capabilities of the enterprise (Boichenko, 2018).

Conclusions.

In this work connected with research of publishing activity we have made the analysis of HRMS publishing activity from the point of view of its development and relevance in the Ukrainian sector and on the world-wide scale. For this purpose, we have analyzed the sample of scientific libraries and repositories of different countries, performance of the number of scientific articles, as well as the share of publications on the subject of HRMS in the total world volume and in CIS countries for the period 2007-2017. In addition, the characteristic features of the growth of publishing activity in the analyzed area have been found and its causes have been determined, which indicate the overall positive performance of HRMS development.

The main conclusion can be made from the fact that the Ukrainian information resources, and production and commercial area get oriented insufficiently in the various types of HRMS technology. Due to the lack of scientific and academic research in this area, the society misses the logical HRMS component. Insufficient understanding of HRMS types and functions occurs.

All this suggests that there is a great need to increase research in the field of HRMS, including the organizational and economic difficulties of its innovative receptivity, which will make it possible to bring the use of these technologies in Ukraine up to the level of the European and world standards.

In this article the problem of digitization of repositories of Ukraine has been described.

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