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# **Original Article**

Human Resources Management System in Digital Economy (Empirical Study on Elcom+)

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#### Abstract:

This research uses qualitative analysis method techniques and data collection using observation, depth interviews, questionnaires, and comparative analysis techniques. This research analyzes the trends in human resources management systems, HRMS in the digital economy implemented by the Russian company, Elcom+ LLC. The problem and subject matter of this research is how to study the trends of HRMS in the digital economy in improving company performance, whether the analysis of suitable international experience, and Russian HRM practices has an impact on improving company performance. The result is an effective modern HRM supported by the disciplines of digital management, site development technology, HRM knowledge, innovation management and offers a favorable system for the application of new methods of recruiting and selecting employees, to attract talent, motivate, stimulate employees, and also timeliness is a virtue. Therefore, the purpose of this research is to study the trends of HRMS in the digital economy through the analysis of international experience, find the analysis of international experience and HRM practices of enterprises in Russia. The results of this study have an impact on HRM and corporate financial management. Furthermore, the conclusion of this research is the potential role of HR designed to meet the challenges of automation and digital transformation in organizations, agile work culture. Moreover, the results outline that HRM systems can be compared, developed, additionally applied to the digital economy system with the support of site development technology and cloud systems.

**Keywords:** Human Resource Management System, Digital Economy, Financial Management, Russian and Indonesian Company, HRMS Agile.



#### Introduction

The current Digital economy is where are undergoing a major shift from traditional settings to widespread digital settings, requiring companies to incorporate innovation into performance. (Song, Z., Mishra, A.R., Saeidi, S.P., 2023) In addition this study, the author who is also a researcher, defines the Digital economy is the art of managing economic activities that have several main factors such as: financial management and accounting data in the softcopy form that can be digitized on the site or app; its use in various volumes, ranging from micro to macro economy volumes; can improve the efficiency of HR management; effectiveness of operations management; can improve the quality of marketing management, supported by information system technology and cloud system equipment. Based on Sanders, K., et.al., (2024) Human Resource Management System, HRMS, is defined as a characteristic of a HR system that sends a signal to employees that allows them to understand the desired and appropriate response. According to the authors of this journal after observing the object of research, HRMS is the science of managing labor systems relations with all stakeholders through the active role of each division in the company in order to contribute effectively to the achievement of the company's production targets and contribute positively to the wider community.

In agreement with the production of electronic goods and services by hi-tech business structures and the sale of these products through e-commerce, which is possible thanks to applied informatics. Based on Basory, H.A., et.al., (2023) participate in the educational organization and training programs to improve digital literacy and technology understanding in the community, as well as developing applications and platforms that respond to the internet various conditions. Therefore, digitization can be said to be a way of doing business that gives companies a new competitive advantage through the development of innovation and creativity. The digital economy in HRM is a conceptual new way to solve personnel problems. However, the main parts of the transition to a different management system are the old system transition into the cloud, the implementation of integrated mobile application design and real-time HR operations, the use of behavioral economics principles, and sustainable analysis. Pursuant to the portal cloud.vk.com about HR digital transformation in Russia, in 2018, 11% of employers in Russia have used artificial intelligence (AI) in their work with staff, 49% haven't started doing it, meanwhile have learned it, while 40% of respondents aren't interested in this topic at all. In conformity with McMackin & Heffernan (2021) describes the emergence of agile in HR.

Moreover, this perspective is important for the understanding of practitioners and academics who care about the HRMS development so that the concept of agile isn't just a slogan and rhetoric in the HRMS transformation. The research period chosen is 2023-2024 considering that the covid pandemic has become endemic and the business environment in Russia and Indonesia has entered a post-pandemic era post-2020. Henceforward, the company name as the object research: Limited Liability Company "Elcom+". This company an international Russian IT company with expertise in professional radio communications, factory automation, and digitization. The company was founded in 1994, opening its first office in the city of Tomsk, Russia, in 2016 the company opened a new branch in Miami, U.S.A. The research object company was established in agreement with the legislation of the Russian federation, the Federal Law "on Limited Liability Companies", as well as the Russian federation civil code.

## Methods

This study is a type of qualitative research with associative or comparative hypothesis. In obedience to Wardani, D.K., (2020) qualitative research, associative hypothesis, and comparative hypothesis have different definitions, Associative hypothesis is a competent hypothesis used to test the relationship or correlation between two variables in a population, although in qualitative research the hypothesis can be tentative and varied; Comparative hypothesis is a hypothesis used to test the two comparison or more samples in a population, a competent hypothesis is used to test the difference or

similarity between two or more variables in a population; Qualitative research is research that focuses more on analyzing and presenting an analysis of the data by collecting data from the research object, writing descriptive words, rather than using numbers.

Comparative and associative hypotheses are two of the three forms of hypothesis in qualitative research, a comparative hypothesis can be tentatively established and varied throughout the study. Agile methods test tools for HRMS, comparative analysis HRM models and technologies in the digital economy can use associative or comparative hypotheses, which can be modified during the study, be temporary and adaptive. The main objects in the HRMS are certain employees of the company; personal interests, groups, and companies. The subject of HRM is the management subsystem, that is, the employer and the representatives - managers with a special policies.

#### Results

## Sub 1 Associative Analysis of HRMS

The research object company opened several more offices in other cities such as Moscow, St. Petersburg, and Irkutsk, and in 2016 in addition to a new branch in the USA, in the city of Miami. The company is one of the export leader companies among innovative Russian companies according to the Russian Export Centre. For more than 27 years it has been working in the IT market, 10 of which it has been exporting product services to several countries. The claims of the company have been more than 80 countries, and the partner network includes more than 200 Russian and foreign companies. The enterprise consists of an international team of technical experts and consultants who provide 24/5 worldwide support for its products from Russia and the USA in Russian, English and Spanish. More than 2,000 companies worldwide are users of Elcom+ products, including Uber, Samsung, General Motors, eBay, the Spanish Red Cross, and the FIFA World Cup in Russia. Among the largest Russian clients are Rosseti, Lukoil, Gazprom, SIBUR, Rosneft, SUEK, and others. Nowdays, the organizational structure of management at this firm is diverse. The company's activities include many multidisciplinary organisations. The company is united by the fact that employees are under one management company with many services and departments, headed by the corporation General Director Evgeny Teplyakov. Henceforth, the company is managed by a board of directors, which includes all the business leaders and management heads of the company.



Figure 1. Recommended Organizational Structure

After conducting in-depth interviews and observations, the researcher suggested that for the interaction among the company's divisions and reporting to several managers, an appropriate organizational structure system seems to be: matrix

management organizational structure. Task reporting to the managing director and project management by the project office can be used, which minimises the reaction to changes and allows the company to grow rapidly. Stemming from Bhalla, V., et.al., (2022) In organizations that use a matrix structure, in addition to leadership style, business dimension leaders and matrix leaders must have the right mindset and skills to thrive in a collaborative and dynamic structure.

Swayed by the research that has been done, the researcher describes that matrix organizational structure is the organization's performance while operating under a matrix structure has improved concerning project execution. A matrix management organizational structure, springing from on-field data can bring advantages to the company, which are: more flexible, quick to adapt, able to change; and strengthened customer focus. Organizational performance when operating under a matrix structure has improved conciseness concerning project implementation. However, factually in some this firm projects, the matrix management organizational structure has its disadvantages: a complex organizational structure can be confusing for implementing employees; it can cause conflicts between functional managers and project or division managers.

The director manages the day-to-day activities of the company. The director organises the implementation of the decisions of the meeting of the founders of the company. The competence of the director covers all issues of managing the current activities of the company, except for issues related to the exclusive competence of the meeting of the founders of the company. Currently, the total number of employees of all departments, including management, in this corp is 223 people approximately. In light of Mahdzan, N.S., et.al., (2023) that descriptive statistics and analysis of variance, F-Test (ANOVA) were conducted to achieve the first research objective.

	Table 1. F-Test								
ANOVA b									
				Mean					
Model		Sum of Squares	df	Square	F	Sig.			
1	Regression	17.782	2	8.891	7.839	0.002			
	Residual	35.159	31	1.134					
	Total	52.941	33						

Contingent on the data from table 1, the results of the F test calculation, it can be seen that F count = 7.839 and F table at the 5% level = (2;34-2) = (2;32) = 3.300, then F table 3.09 is obtained, meaning that F count > F table = 7.839 > 3.300 and the significance value is 0.002 < 0.05, the associative analysis hypothesis is accepted, which means that the HRMS and the Digital Economy have a positive and significant effect on service quality at this corporation.

## Sub 2 Comparative Analysis of HRMS

Companies are trying to solve the problem through the creation of domains founded on regional centres, centralisation of processes at headquarters and reduction of HR in the field. Assuming, earlier in Russia the average foreign company had 20 people responsible for working with several personnel on several divisions, now the company left 2 in regional domains, 3 employees in local, the rest were laid off. Troubleshooting occurs through tickets in the domain, the position of employees working like a call centre is trying to decide who will handle this task. Then, most

importantly, how can employees work effectively and the company is efficient in remuneration costs. The rules in the field of personnel management have changed significantly over the past 4-5 years.

Table 2. Comparative analysis of HRM system regulations

Old Regulations on HRMS	New Regulations on HRMS		
Focus on developing and streamlining	Focus on optimising employee		
processes to create standardised	productivity, engagement, teamwork		
personnel management practices	and career development		
Cloud service providers and introducing	Innovative programmes, applications		
unconventional practices	and strengthened platforms for further		
	development		
The HRM programme is designed for	The HRM programmes are designed for		
scale and consistency	different segments of the workforce,		
	providing an output map for career and		
2	job development		
The HRM focuses on 'self-service' as a	The HRM focuses on capabilities, this		
way to measure service and support	function wants to help people do the		
	jobs assignment more effectively		
HR management creates a 'self-service	Using digital capabilities, big data, IoT,		
portal' for employees - a technology	HR management creates an integrated		
platform that allows companies to quickly	platform premised on employee		
find the information they need	experience 7		

In accordance with Basory, H.A, et.al., (2024) node from human resource management (HRM) based on the effectiveness of HR performance and optimize employees as HR in improving customer service. Among the popular tools used for this purpose are Human Capital Management Systems (HCM), Human Resource Information Systems (HRIS), and Human Resource Management Systems (HRMS). these several things are done using Application Programming Interface (API). The ecosystem approach remains the most effective in terms of HR automation, implying the transition to a digital workspace, which becomes possible through the use of electronic personnel document management. Electronic document management of personnel (MDEP) is an automated system that combines and organises digital analogues of traditional paper documents. The Sierra-Cedar HR Systems Survey, (2020) mainly identifies analytics disciplines such as predictive HR analytics and benchmarking, followed by machine learning, robotic process automation (RPA) and cloud technology PaaS models.

The gender distribution of employees is as follows: 26% men and 74% women. At the same time, men mainly work in production and in logistics centres, while female employees are mainly engaged in retail and line management. The gender ratio of general managers is 60/40. With regard to the number of employed workers and the number of retirees, the corporation can provide in the figure below.

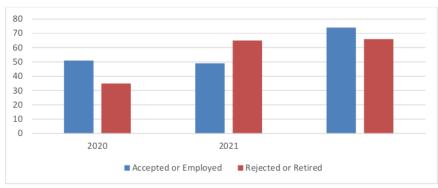


Figure 2. Status of the number of employed and retired in Tomsk branch

Onwards, much attention is paid to the level of education of employees, therefore about 90% have completed higher education, the rest of the workers - mostly medium-specialised. Otherwise, the company is also open to potential employees at any level, the company of the object of the study can come and start working from any position, even at the level of senior management. The organisation is ready to hire any specialist, if he or she has the appropriate qualifications, without considering work experience in this or related organisations. This type of HRMS policy is typical for companies focused on creating a certain corporate atmosphere, the formation of a special spirit of involvement.

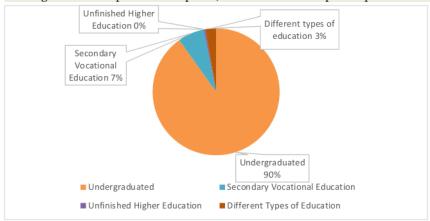


Figure 3. employee education levels

Therefore to the degree of openness in the analysis and associative hypothesis, in relation to the external environment in the formation of personnel, open and closed personnel policies are distinguished. In compliance with Na, K., (2021) Employee education level related higher level of education would make more knowledge available to the firm and therefore greater innovation. As stated by the researchers of this journal, the employee education level is the importance of access to education and training alongside adulthood is underscored by the likely impact of the digital transition on the labour market and the company rather applies a closed personnel policy, since the organisation focuses on the influx of new personnel from the lowest official level, and replacement occurs from among the employees of the organization considering the employee education level. In addition, this is due to the lack of employees on the labour market who have the competencies the company needs. That is why it is preferable for companies to "nurture"

managers who know how processes are organised from the inside and who share the company's values. Derived from statistical data owned by this company, 80% of the company's top management starts the career ladder with the position of line personnel and the remaining 20% are recruited at non-lower-level positions.

### Conclusion

Hingeing on direct observation at the object of research, in-depth interview sessions with several employees from several divisions, and factual records, this research is able to answer issues related to the problem formulation and subject matter, This research with the analysis that has been quite expected to be able to study HRM trends in the digital economy in improving company performance, a variety of Russian HRM practices as analysed by the research that has been slighted can have an impact on improving company performance, with the explanation that the main findings: HRMS trends in the digital economy such as Increased focus on data analytics to inform HR decisions such as hiring, science training, and career development; Impact of Russian HRM practices on enterprise performance such as Investment in employee training and development can increase productivity, employee innovation in problem-solving ideas. HRMS plays an important role in helping companies to remain competitive in the digital economy. HRMS along with digital economy adopting the latest HRMS trends and implementing effective HRM practices, companies can improve performance and achieve business goals. The research also highlights the importance of suitable international experience analyses such as comparative analysis, associative, cloudsupported qualitative approaches and big data. Russian HRM practices can provide valuable insights for companies in other countries looking to improve their performance.

## Suggestion

The suggestions for companies commensurate with the analysis that has been carried out, has been able to answer the formulation of the problem as well as the research objectives presented at the beginning, among others, the following steps are proposed to improve, that for medium-sized companies such a developed organizational structure is acceptable. There are about hundred employees and there are more than that number in all departments, so for a company with about more than two hundred employees, it's enough to have departments and employees as in figure one. Distribution according to the terms of reporting and the period of transfer of information to the head office and representative offices will allow: reducing the burden on line managers responsible for compiling reports by redistributing the performance of production divisions; paying attention to conditions affecting the level of remuneration of employees, incentives and big data. Considering that today the company still uses about 80% of paper documents in it's activities. Electronic Document Management, EDM, helps companies conduct transactions with counterparties for the exchange of documents over the Internet.

Employees in various divisions can sign and work on various documents in their personal accounts using Energy Data Server Cloud, EDS Cloud, Big data support, and IoT. Immediately created two methods namely Coaching: Creative and Risk Group; Mentoring: Big Data and Cloud Group involving advice and support from academics as well as experienced professional practitioners to help achieve the company's vision, mission, development goals, and targets. The company is able to create and implement suggestions related to the creation of HRMS roadmap and conceptual framework of the

from academics as well as experienced professional practitioners to help achieve the company's vision, mission, development goals, and targets. The company is able to create and implement suggestions related to the creation of HRMS roadmap and conceptual framework of the company's digital economy for a period of three years ahead, considering the possibility of growth in the digital economic climate for countries where companies operate businesses that are members of the G-20. Provide planning for the production group, payroll and incentivised group, and than work practices including workplace design using IoT and VR to support the creative & risk division. The analytical reports of HR directors and production directors is carried out according to algorithms and the company uses a matrix organizational structure, more flexible, quick to adapt, able to change; and strengthened customer focus.

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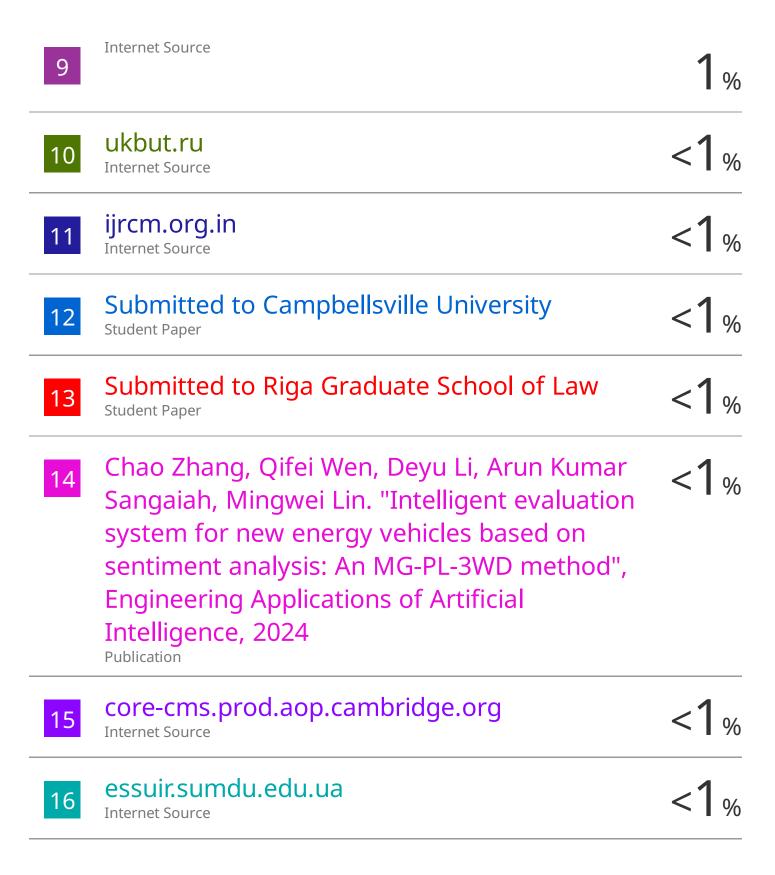
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