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INTERNATIONAL INDICATOR-BASED APPROACHES TO EVALUATING DIGITAL HRM IN THE PUBLIC SECTOR: EVIDENCE FOR KAZAKHSTAN

Abstract. *The digital transformation of public administration increasingly extends beyond the digitalization of public services and encompasses internal managerial functions, including human resource management. Despite the widespread adoption of electronic HR systems (e-HRM) in the public sector, approaches to assessing their effectiveness remain underdeveloped and are often reduced to technical or process-based indicators. This article proposes an indicator-oriented approach to evaluating digital HRM as a mechanism for building the state's managerial and institutional capacity, based on cross-country comparative analysis, interpretation of indicator dynamics, and identification of stable patterns of digital performance. Drawing on international digital government indices (the UN E-Government Development Index, the OECD Digital Government Index, and the IMD World Digital Competitiveness Ranking), the study identifies HR-related mechanisms that underpin consistently high digital transformation outcomes. The findings show that the effectiveness of digital HRM is reflected indirectly through indicators of human capital, capacity to deliver digital services, institutionalization of data-driven governance, and readiness for future changes. The results are used to formulate analytically grounded implications for developing a context-sensitive framework for evaluating digital HRM and setting managerial priorities for digital transformation in the public sector of the Republic of Kazakhstan.*

Keywords*: digital government; e-HRM; human resource management; indicator-based benchmarking; Human Capital Index; Digital Government Index; Kazakhstan.*

Introduction. In recent years, the digital transformation of public administration has ceased to be limited to the simple digitization of public services and has gradually spread to internal management processes, including human resource management. In the context of the development of digital government, management in the digital age and government technologies, the introduction of electronic personnel management systems (e-HRM), integrated human resource management information systems (HRMIS), as well as data-driven HR analytics tools is of particular importance [1]. These solutions are not limited to being used only as a tool for automating routine personnel procedures [2]. They are also used as a mechanism to increase the institutional effectiveness of the state apparatus, enhance the transparency of personnel policy and increase the validity of strategic decisions in the field of personnel management [3].

Both theoretical research and applied literature agree that human capital and managerial competencies are

key determinants of successful digital transformation of the public sector [1]. In this context, digital personnel management systems are considered not just as technical tools, but as infrastructural elements that provide administrative capacity, institutional stability, and the ability of government organizations to learn and adapt [4]. It is assumed that the introduction of e-HRM and HRMIS creates conditions for the transition from disparate and procedurally oriented HR practices to an integrated management model based on data analysis [2]. Such a transition, in turn, expands the possibilities of evidence-based policy development and forms prerequisites for long-term strategic planning in the field of public service [5].

At the same time, despite the large-scale spread of relevant technologies, the assessment of their managerial effectiveness is noticeably lagging behind the pace of implementation [6]. In practice, digital HR solutions in many countries are still interpreted primarily as IT projects and are evaluated through technical indicators such as the level of user coverage, the degree of automation of procedures, and the functional completeness of the system [3]. Such a technocratic measurement logic leaves out of the scope of analysis the institutional and managerial effects associated with the use of personnel data in the decision-making process, the development of professional competencies and improving the quality of public administration [1].

Empirical evidence suggests that in the absence of accompanying organizational changes, developed analytical capabilities, and regular use of personnel information in management practice, digital systems are not being used for their intended purpose. On the contrary, despite the technological nature of the personnel management process, they reproduce existing bureaucratic procedures, but in electronic format [1]. In such conditions, technological renewal is not transformed into sustainable management results [7]. This limitation is especially evident in public administration models focused on data and organizational capabilities [2]. Since it is in them that the decisive resource is not the technology itself, but the institution's ability to interpret and apply data to improve the quality of managerial and policy decisions [8].

International organizations, such as the OECD and the World Bank, to a certain extent address the issue of personnel management through the category of indicators of human capital, institutional capacity and data use [9]. These include, for example, the Human Capital Index, individual components of the Digital Government Index, as well as models of public technology maturity [10]. Nevertheless, these tools do not form an integrated and functionally structured framework for evaluating digital human resources management as an independent mechanism of public administration. As a result, there remains a conceptual gap between measuring the progress of the digital government as a whole and analyzing the administrative potential formed through personnel policy and digital HR tools [9].

This gap is particularly relevant in the context of the Republic of Kazakhstan. Despite the noticeable progress in the digitalization of civil service, the degree of the real impact of digital personnel management systems on the formation of management remains insufficiently empirically studied [9]. In this regard, international comparative analysis can be considered as an analytical tool for identifying relevant criteria for evaluating the effectiveness of digital personnel management. However, its application requires a critical interpretation of the indicators,

considering the national institutional context and the specifics of the administrative system [5].

Based on the identified research problem, the article proposes to consider an indicator-based approach to identifying international criteria in the field of digital personnel management. The approach is based on an analysis of the dynamics of indicators related to personnel management in global ratings of digital government. The focus is on institutional and personnel mechanisms that ensure the sustainable functioning of the public administration system, as well as their potential applicability in the administrative practice of the Republic of Kazakhstan.

Materials and methods. The methodological basis of the study is an indicator-based comparative approach aimed at identifying those personnel management mechanisms that support the digital transformation of the public sector. In contrast to the use of positional ratings as an end in itself, international indexes in this work are interpreted as diagnostic and analytical tools. They make it possible to interpret the institutional potential, the maturity of the workforce, and the willingness of government agencies to use data in management processes, including personnel decisions [3].

The empirical research base includes official publications and datasets from international organizations. These include the United Nations E-Government Development Index (EGDI), the OECD Digital Government Index (DGI), and the IMD World Digital Competitiveness Ranking (WDCR). Despite the differences in coverage and methodology, these indexes are widely used in international analytical practice for a comparable analysis of the digital transformation of public administration [9].

The EGDI analysis focuses on the Human Capital Index (HCI) and the Online Services Index (OSI). HCI reflects the accumulated educational and human resources potential, while OSI characterizes the level of institutionalization of digital services and related management procedures [3]. The OECD Digital Government Index is used as a conceptual framework for evaluating digital government management practices. Its use is primarily determined in areas related to data-based management, the principle of digital-by-design, and the development of public sector capabilities. These measurements are directly correlated with the formation of digital competencies and data usage practices in human resource management [9]. The IMD rating complements the analysis with indicators that capture systemic human capital management, investment in skills development, and public sector readiness for technological and organizational change. In particular, this is reflected in the report itself through the blocks "Talents", "Vocational training and education" and "Readiness for the future" [10].

At the same time, in accordance with the proposed conceptual formulation, international indices are considered not as direct measures of the effectiveness of personnel management, but as indirect proxy indicators reflecting individual components of digital human resource management [1]. Therefore, the analytical focus is shifting from the absolute positions of countries in the ratings to the dynamics and combinations of indicators related to personnel management, which largely depend on the quality of HR management and the level of competence development of the digital workforce [2].

The analytical procedure included several successive stages. At the first stage, the EGDI, OECD DGI and IMD identified and selected indicators relevant to human resources

management. The selection was aimed at capturing not only the formal manifestations of digitalization, but also the parameters reflecting the human, analytical and managerial potential of the public sector [9].

At the second stage, the dynamics of the selected indicators in the available time slices (2020, 2022 and 2024) were analyzed. This made it possible to distinguish between stable and unstable trajectories of digital development and, accordingly, to separate structural changes from short-term fluctuations. In particular, it was found that the HCI values demonstrate relatively high stability, while the OSI is characterized by greater volatility. This volatility was interpreted as a potential analytical signal of changes related to reforms and adjustments of management practices [3].

At the third stage, groups of reference countries were formed according to individual indicators. These groups included States that (i) consistently demonstrated high values of indicators, (ii) repeatedly found themselves in the upper segments of ratings in several assessment cycles, or (iii) showed steady growth in indicators that can be associated with certain institutional or policy measures [5]. At the same time, a more cautious approach was applied to countries that entered the upper segment only once and did not have signs of institutionalization of the relevant mechanisms: such cases were not automatically considered as benchmarks for comparison.

The final stage was devoted to identifying inter-indicative similarities. That is, situations where similar mechanisms of personnel management manifested themselves simultaneously in several indicators and persisted over time. This shifted the analytical focus from single achievements and short-term "leaps" to practices that potentially have greater portability and institutional stability [1].

The study covers the period 2020-2024 and includes countries with global and quasi-global coverage (EGDI, IMD), as well as a more limited sample of OECD countries within the framework of the DGI. It is important to emphasize that international indexes were not developed specifically to measure the effectiveness of digital personnel management [3]. Accordingly, the results of the analysis are interpretative and comparative in nature. For this reason, the conclusions require context-based application and do not imply direct institutional borrowing of the identified practices.

Results. Human capital and the structural capacity of digital government. The analysis of HR-related mechanisms of digital government begins with the Human Capital Index (HCI) as the most inert component of the EGDI. It reflects the long-term structural foundations of the digital potential of the state [3]. In the updated methodology of the UN 2024 E-Government Study, the HCI has been expanded to include e-government literacy indicators. And this, in turn, strengthened its connection with the actual involvement of the population in digital practices and allows us to interpret the index as an indicator of the human capital of a digital government [3]. Accordingly, HCI captures the accumulated characteristics of human capital to a greater extent than the short-term effects of individual reforms.

Empirical data from the UN E-Government Study for 2020-2024 indicate the stability of the upper segment of the HCI distribution and limited rotation among the leading countries [3]. In 2020, the highest HCI values were recorded in Australia (1.0000), Denmark (0.9588), Finland (0.9549) and Iceland (0.9525). In 2022, Australia retained the absolute lead

(1.0000), while New Zealand (0.9823) and Sweden (0.9649) joined the group of leaders, but Finland also held a high position (0.9640). In 2024, HCI values are once again concentrated around a stable core of countries, including Australia (1.0000), Iceland (0.9953) and Finland (0.9836). The low amplitude of HCI fluctuations among the leading countries further confirms the structural nature of the factors determining its dynamics.

Table 1

Human Capital Index (HCI), 2020–2024

Country	2020	2022	2024
Australia	1.0000	1.0000	1.0000
Denmark	0.9588	0.9559	0.9584
Finland	0.9549	0.964	0.9836
Iceland	0.9525	0.9657	0.9953
Kazakhstan	0.8866	0.9021	0.8403

The steady leadership in HCI is most likely due not to individual reforms, but to the accumulated effect of long-term policies. It is based on stable investments in education and skills development, which form a "reserve" of human capital [4]. However, a high level of education alone does not guarantee the digital maturity of the state. This requires institutional practices that support digital literacy and encourage civic engagement in the digital environment [11]. In this combination, education and a consistent personnel policy become the social foundation of a mature digital government.

Next, the implementation mechanism is important. When digital skills are integrated into educational programs and HR practices, digital literacy transforms from a declaration into a sustainable everyday competence and increases the ability to effectively use e-government tools [12]. Additionally, strategies focused on the development of digital competencies among different social and age groups expand engagement and reduce the risk of "digital gaps", supporting the sustainability of human capital [13; 14]. Taken together, this allows us to consider Australia, Finland, and Iceland as valid structural benchmarks in the analysis of the digital government's human capital [3].

Digital services and HR-conditioned operational capacity. In contrast to HCI, the Online Services Index (OSI) captures the results of relatively shorter-term managerial and technological efforts. Therefore, it better reflects the operational ability of the state to carry out digital reforms [3]. In the UN e-Government Research methodology, OSI describes the degree of institutionalization and quality of digital services, including their accessibility, functionality, and degree of citizen engagement [3]. Thus, it acts as an indicator of the sustainable development of e-government services [8].

The composition of the OSI (institutional, service, content, technological elements and participation components) makes it sensitive not only to the updating of IT solutions, but also to personnel and organizational changes [3]. The launch of national portals, the introduction of digital identification and authentication, as well as the development of feedback channels are usually directly reflected in the dynamics of OSI, which is consistent with empirical research on the use of electronic services [6]. However, high sensitivity has a downside. OSI shows volatility more often. Large-scale initiatives can quickly raise the indicator, but with weak institutionalization, new

practices may not gain a foothold, and then growth turns out to be short-term [9].

A comparison of the data for 2020, 2022 and 2024 reveals two stable lines. The first involves stable leadership in countries where digital governance mechanisms are institutionalized. The second is sharp upward "jumps" in states where improvements are associated with relatively recent reforms. In 2020, the leaders of OSI were the Republic of Korea (1.0000), Estonia (0.9941), Denmark (0.9706), Finland (0.9706) and Singapore (0.9647). In 2022, Estonia took the first place (1.0000) while maintaining a stable core of leading countries. In 2024, structurally stable leaders as the Republic of Korea (1.0000), Denmark (0.9992), Estonia (0.9954) will again dominate, while transformational growth is observed in a number of countries. Low OSI volatility among stable leaders indicates institutional maturity, while noticeable fluctuations more often reflect the effect of reforms that are not yet fully entrenched in managerial routines.

Table 2

Online Services Index (OSI), 2020–2024

Country	2020	2022	2024
Republic of Korea	1.0000	1.0000	1.0000
Denmark	0.9706	0.9797	0.9992
Finland	0.9706	0.9833	0.9097
Singapore	0.9647	0.9620	0.9831
Saudi Arabia	0.6882	0.8220	0.9900
Ukraine	0.6824	0.8148	0.9854
Kazakhstan	0.9235	0.9344	0.9390

Qualitative sources complement this picture: consistently high OSI values tend to be achieved where technological investments are accompanied by coordination and coordinated HR strategies. Specialized institutions and systematic training of civil servants play an important role in the Republic of Korea [5]. In Estonia, the sustainability of digital services is supported by interagency coordination mechanisms and the development of managerial and digital competencies [15]. In Denmark, the Agency for Digital Governance plays a key role in combination with the continuous development of digital skills in the public sector [16]. In Singapore, a similar effect is provided by the Digital Government Blueprint framework and large-scale professional development programs in the field of digital technologies [17]. Consequently, OSI reflects not only the technical quality of the platforms, but also the institutional and personnel processes on which the sustainability of digital services depends [9].

Institutional capacity of digital government. Although the EGDI captures the overall results of digital development, the OECD Digital Government Index (DGI) provides an assessment of how well the principles of digital transformation are institutionalized. DGI is not a global rating and does not include Kazakhstan in the standard sample. Therefore, in this study, it is used as a normative framework for analyzing how digital principles are integrated into the strategy, management processes and culture of the public sector [9]. The six dimensions of DGI, such as digitalization by design, the data-driven public sector, "government as a platform", default openness, user orientation, and proactivity, describe not only technological solutions, but also

organizational and personnel conditions for sustainable digital transformation [9].

According to Government at a Glance 2025, the average DGI value for OECD countries is about 0.61, with the Republic of Korea (0.94), Denmark (0.81) and the United Kingdom (0.78) showing the highest rates. This indicates a relatively balanced development of the key components of digital government [9]. For the analysis of personnel management, measurements related to digital-by-design and data-driven public sector are especially important, since they assume the presence of stable HR processes, developed digital competencies and regular practices of using data in management [9].

Table 3

Digital Government Index (DGI), 2023-2025

Country	2023	2025
Republic of Korea	0.935	0.94
Denmark	0.811	0.81
United Kingdom	0.775	0.78
Average	0.605	0.61

Comparing the logic of DGI with the dynamics of EGDI shows that project-oriented reforms often have a rapid but unstable effect. On the contrary, sustainable results are more often observed where the development of human resources is institutionalized. That is, through formal training programs, strategic personnel planning, embedding data management in decision-making procedures, and the availability of formalized digital transformation functions [9]. Thus, digital sustainability is determined not only by the quality of the platforms, but also by the extent to which personnel management mechanisms are built within the system to ensure the development and application of competencies.

Future readiness and digital talent management. The IMD World Digital Competitiveness Ranking (WDCR) complements the analysis by focusing on long-term adaptability and quality of human capital management. Unlike EGDI, WDCR captures to a greater extent the structural prerequisites for digital development and institutional "readiness", therefore, leadership in it, as a rule, changes more slowly and less frequently [10]. The WDCR methodology identifies three sets of factors such as "Knowledge", "Technology" and "Readiness for the future". At the same time, "Knowledge" encompasses talents, education, and scientific potential, while "Readiness for the future" reflects adaptability and the ability to innovate [10].

In 2025, Switzerland took the first place in the WDCR, ahead of the United States and Singapore due to strong results in the blocks "Knowledge" and "Readiness for the future" [10]. The steady presence of the United States and Singapore among the leaders can be attributed to a combination of a developed educational base, infrastructural capabilities and adaptive personnel policy, including scaling up professional development programs and talent retention tools [10]. In this sense, the WDCR conveniently "stitches together" the conclusions of EGDI and DGI: when high performance (EGDI), institutional maturity (DGI) and long-term readiness (WDCR) coincide, the likelihood of sustainable causes of success increases. Such a profile indicates the working mechanisms of personnel management rather than the short-term effect of individual technological solutions [1].

Table 4

World Digital Competitiveness Ranking (WDCR), Knowledge factor, 2021–2025

Country	2021	2023	2025
Switzerland	1	1	1
Singapore	4	3	4
USA	3	2	6
Kazakhstan	36	30	34

Table 5

World Digital Competitiveness Ranking (WDCR), Technology factor, 2021–2025

Country	2021	2023	2025
Switzerland	11	10	7
Singapore	3	1	2
USA	4	6	1
Kazakhstan	40	41	42

Table 6

World Digital Competitiveness Ranking (WDCR), Readiness for the future factor, 2021–2025

Country	2021	2023	2025
Switzerland	3	6	2
Singapore	11	10	6
USA	1	2	8
Kazakhstan	28	31	36

Discussion. Taken together, the indicator analysis shows that international indexes reflect the effectiveness of digital human resources management only indirectly. That is, through different analytical "lenses", and in the case of HCI, this is the structural base of human capital, operational potential and degree of institutionalization of digital services for OSI, consolidation of the principles of digital government for DGI and long-term readiness for talent development and adaptation in IMD WDCR [3; 9; 10]. At the same time, the reference points are not countries that reach their maximum on a one-time basis, but those that consistently show high values for several metrics and over several cycles. Such stability usually indicates the presence of institutionalized personnel management mechanisms that support digital performance, and not just "showcase" technological solutions [9]. The identified patterns provide the basis for a contextual interpretation of what mechanisms can be applied in the public administration system of Kazakhstan.

The results also confirm that sustainable digital efficiency is ensured not by copying individual "best practices", but by a consistent system of HR mechanisms, which manifests itself in different indicators and over different time horizons [1]. In the logic of HCI–OSI–DGI–IMD, digital personnel management can be described as a chain of transformation of human capital into administrative potential. In other words, the transition from basic educational and digital training (HCI) to the sustainable ability to create and develop services (OSI), then to the consolidation of the principles of digital management (DGI), and finally to the long-term ability to adapt and work with talent (IMD).

Firstly, the stability of HCI among leaders shows that investments in human capital and digital literacy are a necessary measure [3]. However, it is in itself insufficient condition for digital maturity [4]. For Kazakhstan, the

practical conclusion follows that the main reserve lies not so much in the expansion of formal coverage as in the development of applied digital and analytical competencies. In the future, they are needed for data-driven management, and in creating mechanisms for their regular updating throughout their career in the public sector.

Secondly, OSI volatility helps to distinguish between reform growth and institutional sustainability [9]. Rapid digitalization of services can indeed have a noticeable effect, but retaining the result requires a human and organizational contour. This includes distributed roles, interdisciplinary teams, service lifecycle management standards, as well as built-in service design and data usage skills at the departmental level [8]

Thirdly, the high values of DGI among leaders do not reflect "technological leadership" as such, but rather the degree of institutionalization of the principles of digital-by-design and data-driven public sector. Here, HR mechanisms actually act as the supporting structure of digital transformation [9]. For Kazakhstan, this means that it makes sense to transfer not specific platform architectures, but the management framework. This can be the formalization of digital competencies, continuous learning, embedding personnel data into management cycles, and a clear distribution of responsibility for digital transformation between institutions [2].

Fourth, the logic of IMD, especially the blocks "Knowledge" and "Readiness for the future", emphasizes that long-term competitiveness in the digital environment depends on the ability of the state to develop, retain and reconfigure talents to meet changing skill requirements [10]. For Kazakhstan, this reinforces the priority of creating sustainable mechanisms for professional development, career development and leadership training, as well as incentives to attract and retain IT and data specialists in the public sector [4].

At the same time, the indicator analysis sets the limits of portability. Solutions that are effective with high centralization, small scale, or special resource conditions may be difficult to reproduce in other administrative configurations [1]. Therefore, the object of adaptation should not be "country models", but functional capabilities and HR mechanisms that ensure the sustainability of digital results in comparable institutional settings.

These conclusions are directly related to the issue of evaluating the effectiveness of digital personnel management. Such an assessment cannot be reduced to technical metrics such as system coverage, functionality, or automation level [6]. International indexes "see" digital efficiency through human capital, quality of services, institutional principles, and readiness for the future. This creates a risk of improving positions in the ratings without strengthening internal HR mechanisms, which ensure managerial returns from digitalization [10].

Therefore, the digital personnel management assessment system should be, firstly, multidimensional and cover different levels of efficiency. By listing, this list should include the competence base and digital literacy (HCI), the sustainable ability to maintain and develop services (OSI), the institutionalization of the principles of digital and data-driven management (DGI), as well as the willingness to adapt and develop talent (IMD). Secondly, the criteria should distinguish between the project effect and institutionalization through indicators of the regularity of practices, the formalization of roles and responsibilities, as well as the integration of personnel data into management

processes [1]. Thirdly, the assessment should be managerially relevant: to record the actual use of data and competencies in personnel planning, performance analysis, skills management and leadership development [2].

Taken together, this indicates the need to develop a national assessment system for digital human resources management in Kazakhstan, focused on local conditions and the goals of digital government. In this approach, international indexes act as benchmarks rather than "ready-made recipes" and should be translated into measurements that consider the administrative structure, interdepartmental coordination, the legal context and the actual practice of HR management [9]. The shift from a direct cross-country comparison to a comparison of functionality allows for a more realistic and managerially meaningful assessment, where growth in international rankings is seen not as an end in itself, but as a consequence of strengthening administrative capacity and mature personnel management mechanisms in a digital government.

Conclusions. This article examined international approaches to the assessment of digital human resource management in the public sector based on indicators and benchmarking. Digital personnel management is considered not as a separate IT tool, but as a mechanism of public administration. This mechanism translates human capital into administrative capacity, supports data-driven solutions, and enhances the sustainability of digital transformation.

The results show that international indicators of digital government reflect the effectiveness of HR-related mechanisms only indirectly. They record different levels and time horizons. HCI describes the structural base of human capital. OSI shows the ability of the state to consistently provide and develop digital services. DGI reflects the degree of institutional consolidation of the principles of digital governance. IMD characterizes a long-term willingness to adapt and develop talents. Countries that are consistently strong in these dimensions achieve results not only through technology. They rely on established HR mechanisms that create competencies, allocate responsibilities, and turn personnel data into management decisions. When the growth of indicators is volatile, it is more often associated with the design logic of reforms. Such improvements occur quickly and lose their effect just as quickly if the personnel and organizational mechanisms are not fixed.

The analysis also answers the practical question of how developed digital states evaluate digital HRM. They rarely use a single technical indicator and almost never reduce the assessment to automation. They evaluate the management ability of the system. The indicator analysis makes it possible to identify repetitive mechanisms that support sustainable performance. These include competency-based HR management, regular training and retraining, integration of HR data into management cycles, and alignment of digital HR systems with the architecture and goals of digital government. However, the results show limitations of portability. Effective models depend on the country's scale, degree of centralization, resources, and legal regime. Therefore, direct borrowing of institutions has little effect. The functions and mechanisms are being adapted to local conditions.

For Kazakhstan, the conclusions mean the need for its own system for evaluating the effectiveness of digital personnel management. Such a system should not be limited by the availability of platforms, functionality and percentage of automation. It needs to

measure the institutional consolidation of practices, their strategic coherence, and the actual use of human resources data in management. It is important to check how digital HR tools affect HR planning, competence development, management decisions, and organizational performance. This shift from technical KPIs to management criteria makes it possible to more accurately assess the contribution of digital HRM to the effectiveness of the public sector.

Further research may expand the proposed approach and apply it to other emerging economies and post-Soviet administrative systems. High-quality data is needed to strengthen the evidence. Interviews with managers and HR departments, as well as case studies on specific departments, will help to understand which personnel mechanisms actually work, under what conditions they have an effect and how they create sustainable social value.

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МЕМЛЕКЕТТІК СЕКТОРДАҒЫ ЦИФРЛЫҚ HRM-ДІ БАҒАЛАУДЫҢ ХАЛЫҚАРАЛЫҚ ИНДИКАТОРЛЫҚ ТӘСІЛДЕРІ: ҚАЗАҚСТАН ТӘЖІРИБЕСІ ҮШІН НЕГІЗ

Аңдатпа. Мемлекеттік басқарудың цифрлық трансформациясы барған сайын мемлекеттік қызметтерді цифрландыру шеңберінен шығып, адам ресурстарын басқаруды қоса алғанда, ішкі басқарушылық функцияларды қамти бастады. Мемлекеттік секторда электрондық HR-жүйелердің (e-HRM) белсенді енгізілуіне қарамастан, олардың тиімділігін бағалау тәсілдері жеткілікті деңгейде дамымаған және көбінесе техникалық немесе процестік көрсеткіштермен шектеледі. Мақалада цифрлық HRM-ді мемлекеттің басқарушылық және институционалдық қабілетін қалыптастыру тетігі ретінде бағалауға арналған индикаторлық-бағдарланған тәсіл ұсынылады, ол мемлекетаралық салыстырмалы талдауға, көрсеткіштер динамикасын интерпретациялауға және цифрлық нәтижеліліктің орнықты үлгілерін анықтауға негізделген. Цифрлық мемлекеттік басқарудың халықаралық индекстерін (БҰҰ-ның Электрондық үкіметті дамыту индексі, ЭЫДҰ-ның Цифрлық мемлекеттік басқару индексі және IMD-ның Цифрлық бәсекеге қабілеттілік рейтингі) талдау негізінде цифрлық трансформацияның тұрақты жоғары нәтижелерін қамтамасыз ететін HR-мен байланысты тетіктер айқындалады. Зерттеу нәтижелері цифрлық HRM тиімділігінің адами капитал, цифрлық қызметтерді көрсету қабілеті, деректерге негізделген басқаруды институционалдандыру және болашақ өзгерістерге дайындық көрсеткіштері арқылы жанама түрде көрініс табатынын көрсетеді. Алынған нәтижелер Қазақстан Республикасының мемлекеттік секторында цифрлық HRM-ді бағалаудың контекстке сезімтал ұлттық рамкасын әзірлеу және цифрлық трансформацияның басқарушылық басымдықтарын айқындау үшін аналитикалық негіз ретінде қолданылады.

Түйінді сөздер: цифрлық мемлекеттік басқару; e-HRM; адам ресурстарын басқару; индикаторлық бенчмаркинг; Human Capital Index; Digital Government Index; Қазақстан.

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МЕЖДУНАРОДНЫЕ ИНДИКАТОРНЫЕ ПОДХОДЫ К ОЦЕНКЕ ЦИФРОВОГО HRM В ГОСУДАРСТВЕННОМ СЕКТОРЕ: ОПЫТ ДЛЯ КАЗАХСТАНА

Аннотация. Цифровая трансформация государственного управления всё в большей степени охватывает внутренние управленческие функции, включая управление человеческими ресурсами. Несмотря на активное внедрение электронных HR-систем (e-HRM) в государственном секторе, вопросы оценки их эффективности остаются недостаточно проработанными и зачастую сводятся к техническим или процессным показателям. В статье предлагается индикаторно-ориентированный подход к оценке цифрового HRM как механизма формирования управленческой и институциональной способности государства, основанный на межстрановом сравнительном анализе, интерпретации динамики показателей и выявлении устойчивых паттернов цифровой результативности. На основе анализа международных индексов цифрового государственного управления (EGDI ООН, Digital Government Index ОЭСР и World Digital Competitiveness Ranking IMD) идентифицируются HR-связанные механизмы, лежащие в основе устойчиво высоких результатов цифровой трансформации. Показано, что эффективность цифрового HRM отражается опосредованно через показатели

человеческого капитала, способности к предоставлению цифровых услуг, институционализацию data-driven управления и готовность к будущим изменениям. Полученные результаты используются для формулирования аналитически обоснованных импликаций по разработке контекстно-ориентированной рамки оценки цифрового HRM и управленческих приоритетов цифровой трансформации в государственном секторе Республики Казахстан..

Ключевые слова: цифровое государственное управление; e-HRM; управление человеческими ресурсами; индикаторный бенчмаркинг; Human Capital Index; Digital Government Index; Казахстан.

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