HR-Management of Innovation-Oriented Organisations on the Basis of ESG-Balancing

Sergey Kuznecov[1][a]
[1]*Department of Economics and Finance, Voronezh State University of Forestry and Technologies named after G.F. Morozov, 8 Timiryazeva street, 394087 Voronezh, Russian Federation*
89204339020@mail.ru

Keywords: ESG-Management, HR-Management, Sustainable Development, Innovation-Oriented Organizations.

Abstract: Effective HR-management of modern innovation-oriented organisations should be adjusted to the current global situation, which today is defined by the concept of BANI-world described by modern researchers as fragile, disturbing, non-linear and inscrutable. This shifts the vector of development towards balancing environmental, economic and social challenges simultaneously, which can be defined as ESG management. To date, there is no single mechanism for assessing the level of ESG-management of innovation-oriented organisations, but many scientists allocate their pool of human resource management determinants for assessment, but the problem of identifying the most weighty determinants is particularly relevant in modern ESG-management. The aim of the paper is to identify the most significant determinants on the basis of existing studies of HR-management and ESG-management to create a unified system of the pool of indicators to assess the level of HR-management of innovation-oriented organisations to ensure ESG-balance. As a result, the efficiency of human resource management of innovation-oriented organisations will increase, which will significantly improve their competitiveness at the international level.

1 INTRODUCTION

In the current realities of the BANI-world, based on the alarming reality that even the strongest structure can break down one day, it is impossible to avoid the innovative way of development, which determines the paramount importance in ensuring sustainable development. The vector of any innovation-oriented organisation should be aimed primarily at ensuring ESG-balance, i.e. a balance in solving current economic, social and environmental problems. (Al-Swidi et al., 2021).

To date, there are many studies of the impact of HR-management on the performance of any organisation, and in particular on innovation-oriented organisations according to the majority of scientists, competent management of human resources is of the greatest importance for achieving maximum performance, this actualises a more detailed study of the weight of the existing factors of human resource management. (Iqbal et al., 2021).

Existing studies of human resource management factors show a significant divergence of researchers' opinions, but common is the allocation of technological, organisational, human, environmental and human resource management factors (Lan et al., 2024).

It is necessary to identify a unified system of the pool of indicators to assess the level of HR-management of innovation-oriented organisations to ensure ESG-balance (Martini et al., 2021).

Based on a variety of studies, it is possible to identify the most appropriate factors for innovation-oriented organisations, such as social, digital and other factors, which can be combined into a single system using the expert method (Saka-Helmhout et al. 2024).

Existing studies of ESG-management show similarity of researchers' opinions concerning the allocation of the main component of efficiency - human capital of any modern organisation that has taken the innovative path of development. It is the human-centred approach that becomes the main

[a] https://orcid.org/0000-0003-0509-634X

vector of transformation of existing organisations to ensure sustainable development (Raub et al., 2021).

Current research on sustainability is becoming increasingly relevant as it is the dependence on changes in the external environment that is now an integral part of the reasons why organisations with seemingly ideal structures leave the marketplace (Zhang et al., 2023).

In foreign literature, the concept of sustainable development has long been popularised. Sustainable development is a consensus between producer and consumer, the aim of which is to satisfy current consumer demand without harming future generations.

Considering in studies the general groups of determinants affecting the effectiveness of ESG-management we can highlight the main ones: technological, organisational, human, environmental and individual (Xu et al., 2020).

ESG-management in the literature is studied at meso-, micro- and macro-levels of development, and at all levels the human-centred approach and the primary role of human capital for the formation of sustainable development of organisations are clearly expressed.

The consequences of the pandemic and the modern problem of sanctions creates a new economic reality associated with negative social effects, which slows down the process of human capital accumulation (Stek et al., 2021).

Having considered all the above-mentioned problems, it is relevant to introduce in innovation-oriented organisations exactly the principles of ESG-management as a basis for sustainable development.

To improve the competitiveness of the Russian business sector at the international level, it is necessary to substantially elaborate the weight of the current systems of human resource management factors. To date, there is no consensus on the set of ESG-management components that have the greatest impact on innovation-oriented organisations. The purpose of this paper is to identify the most significant factors affecting the ESG-management system of innovation-oriented organisations and group them in accordance with modern economic realities. As a result, the efficiency of ESG-management will increase, which will improve the competitiveness of innovation-oriented organisations in Russia at the international level. The article considers the key components of ESG-management, identified on the basis of the current economic realities, the vector of which is aimed at solving the problems of society (Podgorodnichenko et al., 2021).

2 METHODOLOGY

HR management in innovation-oriented organisations is influenced by many external and internal factors. External factors lie outside the organisation and affect its performance, while internal factors lie within the organisation and have an equally important impact on its performance.

Classification of determinants into external and internal influences is important as organisations cannot control external determinants while internal determinants are controllable.

Let us disclose the external and internal determinants of HR management of innovation-oriented organisations in Figure 1.

The final sentence of a caption must end with a period.

Figure 1: External and internal factors of HR-management of innovation-oriented organisations.

For effective ESG-management it is necessary to study management schools of world business leaders and to study global factors of management, which can include national traditions, and in the light of recent events with pandemic and sanctions, and opportunities for remote work and the attitude of the population to these problems.

In order to determine the significance of external and internal factors, we will carry out a quantitative and qualitative assessment of them by the method of qualimetric analysis based on the assessments of experts in the field of ESG-management representing innovation-oriented organisations.

The factors will be evaluated by two indices: Index of External Factors (IED) and Index of Internal Factors (IID).

The index of external factors is decomposed into 6 indices and the index of internal factors is decomposed into 6 indices (Table 1).

Table 1: Author's grouping of internal and external determinants affecting HR-management of innovation-oriented organisations.

Index of external factors (IEF)	Index of internal factors (IIF)
E1- Economic factors	I1- Organisational strategy
E2- Socio-cultural factors	I2- Organisational culture
E3- Technological factors	I3- Financial situation
E4- Political-legal factors	I4- Trade Unions
E5- Sectoral factors	I5- Organisational technology
E6- Environmental factors	I6- Employee competences

In order to effectively assess the factors, representatives of organisations that form the infrastructure supporting innovation activity acted as experts. Representatives of the management staff and HR-specialists directly related to the development of human resources, as well as those interested in the development of their organisations, were selected for a more thorough attitude to the assessment.

Within the framework of the applied method of qualimetric analysis, the expert groups compared external and internal factors in pairs on the basis of their influence on the efficiency of ESG-management in their organisations.

The maximum score of 2 points was assigned to one of the two indicators, which, in the opinion of the expert group, was the most significant, the other indicator in this case was evaluated as 0 points. If the expert group found it difficult to identify the most significant indicator, both indicators were given a score of 1 point.

For the convenience of evaluation, a score sheet of external and internal factors of ESG management was prepared for each expert group, which revealed the factors for qualitative analysis by each group (Figure 2).

IEF Brief description	Grade					
	E1	E2	E3	E4	E5	E6
E1-Population, labor market, national income, inflation, general economic conditions.	X					
E2-Attitudes, beliefs, desires, expectations, customs of society.		X				
E3-Production technologies, inventions, digitalization, automation.			X			
E4-Political system, role of government in business, laws.				X		
E5-Level of competition in the forestry sector, strategies of forestry development, peculiarities of the forestry sector.					X	
E6-Environmentally responsible management at the level of state control.						X
Total						
IIF Brief description	Grade					
	I1	I2	I3	I4	I5	I6
I1-Corporate, functional and business-level strategy.	X					
I2-Assumptions, beliefs, values and norms of the organisation's culture.		X				
I3-Trade unions and their mutual support, trade union development, their direct involvement in management.			X			
I4-Ability to pay salaries, bonuses, support for material incentives.				X		
I5-Application of new technologies, digitalisation, atomisation.					X	
I6-Retraining, training, adaptation, recruiting.						X
Total						

Figure 2: Evaluation sheet of external and internal factors of HR-management

2 RESULTS

The results of the qualimetric analysis showed the score and weighting of each factor and provided a conclusion for future evaluation of ESG management of organisations in the form of a computer program (Table 2).

Table 2: Summary assessment of internal and external factors influencing HR-management of innovation-oriented organisations

IED	Grade	Weight	IID	Grade	Weight
E1	14	12,67	I1	19	9,33
E2	5	7,33	I2	11	3,33
E3	39	4,00	I3	6	26,00
E4	31	23,33	I4	35	20,67
E5	39	25,33	I5	38	26,00
E6	22	27,33	I6	41	14,67

The degree of influence of factors on HR management is most clearly shown in Figure 3.

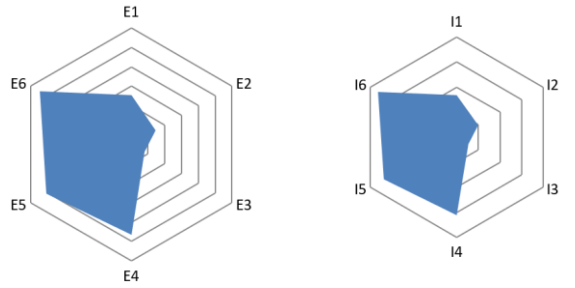

Figure 3: Degree of influence of factors on HR-management of innovation-oriented organisations.

The most significant factors as assessed by the expert groups are:

At the external level:

- Political system, role of the state in business, laws.
- The level of competition in the forest sector, strategies of FSC development, peculiarities of the forest sector.
- Environmentally responsible management at the level of state control.

Internal level:

- Ability to pay salaries, bonuses, support for material incentives.
- Application of new technologies, digitalisation, automation.
- Retraining, training, adaptation, recruiting.

On the basis of the obtained data a computer programme was developed to assess the level of ESG-management of organisations to ensure ESG-balance defined by the BANI-world concept. The programme displays on the screen 8 questions for each block (economic, social and economic), for which 3 answer options are offered, depending on which 0, 0.5 or 1 point is given. As a result, the screen displays the total and partial ESG score with explanations and corresponding colours: green, yellow or red. Green level - advanced, when the organisation most effectively integrates ESG agenda into its activities; yellow level - developing, when the organisation has introduced ESG principles into its activities and shows dynamics in this area; red level - initial, when the organisation introduces ESG principles into its activities and shows little or no dynamics in this area. An example of calculations is presented in Figure 4.

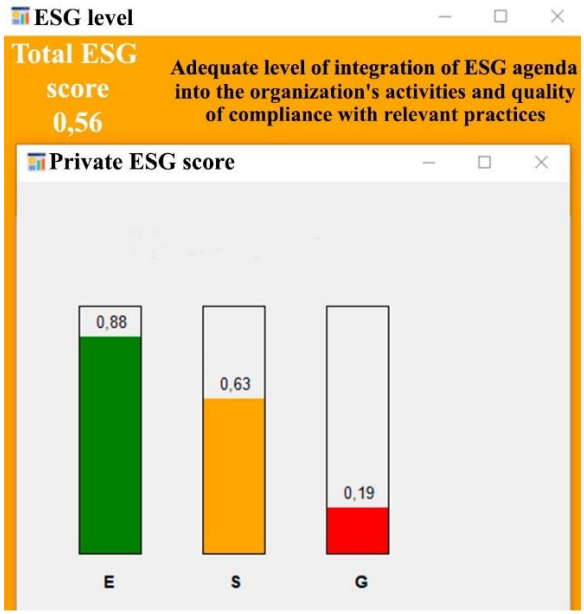

Figure 4: An example of the output of a programme for assessing the level of HR management of organisations to ensure ESG balance.

Using this assessment made by a computer program, it is possible to point out the organisation's weaknesses regarding the ESG agenda and immediately start working on a specific problem: in the economic (G), social (S) or environmental (E) block.

4 CONCLUSIONS

As a result of the conducted research, based on the totality of HR-management factors influencing innovation-oriented organisations, two groups - external and internal - were singled out, but the components of these groups were evaluated by experts in the field of human resources management for weighting due to the divergence of scientists' opinions. The most significant factors identified by the expert method, the most relevant in the modern BANI world, in which the vector of each organisation should be directed towards ESG-management, were put into the basis of a computer program for direct assessment of ESG-management of organisations in order to ensure ESG-balance. As a result of the balance, the efficiency of human resource management of innovation-oriented organisations will increase, which will significantly improve their international competitiveness.

REFERENCES

Al-Swidi, A. K., Gelaidan, H., Saleh, R. M., 2021. The joint impact of green human resource management, leadership and organizational culture on employees' green behaviour and organisational environmental performance. *Journal of Cleaner Production*

Iqbal, S., Rasheed, M., Khan, H., Siddiqi, A., 2021. Human resource practices and organizational innovation capability: Role of knowledge management. VINE. *Journal of Information and Knowledge Management Systems, 51(5), 732-748*.

Lan, L., Zhou, Z., 2024. Complementary or substitutive effects? The duality of digitalization and ESG on firm's innovation. *Technology in Society, 102567*.

Martini, M., Cavenago, D., Marafioti, E., 2021. Exploring types, drivers and outcomes of social e-HRM. *Employee Relations, 43(3).*

Podgorodnichenko, N., Edgar, F., Akmal, A., McAndrew, I., 2021. Sustainability through sensemaking Human resource professionals' engagement and enactment of corporate social responsibility. *J Clean Prod, 293.*

Raub, S., Borzillo, S., Perretten, G., Schmitt, A., 2021. New employee orientation, role-related stressors and conflict at work. *Consequences for work attitudes and performance of hospitality employees. Int J Hosp Manag, 94.*

Saka-Helmhout, A., et al., 2024. Stakeholder engagement strategies for impactful corporate social innovation initiatives by multinational enterprises. *Journal of International Management, 101159.*

Stek, K., Schiele, H., 2021. How to train supply managers–necessary and sufficient purchasing skills leading to success. *Journal of purchasing and supply management, 100700.*

Xu, B., Chen, X., Wang, Y., 2020. A new dynamic classification of enterprises for implementing precise industrial policies. *Journal of Business Research, 118, 463-473*.

Zhang, D., Meng, L., Zhang, J., 2023. Environmental subsidy disruption, skill premiums and ESG performance. *International Review of Financial Analysis, 102862.*