

**Halyna Lema,  
Ihor Oleksiv,  
Viktoriya Kharchuk,  
Roksolana Vilhutska,  
Liliia Mykhailyshyn**

# FEATURES OF CSR DEVELOPMENT IN VARIOUS SECTORS OF THE ECONOMY: CASE STUDY FROM UKRAINE BASED ON THE ANALYTICAL-HIERARCHICAL METHOD

*The object of research is the level of development of corporate social responsibility (CSR) in various sectors of the economy. The conducted research solves the problem of the lack of a comprehensive assessment of the level of development of CSR in various sectors of the economy. The research method is the construction of an analytical hierarchical model (AHP) for assessing CSR, taking into account economic, social and environmental aspects. The empirical basis of the research is an expert survey of specialists in the field of management and CSR. The research results were processed using the Expert Choice software. The data show that for enterprises in the IT (0.316) and energy (0.323) industries, the most important aspect of CSR is the working environment (0.383). The latter can be explained by the high level of digital culture, the significant importance of human capital and environmental responsibility. Enterprises of the light, food and machine-building industries received lower weight coefficients (0.104; 0.11 and 0.146, respectively), which is due to the low level of investment in employees, lower interest in environmental initiatives or low participation in social projects. In general, the AHP analysis shows that CSR in Ukraine is formed at the expense of social, labor and public aspects, while the market and financial and economic blocks play a less significant role. The applied structured multi-aspect approach to expert assessment will allow to form priorities of components and elements of CSR in different sectors of the economy. The results can be used by enterprises of different sectors of the economy to form corporate social responsibility policies. The use of the AHP model allows to structure the decision-making process, reduce the level of uncertainty and increase the validity of resource allocation regarding corporate social responsibility.*

**Keywords:** CSR of enterprises, market environment, working environment, environment, society, analytical-hierarchical method.

Received: 18.03.2026

Received in revised form: 03.05.2026

Accepted: 14.05.2026

Published: 19.06.2026

© The Author(s) 2026

This is an open access article

under the Creative Commons CC BY license

<https://creativecommons.org/licenses/by/4.0/>

## How to cite

Lema, H., Oleksiv, I., Kharchuk, V., Vilhutska, R., Mykhailyshyn, L. (2026). Features of CSR development in various sectors of the economy: case study from Ukraine based on the analytical-hierarchical method. *Technology Audit and Production Reserves*, 3 (4 (89)), 67–73. <https://doi.org/10.15587/2706-5448.2026.361128>

## 1. Introduction

Depending on the profile of its activities, the enterprise forms its attitude to corporate social responsibility differently. Therefore, it is important to study the level of development of CSR in different sectors of the economy. In order to be able to carry out such an assessment, it is necessary to apply a certain method that would best and most reasonably assess all elements of corporate social responsibility, namely: market and working environment, environment and society [1].

In the research [2], a review of literary sources was carried out using the bibliometric network method on the disclosure of information about CSR in family companies. The research results show the formation of four clusters regarding the board of directors, ownership structure, corporate governance and family ownership, on the basis of which a structural map of the industry was formed taking into account modern knowledge. At the same time, in [2] it is not determined how the selected clusters affect the CSR formation.

In the work [3], the authors analyze the CSR manifestations in the process of purchasing transactions and justify their impact on making managerial decisions. This work shows that CSR ensures the formation

of trust among stakeholders and increases their willingness to purchase. The authors also focused on the CSR multidimensionality, especially when considering environmental and social aspects of purchasing operations. At the same time, [3] does not indicate which of the proposed aspects (environmental or social) more effectively influence management decision-making regarding operational activities, which implies the problem of their quantitative assessment.

The research [4] examines stakeholder pressure and how it affects the informativeness of data disclosure in CSR reports based on Ullman's theoretical model. The authors of [4] identified the main factors, namely: government pressure, creditor pressure, employee pressure and audit pressure, and showed that the main factor that most positively affects the presentation of information in reports is government pressure. The size of the companies studied also influenced the formation of the results, since larger ones usually provide more complete and high-quality information, and, as a rule, provide a higher level of openness and detail of information. The problem of the influence of the government [4] on the CSR development at different enterprises remains debatable, since the information presented in CSR reports may be unreliable.

The fact that CSR increases the trust of stakeholders in the activities of the enterprise is noted in the works [5, 6]. In particular, in [5] CSR is associated with the term “performance”, while in [6] CSR is more related to socio-emotional needs. The authors of the work [5] distinguished internal and external CSR and investigated the process of rewarding companies (family and non-family) for their results. According to [6], family participation in company management increases the socio-emotional needs of entrepreneurs. The researches [5, 6] focus on results, rewards and efficiency as a short-term perspective and do not show how “trust” will affect the CSR development in the long term.

The research [7] is aimed at studying the corporate social responsibility of the mining industry. The authors conducted a bibliometric analysis in the field of the mining industry CSR based on 72 scientific works, as a result of which 2 clusters were formed regarding interaction with local communities and CSR reporting. The CSR division into 2 clusters in [7] limits the quality of the assessment of the studied industry, which is characterized by high environmental and economic risks.

It is worth noting that CSR can have not only a positive impact on the activities of companies and society, but also a negative impact. Thus, in [8] it is shown that CSR can also have negative reactions, such as skepticism, distrust or a decrease in intentions to purchase a company's goods or services. Accordingly, according to the authors, the study of such reactions will contribute to the development of effective directions and strategies in the context of CSR. The authors also focused on consumers and employees who influence the CSR development. Thus, in [8] two groups of stakeholders (consumers and employees) are taken into account, which influence the formation of CSR development and the influence of other stakeholders is not shown.

In [9], an analytical hierarchy of CSR in peacemaking processes of managerial decision-making is given. The authors noted that the AHP method provides a clear and transparent prioritization of CSR elements, especially when it comes to social and economically viable aspects. Therefore, in [9] the AHP method of CSR assessment was used in relation to peacemaking processes of managerial decision-making. At the same time, the authors took into account social and economic aspects, which limits the assessment of environmental components of CSR and cultural characteristics of different countries.

Corporate social responsibility can be assessed using the following methods: cost calculation models [10], decision rationality prediction models [11], bibliometric analysis [12], isomorphic distance matrix construction method [13], Thurstone pairwise comparison matrix of studied elements [14, 15], methodological approaches [16], etc. However, one of the accurate and flexible methods for assessing corporate social responsibility of enterprises is the analytical hierarchical process method [17].

The analysis of literary sources showed a focus on individual aspects of CSR, while a structured multi-aspect analysis of CSR for managerial decision-making requires further research. The gaps identified above in CSR research were addressed by integrating the identified components and elements of CSR into the AHP model. Prioritizing components and elements will contribute to more effective CSR management in various sectors of the economy. The latter is important for enterprises in the context of requirements for submitting CSR/non-financial reports [18].

Thus, *the object of research* is the level of CSR development in different sectors of the economy. *The subject of research* is methodological approaches to assessing the importance of CSR components in different sectors of the economy. *The aim of research* is to comprehensively assess the development of CSR components using an analytical-hierarchical process for different sectors of the economy. And as a result, to form priorities for the development of certain CSR components in different sectors of the economy.

Achieving the proposed aim entails the implementation of the following objectives:

1) determining the components and elements for analyzing the level of CSR development in different sectors of the economy;

2) building an analytical-hierarchical model for assessing CSR development in different sectors of the economy;

3) forming priorities for CSR components and elements for the analyzed sectors of the economy.

## 2. Materials and Methods

The AHP method was used in the research, because it allows solving complex management decisions by classifying them on a mesh. The main advantages of the AHP method are: it makes it possible to divide a multifactorial process into separate elements – to determine the goal, components and elements, which involves the staged nature of their analysis; the ability to use quantitative and qualitative characteristics of the object of research. For example, building a correlation-regression model involves the use of only quantitative indicators; the use of expert assessments, which contributes to a deeper research of the features of corporate social responsibility elements through their pairwise comparison; ensuring the reliability of data using the consistency coefficient; easily adapts to the variability of conditions or changes in the factors being studied, while in correlation-regression models it is necessary to re-build the model when changing one of the indicators; convenient in interpreting management decisions. The procedure for applying AHP analysis was presented in the form of the following sequence:

- 1) formation of a hierarchical structure of the research;
- 2) formation of a matrix of pairwise comparisons;
- 3) calculation of local priority vectors;
- 4) formation of global priorities;
- 5) checking the consistency of expert assessments.

The mathematical apparatus of the AHP method is presented below. In order to clearly display the pairwise comparisons of indicators evaluated by the Saaty analytical-hierarchical method, it is necessary to form a matrix that will reflect the components and elements of the pairwise comparison. The proposed matrix will have the following form [17]:

$$i \begin{pmatrix} k_{11} & k_{12} & \dots & k_{1n} \\ k_{21} & k_{22} & \dots & k_{2n} \\ \dots & \dots & \dots & \dots \\ k_{n1} & k_{n2} & \dots & k_{nn} \end{pmatrix}, \quad (1)$$

where  $k_{ij}$  – expert assessments of the pairwise comparison of the priority of CSR components and elements;  $n$  – the number of components and elements, which priority is assessed;  $i$  – ordinal numbers of components and elements.

The Saaty AHP pairwise comparison matrix provides for the assignment of points for analyzing the priority of CSR components. If one CSR element is more important for one industry, then it is assigned a value of 3, 5, 7 or 9.

The reliability of the obtained results of the analytical-hierarchical method is calculated by the formula [17]

$$\gamma_{\max} = \sum_{i=1}^n p_i \left( \sum_{j=1}^n a_{ji} \right), \quad (2)$$

where  $a_{ji}$  – the  $j$ -th element of the  $i$ -th column of the matrix;  $n$  – the elements that are compared in pairs;  $p_i$  – the weight coefficient of the elements of corporate social responsibility.

The index of inconsistency or confirmation of the accuracy of the expert assessment is calculated by the formula [17]

$$TR = \frac{T_i}{R_i}, \quad (3)$$

where  $T_i$  – the index of stability with respect to the influence of the elements;  $R_i$  – the random index. It is important to emphasize that the

reliability of the obtained results is considered to be the value of TR when it is lower than 0.1.

The stability index is calculated by the formula [17]

$$T_i = \frac{Y_{\max} - 1}{n - 1}, \tag{4}$$

where  $Y_{\max}$  – the maximum value of expert assessments;  $n$  – the number of assessment elements.

The relationships between the components and elements of different levels of the AHP hierarchy of the CSR development assessment model for different sectors of the economy are determined by the multiplicative convolution of local priorities. This, in turn, helps to determine the global impact of the components and elements of CSR in different sectors of the economy. Each element of the lower level of the hierarchy affects the component of the higher level using weight coefficients, which are obtained by calculating the matrix of pairwise comparisons.

The AHP process method involves a pairwise comparison of the proposed indicators according to the scale from 1 to 9 proposed in [17]. A feature of the scale is that the author [17] recommended using odd values. The characteristics of the values of the T. Saaty scale are given in Table 1.

Table 1

Characteristics of the values of the T. Saaty scale

No.	Scale value	Value characteristics
1	“1”	equal priority
2	“3”	moderate priority
3	“5”	substantial priority
4	“7”	significant priority
5	“9”	determining priority
6	“2”, “4”, “6”, “8”	intermediate values

Note: formed by the authors based on [17]

The assessment is carried out by an expert method, where a more priority element of the assessment is determined by pairwise comparison. Thus, the experts were asked to carry out a pairwise assessment of all components and elements of CSR. Such a comparison helps to determine the relative importance of the components and elements of the assessment.

The processing of the obtained results was carried out on the basis of calculations of the Expert Choice software (Expert Choice Inc, USA)

in compliance with standard AHP analysis procedures. The global priorities of the studied industries were calculated as a weighted sum of local priorities of the components of the first level of the hierarchy and the elements of the second level of the hierarchy, which contributes to an integral assessment of the development of CSR for different sectors of the economy.

The calculation of the consistency index provides a check of the reliability of the experts’ assessments, and therefore the expediency of using the AHP method in assessing the components and elements of CSR of enterprises.

The complexity of the proposed approach to assessing CSR using the AHP method is ensured by a combination of groups of components [1], namely: economic (market environment, financial development, investment development), social (working environment, professional development, social partnership) and environmental (environment, resource development), which makes it possible to take into account the multidimensional nature of CSR.

### 3. Results and Discussion

#### 3.1. Components and elements for analyzing the level of CSR development in different sectors of the economy

In order to determine the development of CSR for different sectors of the economy, when building an AHP model, it is crucial to determine the components and elements at levels 1 and 2. For the first level, it is recommended to focus on the market and working environment, environment and society [1]. The proposed components will show the economic, social and environmental aspects of the development of industries and will be structured in the form of a complex management task using the analytical-hierarchical method and are presented in Fig. 1.

The first level – the main aim – involves determining the components that influence the CSR formation: market and working environment, environment and society [1].

The second level of the hierarchy involves determining the elements used for analyzing CSR, in particular financial, professional, resource and investment development, market stability, quality development, compliance with employee rights and social partnership. The elements were formed on the basis of processing non-financial reports of companies in various sectors of the economy [19–21]. The element of financial development characterizes the economic stability and transparency of the activities of enterprises in the studied sectors of the Ukrainian market. This element analyzes the stability of income generation, the efficiency of using financial resources, the level of financial independence and solvency and transparency of financial reporting, etc. [19].

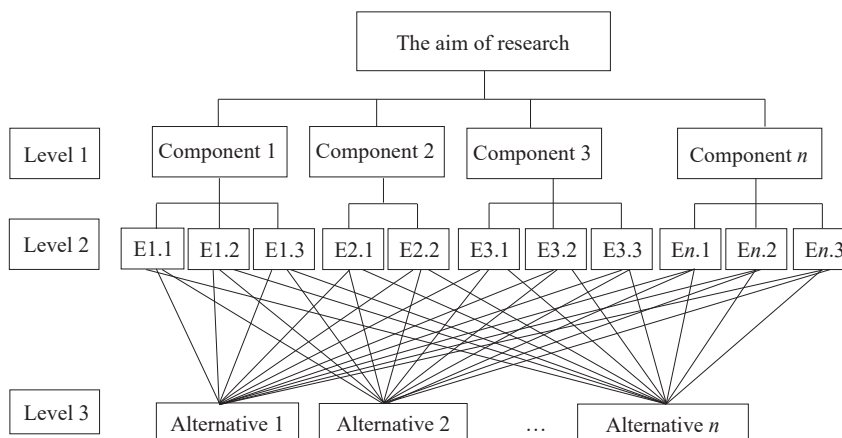


Fig. 1. Analytical-hierarchical model for solving a complex management problem (based on [9, 17])

The element of professional development reflects the development of human capital and characterizes the level of employee competence and opportunities for their career growth [20]. The resource development element characterizes energy efficiency, rational use of raw materials, environmental friendliness of production, circularity of waste, etc. The investment development element provides an assessment of the attractiveness and development of the proposed industry through investments. This element provides the ability to control risks, assesses the return on investment and characterizes the need to attract external investors [21]. The market stability element characterizes the company's position in the market, its competitiveness, stability of demand and resistance to crisis situations [20]. The quality development element characterizes the quality of products and all processes related to its manufacture (compliance with quality standards, ensuring innovations in improving quality, etc.) [19]. The element of respecting employee rights and social partnership provides an opportunity to analyze and assess social responsibility to employees and society [19, 21]. These elements provide social programs to support employees and public communities within the company's location. Within the CSR framework, the elements form a comprehensive assessment of the activities of companies in various sectors of the economy, covering: the economic component (finance, investment, market), environmental (resources, quality), social (personnel, employee rights). The proposed elements are relevant for AHP analysis, as they will provide a holistic multi-criteria model for economic, social and environmental components; will form a clear hierarchy for comparison, will be able to adapt to different sectors of the economy, etc.

The third level in the hierarchy structure covers enterprises in various sectors of the economy (food, light, energy, IT and machine-building enterprises). The selection of such enterprises will show for which sector CSR is most developed and will help assess the impact of corporate social responsibility on their financial stability.

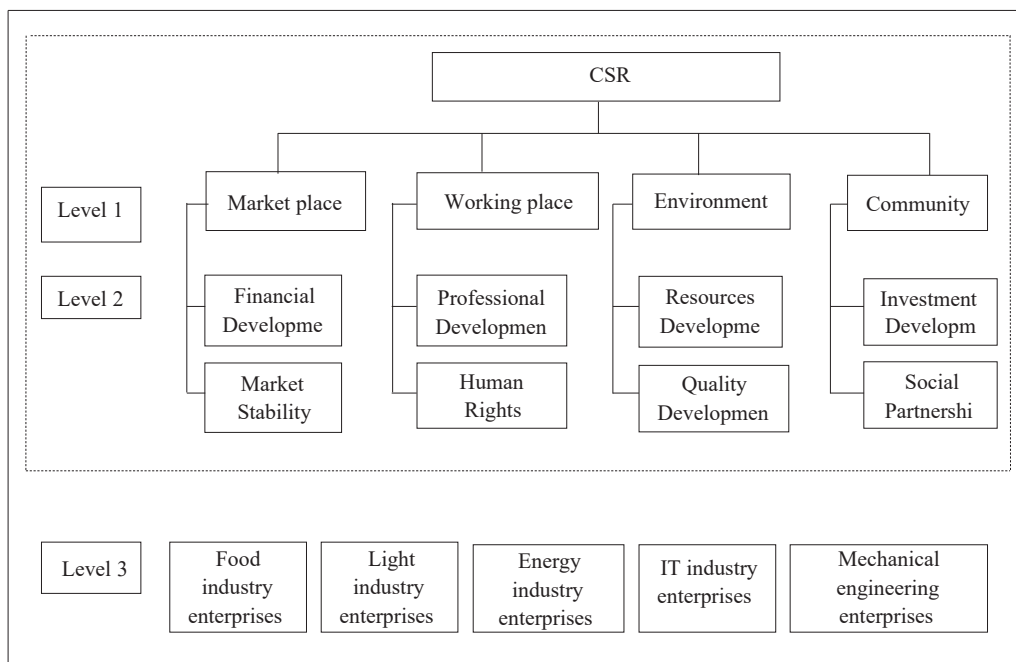
**3.2. Analytical-hierarchical model for assessing the development of CSR in various sectors of the economy**

Based on the presented levels of the hierarchy of the model for solving a complex management problem (Fig. 1), the following analytical-hierarchical model for assessing the development of CSR components and elements for various sectors of the economy is proposed (Fig. 2).

Thus, Fig. 2 presents an analytical-hierarchical model for assessing the development of CSR for different sectors of the economy, which includes three levels of hierarchy: CSR components, CSR elements and sectors of the economy.

The Saaty AHP pairwise comparison matrix for analyzing the importance of CSR components of the first level of the hierarchy is given below (Table 2).

Similar matrices are formed for the second (financial, professional, resource and investment development, market stability, quality development, observance of workers' rights and social partnership) and third (enterprises of the food, light, energy, IT and machine-building sectors of the economy of Ukraine) levels of the hierarchy, on the basis of which the vector of priorities of the elements that were evaluated is determined.



**Fig. 2.** Analytical-hierarchical model for assessing the development of CSR for different sectors of the economy (developed by the authors according to [9, 17])

**Table 2**

The Saaty AHP pairwise comparison matrix for analyzing the importance of CSR components of the first level of the hierarchy

No.	CSR components	CSR components				Vector of priorities
		Market place	Working place	Environment	Community	
1	Market place	1	5	5	5	0.06
2	Working place	–	1	3	3	0.383
3	Environment	–	–	1	3	0.175
4	Community	–	–	–	1	0.383

**Note:** obtained by the authors based on calculations of the Expert Choice software (Expert Choice Inc, USA)

**3.3. Formation of priorities for CSR components and elements for the analyzed sectors of the economy**

The results of the analysis of CSR components and elements of various sectors of the economy, performed using the analytical-hierarchical method (Fig. 2), are presented below.

The weighting coefficients of the components and elements were obtained by normalizing the eigenvectors of the matrix of pairwise comparisons of each of the proposed levels of the hierarchy. At the same time, the global priorities of the studied industries were obtained by aggregating the local weights of the components and elements presented in Table 3. The results of applying the AHP method for assessing the CSR development for various industries of the economy are presented in Table 3.

Table 3 presents the results of assessing the development of CSR for various sectors of the economy based on the AHP method. The components “working environment” and “interaction with the community” have the greatest impact on the development of CSR of the first level of the hierarchy – 0.383. Therefore, it is possible to conclude that companies in Ukraine actively pay attention to working conditions, development and improvement of employees and social guarantees. Thus, for Ukrainian companies, CSR towards their own employees is a key element of their existence and development. Along with the “working environment”, the component “interaction with the community” is significant – 0.383. This, in turn, indicates the importance of social partnership and general social activity of companies. The component “environment” is 0.175, which indicates an increase in attention to resource conservation and ensuring environmental safety. The component “market environment” received the lowest value of 0.06, which indicates financial instability and unpredictable actions of competitors.

The research shows that the highest level of CSR development is in IT and energy industries – 0.316 and 0.323, respectively. According to the results obtained, IT industries are leaders in CSR due to a high level of digital culture, a significant impact on human capital and active participation in community life. In turn, energy industries develop CSR through environmental responsibility and sustainable development.

Enterprises in the light, food and machine-building industries received lower weight coefficients – 0.104; 0.11 and 0.146, respectively, which is due to a low level of investment in employees, less interest in environmental initiatives or low participation in community life and social projects.

It is important to emphasize the reliability of the results obtained according to the index of inconsistency or confirmation of the accuracy of expert assessment (3), which is 0.06. The results of confirmation of the accuracy of expert assessment are shown in Fig. 3.

According to the results obtained (Fig. 3), the value of the consistency index is 0.06, which indicates the reliability of the experts’ assessments and a high level of consistency of their assessments. It is important to note the absence of significant contradictions in the experts’ assessments, which indicates the quality of the assessment.

The practical significance of using the AHP method is to make informed management decisions when allocating resources to form CSR components, and thus makes it possible to determine priority areas of development and focus attention on different areas of the enterprise’s activity: the working and market environment or environmental responsibility to society. The proposed method will be useful when conducting internal audits, forming non-financial reports, and ensuring business transparency.

**Table 3**

Results of the AHP method for assessing the CSR development for various industries of the economy

Hierarchy level	Components, elements and sectors of the economy	Local and global priorities
CSR components (level 1)	Market place	0.06
	Working place	0.383
	Environment	0.175
	Community	0.383
CSR elements (level 2)	Financial development	0.25
	Market stability	0.75
	Professional development	0.75
	Human rights	0.25
	Resources development	0.833
	Quality development	0.167
	Investment development	0.25
	Social partnership	0.75
Economic sectors (level 3)	Food industry enterprises	0.11
	Light industry enterprises	0.104
	Energy industry enterprises	0.323
	IT industry enterprises	0.316
	Engineering industry enterprises	0.146

**Note:** obtained by the authors based on calculations by Expert Choice software (Expert Choice Inc, USA)



**Fig. 3.** Assessment of the priority of key components of CSR development based on AHP analysis (obtained by the authors based on Expert Choice software (Expert Choice Inc, USA))

### 3.4. Research limitations and directions of its possible development

When assessing the level of CSR development in various sectors of the economy, it is necessary to take into account the following limitations: the dynamism of both the internal and external environment; insufficient sampling of the proposed sectors of the economy, ensuring a sufficient number of experts and consistency of their assessments, ensuring not only expert but also quantitative assessments. Therefore, the environment is extremely dynamic and changeable. And when assessing the CSR of enterprises in various sectors of the economy using the AHP method, it is important to focus on key factors of the internal and external environment in order to determine the assessment elements. The limitation on the number of experts and quantitative assessments is necessary, since a sufficient sample will affect the accuracy and reliability of the results obtained, and quantitative indicators will ensure the validity of management decisions.

These limitations form the prospects for further research on the application of the analytical-hierarchical method and the need to increase the number of sectors of the economy, the number of experts and CSR elements. In addition, it will be relevant to study similar elements, which will allow comparing trends in the development of CSR in various sectors of the Ukrainian economy in conditions of war and constant adaptation to destabilizing conditions and countries where such conditions are favorable.

## 4. Conclusions

1. Based on a structured multi-aspect analysis, it is determined that the "working environment" (0.383) and "interaction with the community" (0.383) have the greatest impact on the CSR development. Accordingly, it can be noted that it is the social component that has the greatest impact on the CSR formation. The need to determine the components and elements of CSR in the context of industry-specific characteristics of enterprises involves taking into account different levels of social and environmental impact. The selected elements (financial, professional, resource and investment development, market stability, quality development, respect for employee rights and social partnership) are relevant for conducting AHP analysis, since they allow for the formation of a holistic multi-criteria model that takes into account economic, social and environmental aspects of activity, provide the construction of a clear hierarchical structure for comparison, and are also characterized by flexibility in application in different sectors of the economy.

2. The peculiarity of the results obtained is the analysis of the CSR development in different sectors of the economy based on an analytical-hierarchical process. CSR analysis by AHP process involves decomposition of the entire assessment process into three hierarchical levels, namely: the level of components, the level of elements and the level of economic sectors. The definition of three levels of hierarchy involves a combination of quantitative and qualitative (expert) assessment, giving weight to each identified element, which allows ranking the CSR elements in the studied economic sectors.

3. The results of the analysis allow focusing on those strengths of the activity that provide the expected and most operational results of financial activity. The results obtained show that there is a difference in the level of CSR development in different sectors of the economy, pressure from stakeholders or environmental impact. The most corporately and socially responsible were enterprises in the IT and energy sectors, which indicates their ability to integrate social responsibility into strategic and operational processes. In turn, enterprises in the light and food industries need to further strengthen their CSR policies to increase competitiveness and sustainability. From a methodological point of view, the research confirms the feasibility and reliability of using the AHP method to assess the level of CSR development in conditions of industry heterogeneity, which demonstrates the value of the

inconsistency index (confirmation of accuracy) of expert assessments of 0.06. The AHP method is a reliable tool for assessing the level of CSR development in various industries and will provide guidelines for the development of companies and their financial stability in Ukraine. This approach will increase the objectivity of the assessment results, ensure their adaptability to modern challenges and form more substantiated management decisions in the field of CSR.

### Conflict of interest

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

### Financing

The research was performed without financial support.

### Data availability

The manuscript has no associated data.

### Use of artificial intelligence

The use of artificial intelligence was carried out only for the purpose of checking grammar and identifying spelling errors. The main text of the article was not subject to changes. The research results were obtained based on calculations of the Expert Choice software and without the use of artificial intelligence. The authors made their own conclusions based on the results obtained.

### Authors' contributions

**Halyna Lema:** Methodology, Investigation, Data curation, Writing – original draft, Writing – reviewing and editing; **Ihor Oleksiv:** Methodology, Investigation, Conceptualization; **Viktoriya Kharchuk:** Software, Visualization; **Roksolana Vilhutska:** Writing – reviewing and editing, Validation; **Liliia Mykhailyshyn:** Writing – reviewing and editing, Validation.

### References

1. Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34 (4), 39–48. [https://doi.org/10.1016/0007-6813\(91\)90005-g](https://doi.org/10.1016/0007-6813(91)90005-g)
2. Mosad, M. S. T., Szegedi, K. (2025). Mapping the academic discourse on CSR disclosure in family firms. *Discover Sustainability*, 7 (1). <https://doi.org/10.1007/s43621-025-02342-y>
3. Peng, Y., Zhang, Z. (2026). The roles of lean and corporate social responsibility in acquisitions. *Omega*, 141, 103483. <https://doi.org/10.1016/j.omega.2025.103483>
4. Ta, H. T. T., Le, O. T. T., Can, D. H. (2025). Stakeholder pressure on the level of corporate social responsibility disclosure: Evidence from Vietnam. *Multi-disciplinary Science Journal*, 8 (2), 2026029. <https://doi.org/10.31893/multiscience.2026029>
5. He, L.-Y., Wang, Y. (2026). Is CSR a leading indicator of corporate restructuring performance? Evidence from explainable machine learning. *Journal of Management Science and Engineering*, 11 (1), 20–36. <https://doi.org/10.1016/j.jmse.2025.12.001>
6. Yin, C., Salmador, M. P., Li, D. (2026). The impact of corporate social responsibility on executive remuneration: A comparative analysis of family and non-family firms. *International Entrepreneurship and Management Journal*, 22 (1). <https://doi.org/10.1007/s11365-025-01147-9>
7. Rodrigues, M., Mendes, L. (2018). Mapping of the literature on social responsibility in the mining industry: A systematic literature review. *Journal of Cleaner Production*, 181, 88–101. <https://doi.org/10.1016/j.jclepro.2018.01.163>
8. Willness, C. R., Grygoryeva, A. (2026). A systematic review of negative reactions to corporate social responsibility. *Human Resource Management Review*, 36 (2), 101130. <https://doi.org/10.1016/j.hrmr.2025.101130>

9. Téllez-Bedoya, C., Almanza-Junco, C., Herrera, J. (2026). Analytic Hierarchy Process-Based Framework for Corporate Social Responsibility Decision-Making in Peacebuilding Contexts. *Sustainability*, 18 (4), 2151. <https://doi.org/10.3390/su18042151>
10. Kirzhetska, M. S., Kirzhetskyy, Y. I., Zelenko, N. M., Zelenko, V. A., Klos, L. Y., Shkoliar, M. V., Gnylianska, L. Y. (2023). Activity-based costing: a practical model of cost calculation in psychiatric hospitals. *Wiadomości Lekarskie*, 76 (12), 2679–2686. <https://doi.org/10.36740/wlek202312118>
11. Moskvyyak, Y., Kucher, A., Kniaz, S., Heorhiadi, N., Fedorchak, O. (2025). Construction of a model for forecasting the rationality of financial decisions under the conditions of financial markets digitalization. *Eastern-European Journal of Enterprise Technologies*, 2 (13 (134)), 38–50. <https://doi.org/10.15587/1729-4061.2025.325518>
12. Kharchuk, V., Oleksiv, I. (2023). The Intellectual Structure of Sustainable Leadership Studies: Bibliometric Analysis. *Advances in Intelligent Systems, Computer Science and Digital Economics IV*. Cham: Springer, 430–442. [https://doi.org/10.1007/978-3-031-24475-9\\_37](https://doi.org/10.1007/978-3-031-24475-9_37)
13. Oleksiv, I., Lema, H., Vankovych, L., Chapran, S. (2025). Analysis of the Relationship Between CSR Elements Applying Isomorphic Distances. *Advances in Computer Science for Engineering and Education VII*. 417–426. [https://doi.org/10.1007/978-3-031-84228-3\\_36](https://doi.org/10.1007/978-3-031-84228-3_36)
14. Lema, H., Lisovych, T., Oleksiv, I., Kharchuk, V., Shulyar, R., Lema, O. (2025). Influence of External and Internal Factors on Company Activity in War Conditions Applying Expert Integral Evaluation System: A Case Study from Ukraine. *Advances in Computer Science for Engineering and Education VII*. Cham: Springer, 427–437. [https://doi.org/10.1007/978-3-031-84228-3\\_37](https://doi.org/10.1007/978-3-031-84228-3_37)
15. Kuzmin, O. Y., Oleksiv, I. B., Mykhailiak, G. V. (2014). Integral evaluation of company employees' competence system. *Actual Problems of Economics*, 5 (155), 506–513.
16. Chapran, S. (2021). Analysis of methodological approaches to the construction of dynamic systems of investment in information development. *Technology Audit and Production Reserves*, 6 (4 (62)), 12–16. <https://doi.org/10.15587/2706-5448.2021.248312>
17. Saaty, T. L. (1980). *The analytic hierarchy process: Planning, priority setting, resource allocation*. McGraw-Hill, 287.
18. Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting (Text with EEA relevance) (2022). *European Parliament and Council of the European Union*. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022L2464&qid=1681303503520>
19. Corporate responsibility (2025). *EPAM Systems*. Available at: <https://www.epam.com/about/who-we-are/corporate-responsibility>
20. Corporate social responsibility report 2024 (2024). *SoftServe*. Available at: <https://www.softserveinc.com/files/csr/softserve-corporate-social-responsibility-report-2024.pdf>
21. Sustainability in action report (2024). *DTEK*. Available at: [https://dtek.com/content/upload/Sustainability\\_in\\_Action\\_report.pdf](https://dtek.com/content/upload/Sustainability_in_Action_report.pdf)

✉ **Halyna Lema**, Candidate of Economic Sciences, Associate Professor, Department of Management and International Business, Lviv Polytechnic National University, Lviv, Ukraine, e-mail: [halyna.v.mykhailiak@lpnu.ua](mailto:halyna.v.mykhailiak@lpnu.ua), ORCID: <https://orcid.org/0000-0001-5298-7693>

**Ihor Oleksiv**, Doctor of Economic Sciences, Professor, Department of Management and International Business, Lviv Polytechnic National University, Lviv, Ukraine; University of London, Goldsmiths, United Kingdom; School of Creative Management, London, United Kingdom, ORCID: <https://orcid.org/0000-0001-7387-6933>

**Viktoriya Kharchuk**, Doctor of Economic Sciences, Professor, Department of Management and International Business, Lviv Polytechnic National University, Lviv, Ukraine, ORCID: <https://orcid.org/0000-0003-4354-9549>

**Roksolana Vilhutska**, Candidate of Economic Sciences, Associate Professor, Department of Management and International Business, Lviv Polytechnic National University, Lviv, Ukraine, ORCID: <https://orcid.org/0000-0002-9291-8606>

**Liliia Mykhailyshyn**, Doctor of Economic Sciences, Professor, Department of International Economic Relations, Vasyl Stefanyk Carpathian National University, Ivano-Frankivsk, Ukraine, ORCID: <https://orcid.org/0000-0001-7944-5317>

✉ Corresponding author