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## Predictors of Implementation of ESG Principles in the Small and Medium-Sized Enterprises in the Lublin Region

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**Abstract:**

**Purpose:** The purpose of this article is an attempt to identify predictors of ESG implementation in micro-enterprises and SMEs in the Lublin region, whose development trends are characteristic of the EU regions with significant developmental delays and yet showing significant developmental potential. This paper is a specific continuation of the authors' research in the area of identifying barriers to the implementation of innovation and factors affecting the formation of regional leadership.

**Design/Methodology/Approach:** In order to isolate the predictors of ESG implementation in micro-enterprises and SMEs in the Lublin region, a questionnaire survey was conducted on a group of entrepreneurs representing the Lublin region's entrepreneurs representing this business sector using a specially developed and previously validated research tool. The next step was to extract aggregate variables and propose a conceptual model and then develop a predictive model using SEM and validate it.

**Findings:** The impact weights of the three extracted aggregate predictors corresponding to the basic pillars of ESG were identified and determined, and an attempt was made to decompose these aggregate predictors into 11 basic predictors specific to the studied group of companies. An assessment of the mapping goodness of the identification of predictors of ESG implementation in the proposed model was also made.

**Practical Implications:** The proposed model and the identified predictors may serve as a basis for further extended research, as well as a premise for the development of a local ESG implementation policy for the microenterprise and SME sector of the Lublin region, and above all for interventions in these sections, whose importance seems to be crucial for the success of ESG implementation.

**Originality/Value:** The results of the research presented in this publication are based on the authors' current original research carried out in the microenterprise and SME sector, the importance of which seems to be essential for the overall success of ESG implementation among the enterprises of Lublin Region and may be an interesting comparative study for other EU regions with a similar structure.

**Keywords:** ESG implementation, predictors proposal, SME method, Micro-enterprises.

**JEL codes:** M14, D24, Q01, C31, L26.

**Paper Type:** Research article.

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## **1. Introduction**

The implementation of the principles of sustainable development becoming now one of the dominant challenges in the activities of entrepreneurs. The idea of sustainable development is the result of deep reflection by a wide range of experts, on the challenges facing humanity and awareness of the limited time left to take action to neutralize the effects of our activity.

According to the 1987 Report of the World Commission on Environment and Development, titled. "Our Common Future," sustainable development is development in which the needs of the present generation can be met without diminishing the chances of future generations to meet them (Brundtland Report).

The trend of sustainable development is in line with the current priority activities of many global organizations and the governments of many countries (Rimmel *et al.*, 2024). New regulations are currently being implemented in various regions of the world to get businesses interested in the environmental and social impact of their organizations, including by mandating reporting of non-financial sustainability factors.

Within the European Union, the emphasis on implementing sustainability is clear from legislative activity, which shapes the social, regulatory and policy framework and aims to make businesses aware of their organization's impact on the environment and society. EU legislation at the same time imposes an obligation on companies to report sustainability data (Żak, 2023).

And while the obligation to uniformly report non-financial factors currently only covers large companies, from 2026 this reporting will also apply to parts of the SME sector. An unambiguous assessment of the preparedness of SME sector companies to report ESG indicators is difficult because most studies at the academic level focus on large corporations and only a few refer to small and medium-sized enterprises (Permatasari and Gunawan, 2023).

However, the number of SMEs and the specifics of the relationships they build, indicate that they can have a significant impact on the implementation of sustainability principles and the formation of socially and environmentally responsible attitudes among their stakeholders. At the same time, it should be assumed that the rapid recognition by managers of these companies and use of the benefits of implementing sustainable development will increase their competitive advantage in the market.

Therefore, the purpose of this article is an attempt to identify the predictors of ESG implementation in microenterprises and SMEs of the Lublin region. In order to isolate the predictors of ESG implementation in microenterprises and SMEs, a survey was conducted on a group of regional entrepreneurs representing this

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business sector for this purpose a specially developed and previously validated research tool was used. The next step was to extract aggregate variables and propose a conceptual model, followed by the development of a predictive model using SEM and its validation. The article is a continuation of the authors' research on the issue of regional leadership formation.

## 2. Literature Review

The economic changes of recent years in particular those caused by the COVID-19 pandemic and the associated disruption of supply chains, record costs of natural disasters, resource depletion, war, have proven that there are no safe and self-sustaining places in the world and seemingly separate regions or ecosystems are highly interconnected and interact with each other.

At the same time, the realization that in a world of limited resources, an economic model based on continuous growth, is impossible and, moreover, can even be harmful (as shown by management models focused solely on growth, which have led to the destruction of the environment and the deepening of social inequalities) (Ciechomska-Barczak, 2024) indicate the need to look for an economic model that would eliminate most of these negative factors, increasing the resilience of the organization and doing justice to the needs of stakeholders - directing attention to a model of sustainable development.

The very idea of sustainable development, is nothing new in both economics and business management theory. Considerations of the ecological or social responsibility of the economy and, in particular, of business operations have run through various policy and strategy documents of many international organizations since the 1950s (Rimmel *et al.*, 2024). However, it is the recent years that have intensified public discussions and deliberations on sustainability and the need to build responsible and resilient organizations.

For more than 20 years, the idea of corporate social responsibility, understood as the voluntary respect of social and environmental aspects of business activities and in relations with stakeholders, has been gaining importance. One of the key documents that built the foundation for modern ethical business principles was the European Commission's "Green Paper on CSR" issued in 2004. "Green Paper on CSR.

This document assumes that social responsibility should be an integral part of management in European companies and an everyday practice followed by owners and managers (Adamczyk, 2009; Bojar and Żelazna, 2013). The implementation of CSR principles required a profound change in the way companies are managed, as well as new managerial skills, competencies and a change in mentality among both managers and employees. (Żelazna *et al.*, 2020).

Today, the presence of CSR practices in corporate settings, thanks to the economic, social and environmental benefits derived from them, has become commonplace. (Zelazna *et al.*, 2020).

Nowadays, the concepts of social responsibility and sustainability, understood as the ability of an organization to maintain the consumption of financial, human and natural resources at the minimum level necessary for functioning, to actively manage the interdependencies between them and to reduce the negative impact of the organization itself on the ecosystem in which it operates, in the short, medium and long term, (Ciechomska-Barczak, 2024) overlap in many areas contributing to the integration of economic, social and environmental goals.

CSR can be treated as a concept that ensures sustainability at the micro level, i.e., at the level of enterprises, and is an element of sustainable management ensuring the realization of sustainable development principles not only at the level of socio-economic systems, but also of individual actors involved in change (Bojar *et al.*, 2012)

A weakness of the CSR concept, highlighted in numerous studies, was that it is voluntarily implemented in business organizations, and managers communicate the progress of its implementation to stakeholders in a rather casual and arbitrary manner. As a result, comparing the effects of CSR implementation between different companies is difficult and sometimes impossible (Żak, 2023).

This lack of comparability of non-financial corporate performance is causing the concept of corporate social responsibility (CSR) to evolve into a more comprehensive approach, now known as Environmental, Social, and Governance (ESG) (Zhao *et al.*, 2023; Belas *et al.*, 2024; MacNeil and Esser, 2022).

Changing stakeholder perceptions, necessitates the implementation of changes on the company's side, and in this case, requires a shift in focus from tangible to intangible, non-financial assets, which until now have not been measured, analyzed and managed by the organization. Investors and other stakeholders expect more reliable information on environmental, social and corporate governance (ESG) issues to help them better understand how the company performs, makes decisions and creates value (Gond *et al.*, 2018; EY, 2021).

And while the concept of ESG refers to strategic, long-term activities that affect an organization's value, image and investor evaluation, there is a need reported by both the public and the business community for ESG to mature to the same level as financial disclosure (Singhania and Saini, 2021; EY, 2021).

In order to be able to identify well the intangible assets that have a key impact on the operation of a company, an analysis of ESG (from Environmental (E) -

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environmental, Social (S) - social and Governance (G) - corporate governance) factors is often used (Ciechomska-Barczak, 2024; Koźmiński, 2023):

E- Environmental (E) illustrates an organization's impact on the environment and addresses its impact on climate change, natural resource consumption, biodiversity and pollution. Addresses the prevention of environmental degradation. Refers to issues that affect climate change, such as greenhouse gas emissions, water and energy consumption, waste.

S- Social Responsibility. It defines the issues of the organization's impact on society refer in particular to the organization's interaction with society, social responsibility and respect for human rights including security and data protection, respect for labor rights, diversity of employment or the fight against discrimination.

G- Governance (management quality) focuses on the inside of an organization - its organizational structure, corporate governance, ethical behavior, transparency of operations and broad corporate responsibility.

It looks at how a company is managed and overseen, including ethical compliance, legal compliance, use of financial data and reporting. This indicator is particularly important for investors, as it affects confidence in the organization and the business being conducted.

However, it should be noted that the package of ESG factors that a company has to deal with will be different for each entity. The choice of factors depends on the industry, the stage of market development, the maturity level of the organization and the market environment - geographical region, legislation, technological development and stakeholders) (Ciechomska-Barczak, 2024).

An important element of ESG activities is the reporting of sustainability measures taken. The scope and principles of reporting and data transfer, in accordance with the CSRD (Corporate Sustainability Reporting Directive) adopted by the European Union, indicate that this obligation will enter into force gradually and from 2024 will apply to large entities operating in the European market, which have already published similar reports on more than one occasion.

The state of preparation of Polish companies for this obligation is difficult to assess because the KPMG (2023) survey shows that almost half (44%) of the surveyed companies in Poland identify and already report on ESG issues relevant to their operations.

In contrast, the results of a Grant-Thornton (2024) report covering 100 board members of medium and large companies in Poland indicate that a fifth of respondents said their company would not have such an obligation at all and 57% of respondents had no knowledge of the issue.

However, the fact that, starting in 2026, selected small and medium-sized entities will also be required to disclose information on their ESG activities in their activity report could be a huge challenge for these entities (EU, CSRD) (Segal, 2024).

The regulatory framework itself should not be seen by entrepreneurs only as an obligation for today's businesses have practically no other option but to implement sustainability principles as soon as possible, before their absence reflects negatively on sales, reputation, access to talent or access to capital.

Implementation of the principles allows not only to share the results achieved with stakeholders, but also is an opportunity to organize internal processes and identify the most important impacts of the company is an opportunity for entrepreneurs allowing to build the long-term success of the organization, the strength of the brand, reputation and stakeholder satisfaction, and ensure its stable growth (Holliday *et al.*, 2002, p.30).

As Kozminski (2023) emphasizes, such an assessment of the organization's impact on the environment and society and the current state of corporate governance, which includes a review of virtually all aspects of the company's operations, is an opportunity to rethink the purpose of one's operations and chosen strategy, and to consider who they are really meant to serve.

This is a very good time to implement measures that will not only optimize the bottom line, but also support the sustainable development of the company, the efficient use of resources and ensure long-term profitability. It's also an opportunity to improve companies' competitive edge, build interdisciplinary teams and prioritize human resource management (Deidre, 2023).

The implementation of ESG principles is also an opportunity for SMEs to build a competitive advantage. The SME sector is considered the backbone of any economy and their activities as the 'flywheel' of the economy thanks to this, their impact on sustainable development is undeniable.

According to the World Bank, SMEs “represent about 90% of businesses and more than 50% of jobs worldwide” (WBG, 2019). In Poland, as many as 99.8% of companies in the non-financial sector are classified as SMEs employing almost 67% of the total workforce (PARP, 2023). These values indicate that the economic, social and environmental impact on SMEs of the entire global economy is enormous.

Compared to larger companies, SMEs often have better (direct) contact with stakeholders who can communicate their expectations for positive, long-term changes affecting ESG. Implementing policies in SMEs that fit with the ESG standard can help them attract and retain highly qualified, talented employees, reduce turnover and improve employee productivity ensure the implementation of diversity, equity and inclusion (Kuo *et al.*, 2024).

SMEs often rely on a diverse network of suppliers and other partners to actively monitor suppliers for ESG, working with suppliers that adhere to high ESG standards contributes to a positive corporate narrative and strengthens trust among stakeholders. And with the continued demand for ESG-oriented products and services, it also better prepares SMEs for growth (EY, 2021)<sup>5</sup>.

Integrating sustainability factors into SME strategies can drive innovation in product and service development. By introducing more environmentally friendly and socially responsible offerings, SMEs can explore new market territories for both geographic service providers (Bielas *et al.*, 2024; SM, 2024; CPA, 2022).

Due to the fact that Polish small and medium-sized enterprises are not subject to the ESG reporting obligation, at the same time, as the literature review shows, they can be agents of change in the implementation of sustainable development principles and build their competitive advantage on this basis, it was decided to conduct field research in the Lublin Voivodeship.

### 3. Research Methodology

This study used a survey methodology, using an originally prepared and validated survey questionnaire as a research tool. The study explored a group of entrepreneurs' representative of the Lublin region. The research undertaken is a specific continuation of the exploratory research in the cross-section of entrepreneurship of the Lublin region carried out by the research team in the years 2017-2024.

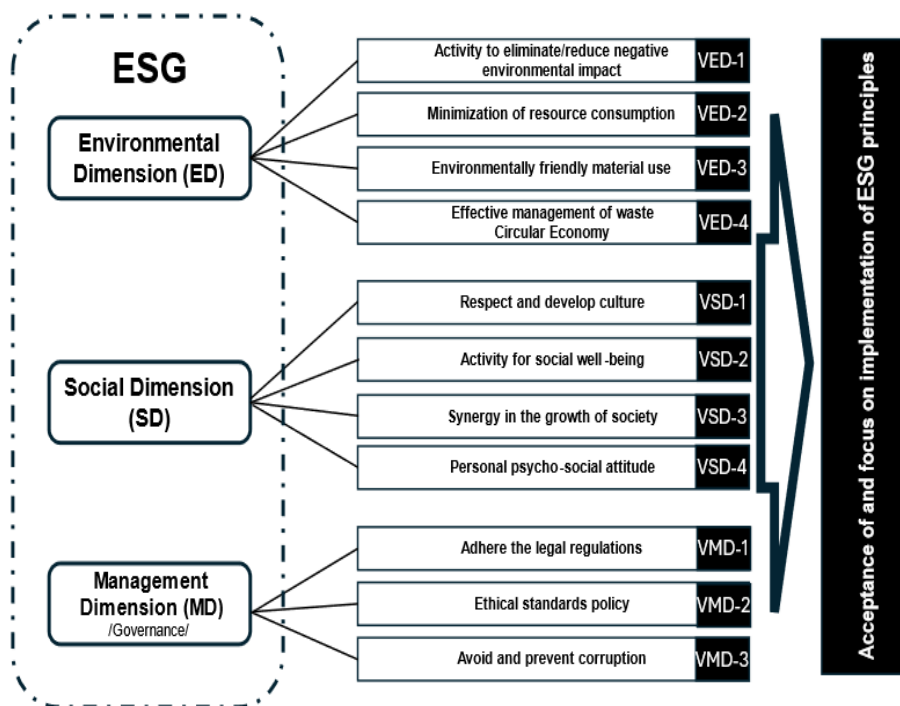
Thus, the research approach used a retrospective questionnaire technique exploring past events, combined with research on the perception of ESG principles and psychological attitudes regarding their implementation in the study group. The conceptual model of the research approach is illustrated by the diagram presented in Figure 1. A total of 106 completed questionnaires were returned, which falls within the range of cases considered adequate for analysis using the structural equation method.

In the comparative structural analysis, reference was made to the group of 360 respondents constituting the subject of the previous research stages. In the construction of the research tool, closed-ended cafeterias with 0/1 choices and 5-point Likert scale questions were used to estimate the main elements of our proposed conceptual model. For the ESG construct, ESG includes three pillars, which are environmental, social and governance areas. The authors adopted and modified 11 aggregate variables (four items on environment, four items on society and three items on governance). The specification of the aggregate variables related to the research questions of the questionnaire is shown in Figure 1.

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<sup>5</sup> [https://www.ey.com/pl\\_pl/sustainability/realize-potential-esg-plus](https://www.ey.com/pl_pl/sustainability/realize-potential-esg-plus).

Figure 1. Conceptual model



Source: Own elaboration.

Statistical calculations were carried out using the SEM module of Statistica Tibco 13.3 software provided for teaching and research purposes by Lublin University of Technology.

The reliability of the questionnaire was evaluated through the implementation of a test-retest methodology. The process entailed the same participants completing the same questionnaire on two separate occasions, with a minimum interval of 14 days between each administration.

The correlation between the test results was 0.92, indicating that the questionnaire exhibits high internal reliability. The overall reliability of the method was estimated using the  $\alpha$  Cronbach coefficient in a randomized sample of respondents, resulting in a value of 0.93. Moreover, the individual scales exhibited high values for the coefficient  $\alpha$  Cronbach, ranging from 0.81 to 0.86, thereby indicating internal consistency.

To answer the question of whether the parameter values satisfactorily replicate the input covariance matrix, we used fit indices: GFI, AGFI, NFI (Schumacker and Lomax, 2015).



Structural equation modeling (SEM) (Structural Equation Modeling) was adopted in this work as a means to test hypotheses on predictors of action and perception of the need to implement ESG principles in a turbulent environment specific to the Lublin region.

#### 4. Research Results and Discussion

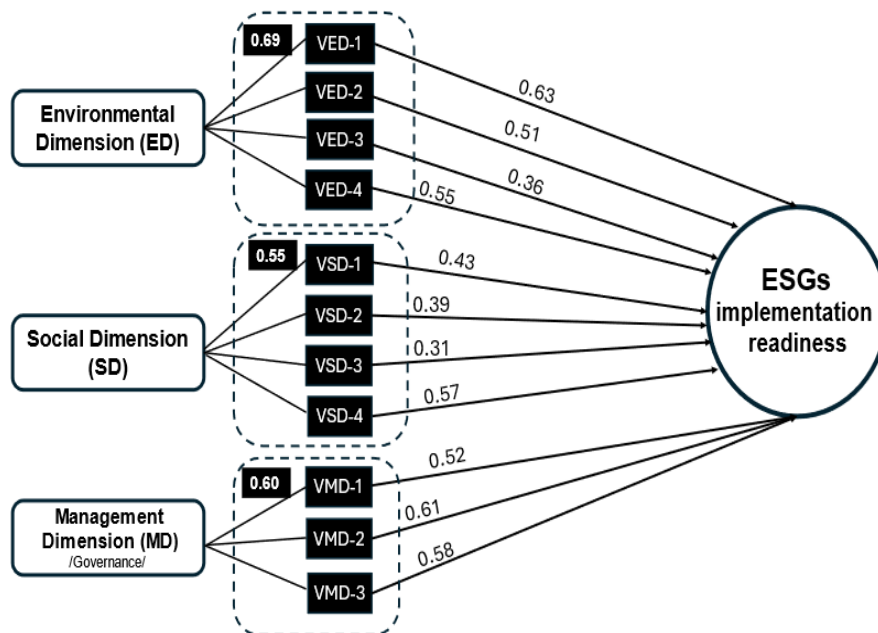
The demographic profile of the study participants is shown in Table 1. 106 respondents were qualified for the final phase of the study. The results of the demographic characteristics were as follows. The majority of respondents were female (72.6%), with a master's degree (66.0%), aged 41-50 (44.3%), for whom the implemented business activity was their first venture (58.5%), classified as micro-entrepreneurs (66.0%) and implementing a business in the form of a partnership (54.7%). Table 1 summarizes the complete characteristics of the study group.

**Table 1.** Characteristics of the study group

| Parameter                     | Description                   | n  | (%)  |
|-------------------------------|-------------------------------|----|------|
| Age                           | 18-29                         | 3  | 2.8  |
|                               | 30-40                         | 18 | 17.0 |
|                               | 41-50                         | 47 | 44.3 |
|                               | 51-60                         | 22 | 20.8 |
|                               | 61-70                         | 13 | 12.3 |
|                               | >70                           | 3  | 2.8  |
| Gender                        | Female                        | 77 | 72.6 |
|                               | Male                          | 29 | 27.4 |
| Education                     | High school                   | 13 | 12.3 |
|                               | Bachelor's degree             | 6  | 5.65 |
|                               | Engineer                      | 6  | 5.65 |
|                               | Master's degree               | 70 | 66.0 |
|                               | PhD                           | 11 | 10.4 |
| Business experience           | First business                | 62 | 58.5 |
|                               | Subsequent business           | 44 | 41.5 |
| Education vs business profile | Consistent                    | 60 | 56.6 |
|                               | Inconsistent                  | 46 | 43.4 |
| Form of business              | Capital (eg. Ltd., Inc., etc) | 23 | 21.7 |
|                               | Partnership                   | 58 | 54.7 |
|                               | Other forms                   | 25 | 23.6 |
| Business scale                | Microenterprise               | 70 | 66.0 |
|                               | Small enterprise              | 24 | 22.7 |
|                               | Medium enterprise             | 7  | 6.6  |
|                               | Large enterprise              | 5  | 4.7  |

*Source:* Authors' calculations.

Figure 2. SEM Predictive Model for ESG Implementation



Source: Authors' calculations.

Considering the impact of the three ESG categories on implementation readiness, the results show that the environmental pillar has the greatest impact on the readiness to implement ESG principles in the Lublin region (aggregate impact value = 0.69), followed by the management (impact value = 0.60) and social (impact value = 0.55) pillars, with the obtained weight values for the environmental and social dimensions being significant at the confidence interval CI=0.95. Conventional tests confirmed the fit of the predictive model (Table 2).

Table 2. Model fit after the survey sequence

| Indicator | Expected value | Level achieved |
|-----------|----------------|----------------|
| GFI       | >0.90          | 0.914          |
| AGFI      | >0.90          | 0.918          |
| RFI       | >0.90          | 0.915          |

Source: Own elaboration based on own research.

## 5. Conclusions, Proposals, Recommendations

Implementation of the principles of sustainable development in an organization is not only a response to global socio-ecological challenges but can be an element of building competitive advantage and an effective tool for enterprise risk management. The change in the approach to environmental and social issues is already a fact, as evidenced by the activity of the legislator.

Nevertheless, it should be assumed that soon the idea of sustainable development will be the main driving factor in building the value of the organization. Therefore, the speed of adaptation to this change will translate into the success of the company and those companies that are the earliest to recognize and take advantage of the benefits of implementing sustainable development will gain a competitive advantage. Therefore, choosing a sustainability path for SMEs is imperative.

The purpose of this study was to capture and verify how the manifestations of business preferences of entrepreneurs in the microenterprise and SMEs segment in the Lublin region, which was considered in this study as an exemplar for less developed EU regions, affect the acceptance and readiness to implement ESG principles in their business.

Structural equation modeling was used to verify the research assumptions. The study confirmed a direct relationship between awareness of the need to implement and acceptance of ESG application in a company and the extracted aggregate variables defined for the three ESG pillars, i.e., the environmental dimension (ED) the social dimension (SD) and the management dimension (MD).

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Regarding the impact of aggregate variables on awareness of the need to implement and acceptance of ESG application in the company, the highest impact was obtained by the aggregate variable of the environmental dimension VED-1 (0.63) and the management area variable VMD-2 (0.63), respectively, while the impact of the environmental dimension variables was in the range of 0.31-0.57.

The study has some limitations that should be taken into account. First and foremost, this study included only a limited number of respondents and aggregate variables on which we predicted the impact of ESG. Additional items can be tested with empirical data in future studies. Increased activity in the area of ESG implementation is associated with higher costs for the company which is important for lagging sectors.

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