



ORIGINAL ARTICLE


Citation: Belas, J., Dvorsky, J., Hlawiczka, R., Smrcka, L., & Khan, K. A. (2024). SMEs sustainability: The role of human resource management, corporate social responsibility and financial management. *Oeconomia Copernicana*, 15(1), 307–342. <https://doi.org/10.24136/oc.2937>

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Article history: Received: 14.01.2024; Accepted: 14.03.2024; Published online: 30.03.2024


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SMEs sustainability: The role of human resource management, corporate social responsibility and financial management

JEL Classification: *M14; G19; G41*

Keywords: *financial management; human resource management; corporate social responsibility; SMEs; sustainability*

Abstract

Research background: The sustainability of small- and medium-sized enterprises (SMEs) represents a significant scientific and professional problem in the current turbulent period because these enterprises play an important role in any country's economic and social systems.

Purpose of the article: This paper aimed to define the significant sustainability factors of small and medium-sized enterprises and to quantify their impact and importance on the sustainability of SMEs. The areas of Human Resource Management, Corporate Social Responsibility, and financial management were defined as significant sustainability factors.

Methods: Empirical research, on which the scientific hypotheses were formulated and evaluated, was conducted in June 2022 in V4 countries (Czech Republic, Slovak Republic, Poland, and Hungary) using a structured questionnaire. The study accumulated a sample of 1398 respondents. Data collection was conducted through an external agency, MN FORCE, operating in Central European countries. The Computer Assisted Web Interview (CAWI) method was used to record respondents' perceptions. Descriptive statistics, correlation analysis, and linear regression analysis were used to evaluate the hypotheses.

Findings & value added: The research showed that all defined factors in the areas of Human resource management (HRM), Corporate social responsibility (CSR), and financial management of the firm had an impact on defined sustainability attributes. The greatest impact was found on the firm's financial management, followed by CSR and HRM. The empirical results confirm that the intensity of the independent variables varies across the V4 countries. These results also show that the intensity of the selected HRM, CSR, and financial management factors of a firm is higher in the integrated models than in the models for individual V4 countries. The research results have shown that a range of factors determine the right attitude towards the sustainability of companies. In this context, economic policymakers and entrepreneurs must perceive sustainable growth as complex and apply a systemic approach to its design and implementation.

Introduction

Small- and medium-sized enterprises (SMEs) are an important part of the economic systems of all EU countries of the European Union. Their impact on important macroeconomic indicators, such as gross domestic product (GDP) and unemployment, is considerable. Currently, SMEs face various

challenges characterised by increasing competition. These firms are constantly threatened by survival and sustainable growth (Kim, 2021). Therefore, scientific research is required to support the sustainable development of SMEs.

Several scientific teams worldwide have addressed this issue from different perspectives. Some authors focus on emphasising the importance of sustainability of firms and explore the concept of sustainability of firms in the context of the three defined pillars (for example, Šebestová & Sroka, 2020; Matinaro *et al.*, 2019; Stoian & Gilman, 2017; Rajnoha *et al.*, 2021; Kozubikova *et al.*, 2023). The next group of authors prefers the environmental aspects of firms' sustainability and appeals to their environmental responsibility (Nielsen & Villadsen, 2023; Gu *et al.*, 2023; Liu *et al.*, 2020). According to Fahad *et al.* (2022) and Tounés *et al.* (2019), SMEs can adopt clean technologies, limit trash generation, and develop recycling and waste management programs. These procedures can lead to cost savings and increased productivity, in addition to helping the environment. Some authors focus on the social aspects of sustainability and highlight the quality of life, the standard of living, human development, welfare, life satisfaction, utility, happiness, health, and safety (Zimmer *et al.*, 2016; Chen *et al.*, 2020; and others). The largest group of authors has prioritised investigating the economic aspects of SMEs' sustainability (Tennakoon & Janadari, 2022; Husgafvel *et al.*, 2017; Malesios *et al.*, 2021).

External influences that trigger turbulent business environments pose major challenges for the SME segment. The impact of the war in Ukraine (Fiszeder & Małecka, 2022), rising prices of raw energy materials and high inflation rates negatively affect business activities.

This study identifies the significant drivers of SMEs' sustainability and quantifies their impact on important aspects of SMEs sustainability. Scientific studies on the attitudes of the original SMEs are lacking. The views of SMEs on sustainability allow a better understanding of their internal conditions. Simultaneously, these attitudes provide valuable information about the external environment. The originality and uniqueness of this study lie in the fact that the presented models of sustainability are based on the original attitudes of SMEs in the Visegrad Four countries (V4 countries). The chosen research methodology represents an innovative approach (a combination of financial and non-financial factors) which resulted in the presented models. These models present the most significant factors determining the partial indicators of SMEs' sustainability.

The remainder of this paper is organised as follows. The theoretical section presents the results of relevant research studies. In the next section, based on qualitative analysis, the research objective is defined, the research methodology is described, and the data used to develop models of the dependence of SMEs' sustainability on the defined factors are presented. The third part of the paper is the results of the empirical research. In the Discussion section, the results of the empirical research are discussed in detail, and a brief comparison of the results of this research study with other relevant scientific findings is presented. Finally, the main conclusions of the study are presented.

Literature review and theoretical framework

This literature review covers three aspects. First, it presents the factors affecting the sustainable development of businesses of all sizes. These factors specifically affect the sustainability of SMEs and how SMEs' sustainability connects with aspects related to human resource management, corporate social responsibility, and financial management. Moreover, it highlights the impact of external events such as the pandemic, ongoing conflicts between Russia and Ukraine, and increasing inflation. All these reflect the impact on SMEs' sustainability (Dvorský *et al.*, 2023a; Dvorský *et al.*, 2023b; Semenikhina *et al.*, 2023). They must adopt necessary considerations and safeguard themselves from turbulence and other critical factors in the current economic environment.

The last few years have been challenging for the business community, such as the Covid-19 pandemic, Russia-Ukraine conflicts, and oil and gas supply chain challenges (Juergensen *et al.*, 2020; Kalemli-Ozcan *et al.*, 2020; European Parliament, 2022; Audretsch *et al.*, 2023). These challenges and hurdles strongly push businesses and firms to work towards sustainability, consider the significance of sustainability, determine how to sustain themselves in different situations, survive various challenges, prolong Earth's resources, and address many more issues. The concept of sustainability is gaining wider acceptance across nations and businesses (Małys, 2023; Balcerzak *et al.*, 2023a; Jagoda *et al.*, 2023; Kiba-Janiak, 2022; Balcerzak & MacGregor Pelikánová, 2020; Silvestre & Tirca, 2019). It covers many factors related to or affecting business sustainability. This is concerned with the capacity to sustain or preserve a process constantly over time. Sustain-

ability aims to stop and control the rapid decline of physical and natural resources in businesses and make them accessible in the long run. Various studies have examined sustainability and expounded on it as a broad notion, considering numerous elements. Environmental variables, such as climate change, pollution, and resource depletion; social factors, such as poverty, inequality, and social justice; and economic factors, such as economic growth, consumer habits, and resource use, impact sustainability. Other factors that affect sustainability, in addition to the mentioned above, also include political ones like laws and regulations, technological ones like advancements and changes in technology, cultural ones like values and beliefs, and demographic ones like population growth (Baglibel *et al.*, 2018; Tasdemir & Gazo, 2018; Tur-Porcar *et al.*, 2018; Ahmed *et al.*, 2021; Huang, 2021; Chiu *et al.*, 2022; Papagiannidis & Marikyan, 2022; de Oliveira *et al.*, 2023).

Sustainability concerns prolonging and protecting resources. This depends on people and how they use them. Owners and managers are responsible for this. Hence, the owners and managers make strategic decisions and plans. Thus, much depends on owners and managers considering the aspects of sustainability, their approach towards sustainable factors, and how they perceive its usefulness for the firm's sustainability. Firms' focus has recently broadened from profitability-seeking to profitability-seeking sustainability (Yang & Liu, 2023; Khan *et al.*, 2023).

Large businesses initially recognised the relevance of sustainability, and it was discovered that businesses that invest in sustainable practices can lower risks, lower costs, and possibly gain a competitive edge as the market for sustainable goods and services expands (Antonio *et al.*, 2018; Hermundsdottir & Aspelund, 2021). In this context, efforts can be made to implement the principles of outsourcing and facility management (Potkany *et al.*, 2016; Potkány *et al.*, 2021; Mizickova *et al.*, 2022). Sustainability has also been proven to attract human talent, reduced costs, and ultimately boost profits (Bodhanwala & Bodhanwala, 2018; Xie *et al.*, 2019). Therefore, implementing sustainability in strategy is vital to meet growing investor pressure, users' and consumers' needs and demands, and regulatory requirements; therefore, examining firms' sustainability for the longevity of SMEs seems logical.

Specifically, the significance of sustainability lies in three dimensions: the environment, society, and economy. Large firms have more resources and go further to protect and support sustainability goals, whereas small

firms face constraints due to limited available resources. Large businesses have a variety of strategies to utilise resources and were the first to realise the issues of sustainability and start taking action (Yeganeh, 2020). Owing to limited resources, lack of funds, or consideration of sustainability as a less important issue, firms' actions can negatively impact the economy, society, and environment, such as engaging in unsustainable behaviours, including excessive resource extraction, pollution, and deforestation. Another approach is to engage in unethical acts, such as exploiting communities and labour (MacGregor Pelikánová & Sani, 2023). Some businesses have a history of adopting immoral methods, such as using underage labour or paying employees meagre wages. However, over time, this approach is constantly changing, and firms see various benefits through sustainable development, such as pollution reduction, environmental conservation, and CO₂ reduction (Haque & Ntim, 2018; Azar *et al.*, 2021; Yousaf *et al.*, 2022). However, SME sustainability and sustainable resources remain under-researched (Boiral *et al.*, 2019; Singh *et al.*, 2020).

In Europe, compared to large corporations, SMEs are much more numerous and contribute significantly to GDP, taxes, employment, and so on specifically in Eastern Europe and the Visegrad nations where most businesses are SMEs (Belás *et al.*, 2019; Belas & Rahman, 2023; Balcerzak *et al.*, 2023b). In the current situation, on the one hand, specifically European nations are hugely dependent on SMEs. However, they also face challenges in protecting against economic, social, and environmental problems. Hence, if sustainability becomes an integral aspect of SMEs, these challenges can be resolved to a certain extent. Therefore, sustainability cannot be ignored and is becoming an integral part of the ecosystem. However, given that SMEs prioritise economic performance over environmental and social concerns to remain competitive, sustainability is a significant concern.

SMEs face several risks, and their efficient management can lead them towards sustainability. There are several types of risks in small and medium-sized enterprises (SMEs) (Hudakova *et al.*, 2018; Crovini *et al.*, 2020; Ferreira *et al.*, 2020). Studies have highlighted that some key critical risks are human resource management and financial management risks (Belás *et al.*, 2018; Dvorský *et al.*, 2020; Ślusarczyk & Grondys, 2019). Additionally, SMEs have more recently been contributing to CSR activities and actively participating in their implementation (Graafland & Noorderhaven, 2020; Grimstad *et al.*, 2020; Belas *et al.*, 2022). They also found that SMEs could lower risk with the aid of CSR. Businesses are more likely to engage in CSR

activities if their corporate governance procedures are successful. CSR activities assist companies in reducing their risk of financial distress (Gangi *et al.*, 2020). SMEs have always put in extra effort. How can personnel and financial risk management influence firm sustainability in this scenario? This study further connects how HRM, CSR and financial management affect sustainability and examines their associations.

HRM can affect a firm's sustainability in several ways. Companies proactively managing sustainability are likely to seek value-creation opportunities (Freudenreich, *et al.*, 2020). Human resources can lead to a sustainability agenda by clearly articulating how an organisation's sustainability goals have a real impact on business performance, society, and the environment and how each individual can contribute to achieving those goals, providing training where necessary and tools to support employees in becoming more sustainable (Almarzooqi *et al.*, 2019; Podgorodnichenko *et al.*, 2020). Cultures, climates, and skills required for successful results can be created through HRM practices related to talent acquisition and selection, training and development, performance management, incentive systems, employee engagement, and empowerment (Kramar, 2022; Ramos-González *et al.*, 2022).

The concepts of CSR and sustainability share similarities related to economic, social, and environmental benefits. The outcome of corporate responsibility is sustainability (Vărzaru *et al.*, 2021). CSR is a company's responsibility for its impact on society and the environment and its commitment to environmental and social sustainability. CSR is concerned with business commitment that contributes to corporate social sustainability, which improves the human quality of life, the environment, and the economy in the long term. In addition, CSR can create long-standing benefits for all stakeholders by concentrating on strategies and tactics that are ethically, morally, socially, collectively, environmentally, economically, and culturally beneficial (Tilt, 2016; Lašáková *et al.*, 2022). These outcomes regarding the appropriate sharing of social responsibility principles in internal and external business environments are growing steadily (Oliinyk *et al.*, 2023; Vo *et al.*, 2020).

However, there is a direct relationship between environmental sustainability and CSR (Helfaya & Moussa, 2017). Business sustainability can be enhanced through CSR. According to earlier studies on similar subjects, CSR initiatives are likely to impact company sustainability positively. CSR has been shown to enhance corporate image and performance and can help

businesses thrive sustainably, improve firm reputation, and achieve sustainable business performance (Feng *et al.*, 2022; Kim *et al.*, 2022; Qing & Jin, 2022).

Business ethics in SMEs play an important role in this context. Zvarikova *et al.* (2023) assessed the ethical level of entrepreneurs in V4 countries to be high. According to the authors, entrepreneurs not only perceived the importance of business ethics but also implemented these practices in their management decisions. On the other hand, Remišová and Lašáková (2020), based on research on business ethics in Slovakia, pointed out the possibility of corruption in the case of entrepreneurs' unethical behaviour.

Financial management is one of the most important factors for the sustainability of SMEs. They generate financial resources through retained earnings, personal savings, loans from family and friends, supplier credit, and bank credit (Owusu *et al.*, 2021). Capital structure decision-making is one of the most important activities of company management as it determines the performance of a company, its competitiveness, and sustainability. SMEs must manage debt risk carefully because excessive debt can jeopardise their survival through high costs (Stoiljkovic *et al.*, 2021). In this context, the authors emphasise the importance of internal sources of financing for SMEs.

Several studies confirm that SMEs face problems with bank financing (Ruiz-Palomo *et al.*, 2022; Stoiljkovic *et al.*, 2021). Financial risk diversification mitigates banks' reluctance to increase SME financing and improves risk-management systems (Saci & Mansour, 2023). The authors emphasise the importance of the key parameters of SME dynamics (value creation, profitability, financial risk management, leverage, and equity multipliers) and the need for their positive development. Cehajic and Kosak (2021) emphasise the need to increase the banking sector's resilience through macroprudential policies, as this approach facilitates bank financing for SMEs.

According to Wall (2021), a differentiated corporate strategy and complex innovation process support improvements in the financial performance of SMEs. The author emphasises the need to mobilise the internal financial resources of SMEs. The results of the study by Syrová and Špička (2023) show that organisational culture and strategic risk management are full-fledged and positive mediators between enterprise risk management and financial performance. Al-Nimer *et al.* (2021) reached a similar conclusion. According to the authors, risk management indirectly improves the financial performance of SMEs through business model innovations.

According to Krüger and Meyer (2021), risk is inevitable in business, and SMEs must deal with it despite certain constraints. The authors state that SMEs are less resilient to risk, which weakens their sustainability. Similar conclusions are also reported by Chakabva *et al.* (2021). The authors highlight that SMEs adopt inadequate and inefficient risk management practices.

Financial risk is one of the most significant risks faced by SMEs and represents a constant threat to the survival of their operations (Ślusarczyk & Grondys, 2019). Entrepreneurs' thinking about business failure positively affects the future of SMEs. As they are small businesses, their functioning depends mainly on the attitudes of owners and managers. The two most influential factors in future business are the view of financial risk as a positive indication of financial accomplishment and a normal component of a company's operations (Dvorský *et al.*, 2023b). Efficient financial processes and risk management can support the sustainability of businesses.

Ayadi *et al.* (2021) state that a company's size, profitability, liquidity, industry, and inflation rate positively impact the survival of SMEs, while financial leverage and change in short-term interest rates have a negative impact.

Buljubasic Musanovic and Halilbegovic (2021) analysed the financial situation of companies before bankruptcy. The authors emphasise the importance of working capital productivity, debt ratio, accounts receivable turnover, return on assets, and return on equity ratios in detecting companies going bankrupt. When a company survives for five or more years, the probability of failure in the near future (Ayadi *et al.*, 2021).

SMEs must understand the basic financial and financial risk management aspects, as these are important sustainability factors.

Therefore, the focus on sustainability is no longer limited to large firms but also reaching SMEs. The SMEs are much higher in numbers than large firms. Moreover, SMEs are major employment creators, producers of commodities, and taxpayers, making them an integral part of the economy and key entities that use resources. In these situations, it becomes imperative for SMEs to consider the sustainability concerns and to understand the factors affecting the SMEs' sustainability.

Aim, methods and data collection

The aim of this paper is to define the significant sustainability factors of SMEs and to quantify their impact and importance on the sustainability of SMEs. The areas of HRM, CSR and financial management were defined as significant sustainability factors.

Data collection was realised in June 2022 separately in four countries (CR – Czech Republic, SR – Slovak Republic, PL – Poland, HU – Hungary). The respondent was defined as an owner or top manager (senior manager) of SMEs. The data collection was realised with using the external agency which operate in middle European countries (MN FORCE). The process of data collection was same for each country and in the same time. The Computer Assisted Web Interviewing (CAWI) method was used on the recording of the perceptions of respondents. The approach of selection in CAWI method of respondents is randomised. The main criterion of data file of respondents was the minimum 50% microenterprises (0-9 employees). The questionnaire contained control question for the verification of homogeneity of respondent answers. The questionnaire was translated to the national language of respondent for better understanding of the statements. The structure of the questionnaire was: the demographics characteristics statements (see also structure of respondents); the independent and dependent statements formulation (see also formulation of variables). The owner or senior manager of SMEs must formulate one answer from the following options (via Likert 5-point scale): (1) completely agree; ...; (5) completely disagree with the formulation of the statement.

The questionnaire contains the variables (dependent; independent) follows as:

Dependent variables (DV):

DV1: I understand the concept of sustainable growth in business.

DV2: Sustainable growth should pursue not only the economic interests of firms, but also the positive impact on the social system and environmental aspects.

DV3: I rate our company as sustainable.

Independent variables (IV):

IV1: I consider people in the firm as the most important asset.

IV2: I regularly evaluate the performance of my subordinates and motivate them to innovate their working practices.

IV3: I invest a lot of money in improving the skills of our employees.

IV4: I take the CSR concept into account when managing the company.

IV5: Implementing the CSR concept enables our company to gain competitive advantages in the market (better company image, higher customer loyalty, new business opportunities, etc.).

IV6: CSR enables our company to gain new customers.

IV7: I understand the most important aspects of financial management of the firm.

IV8: I can appropriately manage financial risks in our firm.

IV9: I have a positive view of our firm's financial performance.

IV10: Our firm will survive in the market in the next 5 years.

Based on the qualitative analysis of this issue and partial results of previous research the following scientific hypothesis was defined.

SH: Independent variable (IV1, ..., IV10) has a statistically significant positive effect on the dependent variable (DV1, ..., DV3) according to the nationality of group of respondents (CR, SR, PL, HU, V4).

The following statistical methods were applied to the evaluation of hypotheses: (i.) descriptive statistics to the evaluation of the assumption of normality of variables (see table 1); (ii.) correlation analysis – quantification and verification (t-Stat; level of significance ($\alpha = 0.05$)) of pairwise dependences (Spearman coefficient of correlations) between: (1) dependent and independent variables and (2) independent variables (see table 2); (iii.) verification of the assumption of multicollinearity with using Variance

Inflation Factor (VIF; see table 3); (iv.) linear regression analysis (LRM) – estimation of regression coefficients (RCs) with using maximum likelihood method; regression characteristics: SE – Standard Error; Sig. – Significance; N – Number of respondents; R² – Coefficient of determination; C – Multiple of Coefficient of Correlation; Adj. R² – Adjusted Coefficient of determination; Analysis of variance: F-ratio and Significance (Sig.).

Linear regression function in general forms is defined as follows:

$$Dpi = b0 + b1 \times IV1 + b2 \times IV2 + b3 \times IV3 + b4 \times IV4 + b5 \times IV5 + b6 \times IV6 + b7 \times IV7 + b8 \times IV8 + b9 \times IV9 + b10 \times IV10 + e_i \quad (1)$$

where:

DP dependent variable;
 i type of dependent variable;
 i = 1,2,3; IV independent variable;
 j = 1, ..., 10
 b0 intercept;
 b1, ..., b10 regression coefficients;
 e_i random error.

LRM is good approach to the evaluation of hypotheses, because the positive answers on the independent variables connected to the positive answers on the dependent variables (direct and linear relationships). This approach is very popular statistical method in the quantitative research (e.g. Hudáková *et al.*, 2023; Musa *et al.*, 2024; Dunn *et al.*, 2006). Autocorrelation was not evaluated because character of research data are not data of time series.

Structure of respondents by nationality: 24.8% CR, 27.3% PL, 23.0% SR, 24.9% HU. 54.1% owners and 45.9% managers in senior management positions participated. The structure of respondents in terms of company size was as follows: 48.5% micro-enterprises, 28.4% small enterprises and 23.1% medium-sized enterprises. The legal form was as follows: 35.1% sole proprietors, 49.4% limited liability company, 12.5 joint stock company and 3.0% respondents indicated another form of business. The largest number of companies were in the service sector 26.3% and trade 18.9%, followed by the following areas: 16.2% manufacturing, 16.2% tourism, 8.0% construction, 3.8% transport, 3.3% agriculture, and 7.3% respondents indicated another branch of business. In terms of length of business, the structure was

as follows: 26.5% up to three years, 39.3% more than 3 years and up to 10 years, and 34.2% respondents have been in business for more than 10 years. 29.3% respondents indicated the capital city as the place of business, and 70.7% indicated another region of business. Of the total number of respondents from V4 countries, 48.5% were men and 51.5% were women. Educational level of respondents: 7.6% respondents reported primary or secondary education without a high school diploma, 44.3% respondents with completed high school education with a high school diploma, 17.0% higher education - bachelor's, 29.0% higher education - master's /engineering, 2.1% higher education – doctoral. Age structure of respondents: 35.3% under 35 years, 34.3% aged 36-45, 21.2% aged 46-55 and 9.2% aged over 55.

Results

The following Table 1 contain the results of the descriptive characteristics (M – Mean; SD – Standard Deviation; Skew. – Skewness; Kur. – Kurtosis) of the dependent and independent variables according to the nationality of respondents.

The descriptive statistics of variables (DVs; IVs) shows that the assumption of normality of variables was confirmed for each variable (see values of Skew. and Kur. Table 1). In generally, these results indicate positive perceptions (completely agree and agree) of the variables (DV1, ..., DV3; IV1, ..., IV10) for each group of respondents according to the nationality.

The empirical results of analysis of correlation with evaluation of their significance are presented in Table 2.

The empirical results of correlation analysis showed that each pairwise coefficient of correlation (see Table 2) is statistically significant at the level of significance 1%. The dependences between dependent variables (DV1, DV2 and DV3) and independent variables (IV1, ..., IV10) shows middle strong correlations.

The results of assumption of multicollinearity for LRM (LRM1, ..., LRM3) according to the nationality of respondent were calculated in the next table.

The results (see Table 3) confirmed that the range of the VIF values are between 1.394 (SR; IV1) and 4.236 (CR; IV5). These VIF values indicate that correlation between independent variables (IV1, ..., IV10) is not high. The

negative effect of the multicollinearity was not confirmed in the linear regression models (LRMs).

The results (see Table 3) confirmed that negative effect of the multicollinearity is not present in the linear regression model for each country.

The following Table 4 presents the results of linear regression modelling of dependent variable 1 “I understand the concept of sustainable growth in business” according to the nationality of respondent (CR, ..., HU, V4).

Linear regression models are statistically significant (Table 4) for each group of respondents according to the nationality. The model explained from 33.2% (HU) to 50.3% (PL) of the total variance of DV1. The most significant independent variable with positive effect on the DV1 is IV7 for each group of respondents.

The linear regression function with relationships between IVs and DV1 for each group of respondents are shown in Table 5.

Bold colour of independent variable in linear regression function (see Table 5) indicates the effect of each independent variable on the dependent variable 1. Independent variable 7 has the most positive effect (statistically significant) on the DV1 for each country.

The following Table 6 presents the results of linear regression modelling of dependent variable 2 “Sustainable growth should pursue not only the economic interests of firms, but also the positive impact on the social system and environmental aspects” according to the nationality of respondent (CR, SR, PL, HU and V4).

Linear regression models are statistically significant (Table 6) for each group of respondents according to the nationality (Sig. is less than the level of significance 0.001 for each model). The model explained from 26.1% (SR) to 38.4% (CR) of the total variance of DV2. The most significant independent variables with positive effect on the DV2 are: (i) IV4 and IV6 according to the Czech respondents; (ii) IV10 according to the Slovak respondents; (iii) IV4, IV7, and IV9 according to the Polish respondent; (iv) IV8 according to the Hungarian respondent.

The linear regression function with relationships between IVs and DV2 for each group of respondents are shown in Table 7.

Bold colour of independent variable in linear regression function (see Table 7) indicate the effect of each independent variable on the DV2. The most statistically significant independent variable with positive effect on the DV2 is for each country different (CR: IV4; SR: IV10; PL: IV9 and HU: IV8).

The following Table 8 presents the results of linear regression modelling of dependent variable 3 “I rate our company as sustainable” according to the nationality of respondent (CR, SR, PL, HU and V4).

LRMs are statistically significant (see Table 8) for each group of respondents according to the nationality. The model explained from 35.1% (HU) to 46.4% (CR) of the total variance of DV3. The most significant independent variables with positive effect on the DV3 are: (i) IV3 and IV10 according to the Czech respondents; (ii) IV9 and IV10 according to the Slovak respondent; (iii) IV5, IV7 and IV9 according to the Polish respondents and (iv) IV6 according to the Hungarian respondents.

The linear regression function with relationships between IVs and DV3 for each group of respondents are shown in Table 9.

Bold colour of independent variable in linear regression function (see Table 9) indicate the effect of each independent variable on the DP3. Independent variable 10 has the most positive effect on the DP3 for Czech and Slovak respondents. For Polish respondents is the most important IV9 with positive effect on the DP3.

Based on the presented research results (Table 5, 7, 9), it can be concluded that the scientific hypothesis *has been partially confirmed*. It can be concluded that all the defined factors (independent variables) have an impact on the dependent variables, although it must be emphasized that there are varying degrees of influence of each factor.

The empirical results of case study showed the important findings.

Relationships between IVs and DV1: Understanding of the most important aspects of financial management of the firm of owners/manager of SMEs is the most important factor which has a positive effect on the understanding the concept of sustainable growth in business for each group of respondents according to the country of research (CR: RC = 0.385; SR: RC = 0.267; PL: RC = 0.326; HU: RC = 0.316). The owners/manager positive relationship to the CSR concept (at managing of the enterprise and to gain new customers) has positive effect on the understanding the concept of sustainable growth in business according to the Czech, Polish and Hungarian respondents. These effects were not confirmed by Slovak group of the respondents. The perception of the financial performance of SMEs does not have a significant effect on the understanding the concept of sustainable growth in business according to each group of respondents.

Relationships between IVs and DV2: The owners/manager positive relationship to the CSR concept (at managing of the enterprise) is significant

factor which has a positive effect on the perception of the sustainable growth (which pursue the economic interests of enterprise, the social system and the environmental aspects) according to the Czech, Slovak and Polish respondent (CR: RC = 0.201; SR: RC = 0.154; PL: RC = 0.258). This effect was not confirmed by Hungarian group of the respondents. Personnel independent variables (people as a key role in the firm; evaluation the performance of our employees and innovation their working practices; money to the growing skills of our employees) haven't significant role with the effect on the perception of the sustainable growth (which pursue the economic interests of enterprise, the social system and the environmental aspects) according to the Slovak, Polish and Hungarian SMEs. Slovak (RC = 0.118) and Polish SMEs (RC = 0.281) thinks that evaluation of financial performance has positive effect on the perception of the sustainable growth (which pursue the economic interests of enterprise, the social system and the environmental aspects). Czech (RC = 0.149) and Hungarian SMEs (RC = 0.222) thinks that management of financial risks in company has positive effect on the perception of the sustainable growth (which pursue the economic interests of enterprise, the social system and the environmental aspects).

Relationships between IVs and DV3: The position of enterprise on the market in the next five years has significant effect on the perception the enterprise as sustainable according to each groups of respondents (CR: RC = 0.363; SR: RC = 0.371; HU: RC = 0.169), without Polish group of respondents. Polish (RC = 0.401), Hungarian (RC = 0.130), and Slovak (RC = 0.155) SMEs think that management of evaluation of financial performance has positive effect on the perception the enterprise as sustainable. Personnel items (people as a key role in the firm; evaluation the performance of our employees and innovation their working practices; money to the growing skills of our employees) haven't significant role with the effect on the perception the enterprise as sustainable according to the Slovak, and Polish SMEs.

Based on the data in Table 5, 7, and 9, further thoughts can be formulated for discussion.

The selected factors from the HRM (IV 1–3) have minimal influence on the attitudes of owners/managers towards sustainable growth. The intensity of occurrence of these factors in the regression function has a mean value of 2. This means that these factors occur only twice in the three models for the V4 countries. While in the Czech Republic and Hungary their frequen-

cy in the regression function is higher than 0, in Poland and Slovakia their frequency in the regression function is zero. The frequency of occurrence of significant independent variables in the regression function for all countries (integrated model) is higher (all 3 independent variables (IV1, IV2, IV3) from the personnel domain had a significant value in the integrated model no.1, one independent variable had a significant value in model no. 2 (IV1) and 2 independent variables had a significant value in model no. 3: IV2, IV3).

The selected CSR factors (IV 4–6) showed greater influence in shaping the attitudes of owners/managers towards sustainable development. The average value of the occurrence of factors within the models for each V4 country was at 4.33, with the most frequent independent variable being IV6. This means that the ability of CSR to win new clients represents a significant impact on the sustainability of the firm. Other CSR attitudes have a moderately positive impact on perceptions of firm sustainability attributes. These are of course also reflected in the integrated models. The impact of selected CSR factors is significant in the Czech Republic and Poland, marginally significant in Slovakia and zero in Hungary. In integrated model no.1, two independent variables were significant, in model no.2 it was one and in model no. 3 it was two independent variables.

The area of financial factors (IV 7–10) had the most significant impact on the perception of the firm's sustainability. The average value of the occurrence of these factors in the models for the individual V4 countries was 5. The most frequently occurring factor was IV7. This means that positive perceptions of firm sustainability factors are the most shaped by owners/managers' knowledge of the financial management of the firm. Owners/managers' financial optimism (IV9 and IV10) was also influential in shaping appropriate attitudes towards firm sustainability. The independent variable IV8 had minimal influence on the formation of appropriate attitudes towards firm sustainability. This can be seen as the persistent pessimism of SME owners/managers towards financial risk management. It is likely that many SMEs fail to manage financial risk appropriately, as confirmed by several studies. The intensity of these factors in the regression function was at a similar level in all V4 countries. In the integrated model 1 up to 6 independent variables had significant value in the regression function, in model 2 it was 5 independent variables and in model 3 it was 7 independent variables.

Discussion

The research aimed to identify the influence of the financial and non-financial factors that shape SMEs' attitudes towards sustainable growth.

The empirical results confirm that human resource management (HRM), financial management (FM), and corporate social responsibility (CSR) are determinants which affect the sustainable development of SMEs. In addition, the region (state of doing business) of an organisation's business activity is an important element because some differences exist in the perception of these determinants (HRM, FM, and CSR). The financial performance of SMEs and the understanding of owners' financial aspects are stronger determinants, which directly affect the rate of sustainability in CR and SR, compared with the lowest direct effect in PL and HU.

Unsurprisingly, financial factors demonstrate the most significant influence in this area. This study confirms that knowledge of financial management (financial performance management and financial risk management) is crucial for shaping SMEs' positive attitudes towards sustainability. These findings follow the results of studies reported by several authors, such as Hudakova *et al.* (2018), Crovini *et al.* (2020), and Ferreira *et al.* (2020), who emphasise the need for quality business risk management about firm sustainability. In this context, Belas *et al.* (2018), Ślusarczyk and Grondys (2019), and Dvorský *et al.* (2020) emphasise the importance of financial risk management in the SME segment, as efficient financial processes and risk management can support SMEs in sustainability. Gallo *et al.* (2023) highlight the importance of using the BSC and EFQM models to manage SMEs' financial systems strategically.

The research has generated several new insights. First, we highlight the influence of SMEs' entrepreneurial optimism in forming SMEs' sustainability attitudes. Entrepreneurs with a positive perception of the firm's current financial situation tend to form more positive attitudes towards sustainability than entrepreneurs with a lower intensity of entrepreneurial optimism. The second important point is the entrepreneurs' belief that their firms will survive in the medium term. This attitude also forms a significantly positive attitude towards the sustainability of SMEs. Our results confirm that it is extremely important to develop an economy in which stakeholders (government, society, media, professional organisations, etc.) influence the growth of SMEs' entrepreneurial optimism in the economic system in appropriate forms.

This research has confirmed the importance of CSR implementation for the sustainability of SMEs, which is in line with the conclusions of Graafland and Noorderhaven (2020), Grimstad *et al.* (2020), and Belas *et al.* (2022). It is widely accepted that CSR enhances the performance of SMEs by increasing competitiveness (Apospori, 2018) because of the moderating role of diverse CSR factors, such as regional aspects (Rashiti & Skenderi, 2023), engaged and loyal employees (Castro-González *et al.*, 2021), and improved firm image and reputation (Feng *et al.*, 2022; Kim *et al.*, 2022; Qing & Jin, 2022; Betakova *et al.*, 2023).

The results of the research show that the ability of CSR to win new clients significantly impacts firm sustainability. SMEs' attitudes reflect the notion that winning new clients due to a positive image moderated by the implementation of the CSR concept will achieve financial benefits that will successfully lead them into the future. Thus, we can formulate a trend of the positive impact of applying the CSR concept on the sustainability of SMEs. Although the intensity of these non-financial factors is lower than that of the financial factors, the research results show the potential benefits of implementing the CSR concept with lower intensity from the sustainability attitudes of entrepreneurs in the SME segment.

This study produced interesting results that differ from the conclusions of other studies. Several studies have highlighted the importance of HRM for a firm's current and future performance and its sustainability. For example, Yang and Liu (2023) highlighted the shift from profitability seeking to profitability through sustainability, and other authors have emphasised the importance of HRM in this area (Bodhanwala & Bodhanwala, 2018; Xie *et al.*, 2019; Almarzooqi *et al.*, 2019; Podgorodnichenko *et al.*, 2020). Human capital represents a competitive advantage for SMEs (Al Qershi *et al.*, 2020) as quality employees significantly increase sales (Santhosh, 2021). SMEs operate solely through their employees' skills, experience, and knowledge as they enhance their performance and support long-term business growth (Khan *et al.*, 2022). The sustained use of appropriate HRM tools will lead to a nuanced approach to addressing employees' needs and concerns over the long term. Satisfied employees respond with greater care for the company, are motivated and engaged, and are more inclined to accept changes in the company (Saks, 2022), which determines performance improvements (Al-safadi & Altahat, 2021). These attributes are prerequisites for firm growth and sustainability.

This research generated different results because the defined HRM factors did not significantly impact SMEs' attitudes toward sustainability. The perception that people are the most important capital in a firm, evaluation and motivation of employees, and investment in their skill development have only a minimal impact on the formation of SME attitudes toward understanding the importance of sustainable business growth. These results can probably be interpreted in such a way that human capital is perceived by SMEs primarily in the short term as an important factor of firm success but is not strongly perceived by SME owners/managers as a factor of sustainability.

Conclusions

This study defines the significant sustainability factors of SMEs and quantifies their impact and importance on their sustainability in the market.

The research showed that all the defined factors in the areas of HRM, CSR, and financial management had an impact on the defined sustainability attributes of firms. The greatest impact was found on the firm's financial management, followed by CSR and HRM.

Knowledge of the concept of sustainable firm growth was significantly determined by the positive perception of human capital, implementation of the CSR concept in firm management, ability to acquire new customers based on CSR, knowledge of SMEs' financial management, and optimism of SMEs who believe that their firms will survive for the next five years.

Positive perceptions of sustainable growth were significantly determined by the attitude that people represent the most important capital in the firm, the implementation of CSR in the firm's management activities, knowledge of the firm's financial management, entrepreneurs' optimism regarding financial risk management, and a positive assessment of the firm's current financial performance.

Based on the attitudes of owners/managers, the assessment of firm sustainability depends on the motivation of employees and the growth of their qualifications, knowledge of the firm's financial management, and the financial optimism of SME owners/managers.

The empirical results confirm that the intensity of the independent variables varies across the V4 countries. These results also show that the intensity of a firm's selected HRM, CSR, and financial management factors is

higher in the integrated models than in the models for individual V4 countries. The results show that the defined areas significantly determine the sustainability of SMEs. Companies should appropriately implement scientific knowledge in their management systems to improve their prospects for sustainable growth.

The research results have shown a range of factors determine the right attitude towards the sustainability of companies. In this context, economic policymakers and entrepreneurs must perceive the concept of sustainable growth as complex and apply a systemic approach to its design and implementation.

This scientific study has important practical implications as it enables economic policymakers, entrepreneurs, and the external environment to identify important factors in SMEs' sustainability. SME owners/managers should pay special attention to human capital and improve HRM tools to enhance business performance. Because human capital provides organisations with a basic knowledge platform, managers should strengthen strategic alliances and formal mechanisms to preserve and institutionalise their knowledge and increase the potential of human capital. Furthermore, the success of SMEs depends on their ability to create, preserve, and apply knowledge for long-term survival.

An important tool for increasing competitiveness is the implementation of CSR in business activities. There is a need for business owners/managers to apply this knowledge to the management of a company and not just see CSR as a tool for company promotion.

Although there are clear indications that SMEs pay considerable attention to financial management, it is desirable for SME owners and managers to institutionalise and standardise appropriate financial management systems and tools to create a suitable platform for achieving long-term financial performance.

This study has some limitations. First, it should be stressed that the research was conducted in V4 countries, and its results can only be used within this region. However, the research methodology is clearly described and can be applied to other economies. On the other hand, the research methodology is clearly described and could be replicable in other countries. Another factor that may have slightly influenced the empirical data is the period in which the research was conducted. Although the turbulent political-economic situation determined the data collection period, the data obtained could be considered relevant for scientific investigation. It may be

assumed that the presented scientific results will contribute to the scientific debate on this topic. One possibility for future studies in this area is to incorporate this scientific field into research on the ESG concept, which is gaining momentum and will strongly influence SME business activities in the near future.

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Acknowledgments

This paper is an output of the project VEGA 01/0494/24 “Metamorphoses and causalities of indebtedness, liquidity and solvency of companies in the context of the global environment”.



Ministry of Education and Science
Republic of Poland

The journal is co-financed in the years 2022–2024 by the Ministry of Education and Science of the Republic of Poland in the framework of the ministerial programme “Development of Scientific Journals” (RCN) on the basis of contract no. RCN/SN/0697/2021/1 concluded on 29 September 2022 and being in force until 28 September 2024.

Annex

Table 1. Descriptive analysis of selected variables

DS	DV1	DV2	DV3	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
Czech Republic (N = 347)													
M	1.988	2.026	2.153	1.726	2.066	2.519	2.533	2.553	2.496	1.939	2.069	2.112	2.009
SD	0.790	0.810	0.831	0.885	0.964	1.103	1.021	1.037	0.963	0.790	0.772	0.851	0.891
Skew.	1.001	1.530	0.140	2.815	0.850	-0.215	0.118	-0.032	0.125	0.219	0.254	0.350	0.625
Kur.	0.728	0.873	0.498	1.521	0.938	0.557	0.509	0.428	0.393	0.604	0.486	0.688	0.795
Slovak Republic (N = 322)													
M	1.758	1.780	1.935	1.575	1.910	2.248	2.311	2.295	2.270	1.733	1.960	2.056	1.953
SD	0.695	0.735	0.748	0.725	0.862	0.983	0.912	0.942	0.909	0.699	0.758	0.822	0.836
Skew.	1.119	1.704	0.691	2.474	0.956	-0.237	0.099	0.037	-0.031	0.318	1.327	1.059	0.524
Kur.	0.759	0.941	0.646	1.342	0.909	0.495	0.437	0.459	0.389	0.696	0.801	0.843	0.700
Poland (N = 381)													
M	1.585	1.685	1.829	1.449	1.861	1.890	1.929	1.976	1.782	1.567	1.822	1.803	1.806
SD	0.758	0.733	0.867	0.751	0.917	0.989	0.916	0.950	0.844	0.721	0.808	0.788	0.864
Skew.	2.496	1.301	1.257	6.757	1.667	1.129	0.968	0.593	0.726	3.220	1.464	1.905	1.306
Kur.	1.402	0.973	1.067	2.275	1.205	1.159	0.987	0.881	0.958	1.458	0.999	1.076	1.124
Hungary (N = 348)													
M	1.589	1.644	1.759	1.509	1.675	1.894	1.784	1.882	1.724	1.566	1.667	1.761	1.710
SD	0.692	0.679	0.821	0.765	0.818	0.874	0.765	0.849	0.770	0.719	0.715	0.841	0.828
Skew.	1.639	1.303	2.408	3.268	1.585	0.454	0.777	1.055	0.775	2.643	1.425	0.940	1.140
Kur.	1.120	0.914	1.291	1.720	1.266	0.833	0.854	0.937	0.937	1.380	1.017	1.060	1.137
V4 countries (N = 1398)													
M	1.726	1.781	1.916	1.562	1.877	2.129	2.131	2.170	2.057	1.697	1.876	1.928	1.866
SD	0.754	0.754	0.833	0.790	0.903	1.024	0.955	0.983	0.931	0.749	0.779	0.838	0.863
Skew.	1.361	1.518	0.891	3.792	1.248	0.214	0.403	0.227	0.160	1.240	0.923	0.859	0.801
Kur.	0.991	0.946	0.857	1.732	1.086	0.788	0.735	0.680	0.669	1.009	0.801	0.881	0.930

Note: IV1, ..., IV10 – Independent variables; DS – Descriptive statistics.

Table 2. Modification correlation matrix of variables

V	DV1	DV2	DV3	IV1	IV2	IV3	IV4	IV5	IV6	IV7	IV8	IV9	IV10
DV1	1												
DV2	0.63' ±0.06	1											
DV3	0.51' ±0.11	0.54' ±0.05	1										
IV1	0.33' ±0.10	0.28' ±0.07	0.29' ±0.05	1									
IV2	0.38' ±0.09	0.34' ±0.04	0.39' ±0.01	0.48' ±0.06	1								
IV3	0.41' ±0.12	0.36' ±0.11	0.41' ±0.08	0.37' ±0.07	0.60' ±0.05	1							
IV4	0.46' ±0.09	0.46' ±0.08	0.43' ±0.07	0.30' ±0.08	0.41' ±0.10	0.49*** ±0.07	1						
IV5	0.46' ±0.10	0.44' ±0.07	0.46' ±0.12	0.32' ±0.13	0.43' ±0.15	0.50*** ±0.06	0.79' ±0.09	1					
IV6	0.46' ±0.09	0.42' ±0.08	0.41' ±0.04	0.33' ±0.09	0.41' ±0.15	0.48*** ±0.13	0.62' ±0.13	0.67' ±0.15	1				
IV7	0.52' ±0.10	0.37' ±0.06	0.38' ±0.06	0.32' ±0.10	0.31' ±0.05	0.32*** ±0.07	0.36' ±0.08	0.34' ±0.07	0.38' ±0.08	1			
IV8	0.43' ±0.12	0.38' ±0.10	0.43' ±0.02	0.31' ±0.09	0.36' ±0.11	0.38*** ±0.08	0.38' ±0.09	0.40' ±0.09	0.38' ±0.09	0.40' ±0.07	0.62' ±0.06	1	
IV9	0.39' ±0.08	0.44' ±0.03	0.53' ±0.07	0.31' ±0.08	0.38' ±0.12	0.43*** ±0.09	0.40' ±0.07	0.44' ±0.11	0.42' ±0.10	0.44' ±0.06	0.61' ±0.03	0.55' ±0.11	1
IV10	0.37' ±0.11	0.37' ±0.04	0.52' ±0.09	0.28' ±0.07	0.36' ±0.12	0.35*** ±0.09	0.32' ±0.05	0.36' ±0.09	0.33' ±0.06	0.43' ±0.08	0.55' ±0.11	0.67' ±0.07	1

Note: DV1, ..., DV3 – Dependent variables; IV1, ..., IV10 – Independent variables; V – Variables; ± range of variance between respondents according to nationality; * $\alpha = 0.001$.

Table 3. Verification of the effect of multicollinearity in LRM according to the VIF value

Variables	CR	SR	PL	HU	V4
IV1	1.445	1.394	1.587	1.381	1.397
IV2	1.947	1.896	2.213	1.769	1.864
IV3	1.844	1.695	2.203	1.895	1.962
IV4	3.653	3.362	2.725	2.314	3.136
IV5	4.236	4.168	2.956	2.334	3.518
IV6	2.525	2.598	2.123	1.645	2.255
IV7	2.035	1.762	1.753	1.822	1.807
IV8	2.333	2.156	2.258	2.454	2.262
IV9	2.720	2.034	2.675	2.102	2.381
IV10	2.179	1.667	2.283	2.213	2.024

Note: IV1, ..., IV10 – Independent variables.

Table 4. Effect of independent variables on the dependent variable 1

RCH	Linear regression model 1 (LRM1)				
	CR	SR	PL	HU	V4
C	0.680	0.591	0.718	0.592	0.656
R ²	0.463	0.349	0.516	0.351	0.431
Adj. R ²	0.447	0.328	0.503	0.332	0.427
SE	0.588	0.570	0.535	0.566	0.571
N	347	322	381	348	1398
Analysis of Variance					
F- test	28.945	16.686	39.440	18.215	104.9
Sig.	7.6E-40***	4.0E-24***	1.9E-52***	1.3E-26***	8E-162***
Verification of the regression coefficients – (t) statistics					
Constant	1.571	3.599	1.133	3.312	4.831
IV1	2.276*	1.530	0.392	-0.751	2.175*
IV2	0.399	1.524	1.075	1.105	2.174*
IV3	1.546	-0.371	1.200	2.890**	2.912**
IV4	1.998*	-0.272	4.088***	0.868	3.215***
IV5	0.265	2.706*	-0.599	0.867	1.735
IV6	2.699**	0.018	2.390*	2.920***	4.178***
IV7	6.738***	4.424***	6.480***	4.946***	11.516***
IV8	-0.069	-1.772	2.591**	1.575	0.812
IV9	0.175	0.726	-0.462	0.626	0.525
IV10	-0.096	3.833***	0.521	-1.832	1.214

Note: IV1, ..., IV10 – Independent variables; RCH – Regression characteristics; * $\alpha = 0.05$; ** $\alpha = 0.01$; *** $\alpha = 0.001$.

Table 5. Regression function with the regression coefficients (RCs) of IVs

Country	LRM1 – dependent variable 1.
CR	$DP1 = 0.184 + 0.098 \times IV1 + 0.018 \times IV2 + 0.060 \times IV3 + 0.118 \times IV4 + 0.018 \times IV5 + 0.141 \times IV6 + 0.385 \times IV7 - 0.004 \times IV8 + 0.011 \times IV9 - 0.005 \times IV10$
SR	$DP1 = 0.431 + 0.079 \times IV1 + 0.077 \times IV2 - 0.016 \times IV3 - 0.017 \times IV4 + 0.186 \times IV5 + 0.001 \times IV6 + 0.267 \times IV7 - 0.109 \times IV8 + 0.040 \times IV9 + 0.188 \times IV10$
PL	$DP1 = 0.094 + 0.018 \times IV1 + 0.048 \times IV2 + 0.049 \times IV3 + 0.202 \times IV4 - 0.030 \times IV5 + 0.113 \times IV6 + 0.326 \times IV7 + 0.132 \times IV8 - 0.026 \times IV9 + 0.025 \times IV10$
HU	$DP1 = 0.348 - 0.035 \times IV1 + 0.055 \times IV2 + 0.138 \times IV3 + 0.052 \times IV4 + 0.047 \times IV5 + 0.148 \times IV6 + 0.282 \times IV7 + 0.105 \times IV8 + 0.033 \times IV9 - 0.100 \times IV10$
V4	$DP1 = 0.242 + 0.050 \times IV1 + 0.050 \times IV2 + 0.060 \times IV3 + 0.090 \times IV4 + 0.050 \times IV5 + 0.103 \times IV6 + 0.316 \times IV7 + 0.024 \times IV8 + 0.015 \times IV9 + 0.031 \times IV10$

Note: IV1, ..., IV10 – Independent variables; Bold type of font – independent variable is a statistically significant.

Table 6. Effect of independent variables on the dependent variable 2

RCH	Linear regression model 2 (LRM2)				
	CR	SR	PL	HU	V4
C	0.619	0.533	0.617	0.582	0.585
R ²	0.383	0.284	0.381	0.339	0.342
Adj. R ²	0.384	0.261	0.364	0.319	0.337
SE	0.646	0.632	0.584	0.560	0.614
N	347	322	381	348	1398
Analysis of Variance					
F- test	20.823	12.326	22.774	17.269	72.067
Sig.	5.1E-30***	5.1E-18***	3.3E-33***	2.61E-25***	1.3E-118***
Verification of the regression coefficients – (t) statistics					
Constant	3.154	3.277	5.217	3.891	8.361
IV1	2.517*	1.129	0.375	-1.333	1.952*
IV2	-0.514	0.931	1.635	1.568	1.482
IV3	1.195	-0.431	-1.452	1.885	0.809
IV4	3.095***	2.169*	4.773***	1.291	5.385***
IV5	-0.130	0.302	-0.021	1.452	1.180
IV6	3.166***	0.035	0.561	2.103*	2.663**
IV7	2.618**	0.796	4.097***	0.250	3.980***
IV8	2.177*	0.716	-0.703	3.371***	0.058
IV9	1.255	1.994*	4.512***	1.908	4.831***
IV10	1.880	3.228***	-1.870	0.013	1.726

Note: IV1, ..., IV10 – Independent variables; RCH – Regression characteristics; * $\alpha = 0.05$; ** $\alpha = 0.01$; *** $\alpha = 0.001$.

Table 7. Regression function with the regression coefficients (RCs) of IVs

Country	LRM2 – dependent variable 2.
CR	$DP2 = 0.405 + 0.119 \times IV1 - 0.026 \times IV2 + 0.051 \times IV3 + 0.201 \times IV4 - 0.010 \times IV5 + 0.181 \times IV6 + 0.164 \times IV7 + 0.149 \times IV8 + 0.084 \times IV9 - 0.108 \times IV10$
SR	$DP2 = 0.436 + 0.065 \times IV1 + 0.052 \times IV2 - 0.020 \times IV3 + 0.154 \times IV4 + 0.023 \times IV5 + 0.002 \times IV6 + 0.053 \times IV7 + 0.049 \times IV8 + 0.118 \times IV9 + 0.176 \times IV10$
PL	$DP2 = 0.476 + 0.019 \times IV1 + 0.080 \times IV2 - 0.065 \times IV3 + 0.258 \times IV4 - 0.001 \times IV5 + 0.029 \times IV6 + 0.226 \times IV7 - 0.039 \times IV8 + 0.281 \times IV9 - 0.098 \times IV10$
HU	$DP2 = 0.404 - 0.062 \times IV1 + 0.077 \times IV2 + 0.089 \times IV3 + 0.077 \times IV4 + 0.079 \times IV5 + 0.105 \times IV6 + 0.014 \times IV7 + 0.222 \times IV8 + 0.099 \times IV9 + 0.001 \times IV10$
V4	$DP2 = 0.451 + 0.048 \times IV1 + 0.037 \times IV2 + 0.018 \times IV3 + 0.164 \times IV4 + 0.037 \times IV5 + 0.071 \times IV6 + 0.117 \times IV7 + 0.002 \times IV8 + 0.146 \times IV9 + 0.047 \times IV10$

Note: IV1, ..., IV10 – Independent variables; Bold type of font – independent variable is a statistically significant.

Table 8. Effect of independent variables on the dependent variable 3

RCH	Linear regression model 3 (LRM3)				
	CR	SR	PL	HU	V4
C	0.692	0.689	0.665	0.608	0.646
R ²	0.479	0.474	0.442	0.370	0.418
Adj. R ²	0.464	0.457	0.426	0.351	0.414
SE	0.609	0.551	0.657	0.661	0.638
N	347	322	381	348	1398
Analysis of Variance					
F- test	30.912	28.062	29.258	19.766	99.573
Sig.	4.8E-42***	5.0E-38***	3.1E-41***	1.2E-28***	3.2E-155***
Verification of the regression coefficients – (t) statistics					
Constant	3.068	2.874	2.881	1.695	5.832
IV1	0.039	0.310	-0.493	-0.511	0.389
IV2	1.021	1.113	0.875	2.830*	2.548*
IV3	3.565***	0.883	-1.250	1.547	2.682**
IV4	0.687	0.297	2.743	0.927	2.203*
IV5	0.953	1.647	3.547***	0.241	3.270***
IV6	0.996	-0.156	-1.226	3.323***	0.687
IV7	1.340	0.555	4.379***	-0.842	3.062**
IV8	-0.684	0.159	-1.298	1.851	-0.282
IV9	0.811	2.901***	5.732***	2.126*	5.563***
IV10	6.704***	7.801***	-0.147	2.654**	7.997***

Note: IV1, ..., IV10 – Independent variables; RCH – Regression characteristics; * $\alpha = 0.05$; ** $\alpha = 0.01$; *** $\alpha = 0.001$.

Table 9. Regression function with the regression coefficients (RCs) of IVs

Country	LRM3 – dependent variable 3.
CR	$DP3 = 0.371 + 0.002 \times IV1 + 0.048 \times IV2 + \mathbf{0.144 \times IV3} + 0.042 \times IV4 + 0.069 \times IV5 + 0.054 \times IV6 + 0.079 \times IV7 - 0.044 \times IV8 + 0.051 \times IV9 + \mathbf{0.363 \times IV10}$
SR	$DP3 = 0.333 + 0.016 \times IV1 + 0.055 \times IV2 + 0.036 \times IV3 + 0.018 \times IV4 + 0.110 \times IV5 - 0.008 \times IV6 + 0.032 \times IV7 + 0.010 \times IV8 + \mathbf{0.155 \times IV9} + \mathbf{0.371 \times IV10}$
PL	$DP3 = 0.295 - 0.028 \times IV1 + 0.048 \times IV2 - 0.063 \times IV3 + 0.167 \times IV4 + \mathbf{0.216 \times IV5} - 0.071 \times IV6 + \mathbf{0.271 \times IV7} - 0.081 \times IV8 + \mathbf{0.401 \times IV9} - 0.009 \times IV10$
HU	$DP3 = 0.208 - 0.028 \times IV1 + \mathbf{0.163 \times IV2} + 0.086 \times IV3 + 0.065 \times IV4 + 0.015 \times IV5 + \mathbf{0.197 \times IV6} - 0.056 \times IV7 + 0.144 \times IV8 + \mathbf{0.130 \times IV9} + \mathbf{0.169 \times IV10}$
V4	$DP3 = 0.327 + 0.010 \times IV1 + \mathbf{0.066 \times IV2} + \mathbf{0.063 \times IV3} + \mathbf{0.070 \times IV4} + \mathbf{0.107 \times IV5} + 0.019 \times IV6 + \mathbf{0.094 \times IV7} - 0.009 \times IV8 + \mathbf{0.175 \times IV9} + \mathbf{0.225 \times IV10}$

Note: IV1, ..., IV10 – Independent variables; Bold type of font – independent variable is a statistically significant.