Received: 24 July 2022 | Revised: 20 August 2022 | Accepted: 29 August 2022

DOI: 10.1002/sd.2410

REVIEW ARTICLE

Sustainable Development | WILEY

Do changes in the business environment and sustainable development really matter for enhancing enterprise development?

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Funding information
Ministry of Education and Science of Ukraine, Grant/Award Number: 0121U100469

Abstract

The accomplishment of sustainable development goals has become a global initiative to encourage renewable energy, reduce wasteful energy consumption and increase investment in energy efficiency projects. The number of publications devoted to sustainable development, environmental protection and green investments is growing exponentially. Firstly, this study is committed to provide a comprehensive overview of research literature on enterprise development in decades-long, focusing on the sustainable development and business environment field. Secondly, it seeks to elaborate the most comprehensive structural model examining the multilateral and facilitative role of internal and external business environment changes in the relationship between sustainable development and enterprise development. A bibliometric analysis via VOSviewer was applied to detect and visualize the research trends and display the research status of enterprise development under the changes in the business environment and sustainable development. A confirmatory factor analysis and structural equation modeling were performed to develop, implement and verify a conceptual structural model examining the multilateral and facilitative role of internal and external business environment changes in the relationship between sustainable development and enterprise development. Mapping bibliographic data based on co-citation, co-occurrence, bibliographic coupling, and network and content analysis showed that generally, researchers had made significant efforts to investigate different links that arise between enterprises development, sustainable development, and business environment separately in different combinations. Structural equation modeling showed that the argument that sustainable development directly causes enterprise development is disputable since sustainable development focuses on changes in the internal and external business environment that eventually influence enterprise development, which in turn leads to a further new shift in the external environment.

KEYWORDS
business environment, ecological dimension, economic dimension, enterprise development, renewable energy, SDGs, social dimension, sustainable development, sustainable energy policy

1 | INTRODUCTION

Much debate surrounds the outcomes of developing and implementing environmental policies to encourage renewable energy consumption and impede wasteful nonrenewable energy sources use. Cross-national evidence shows that sustainable energy policy, among other things establishing emission limits for the industrial sector, results in the consumption of renewable energy resources in economic development that allegedly leads to environmental improvement in terms of reduction in emissions of atmospheric pollutants and waste products recycling (Adebayo et al., 2021; Anagnostopoulos et al., 2020; Liu et al., 2021; Mahmood et al., 2021; Oh et al., 2020).

In recent years, there has been an increasing amount of literature on sustainable and inclusive economic growth aimed at driving new demand and supply opportunities, changing consumers behavior, encouraging investment, stimulating progress, contributing living standards improvement (Hao et al., 2020; Khan, 2020; Khan et al., 2021). Drawing on an extensive range of sources, Kyriakopoulos et al. (2020) set out the different ways in which exploring research methods and dynamic systems toward sustainable economic development. Others stressed the relevance of the search for a better measure of sustainable development, notably Girdzijauskas et al. (2022) and Kubiszewski et al. (2022).

Making an important step toward ecological, economic and social dimension of sustainable development has forced enterprises worldwide to change their business strategies significantly (Ahmed et al., 2021; Lancaster & Larson, 2022; Novovic Buric et al., 2022). The potential impact of sustainable development goals on the business environment and related enterprise development is a broad discussion worldwide and ensuring a balanced approach between satisfying enterprise development needs and protecting the interests of future generations, the environment and sustainability (Holotová et al., 2020; Mentel et al., 2020; Vasylieva et al., 2019). However, empirical shreds of evidence show that notwithstanding the continuous and sustained activities directed at promoting sustainable business operations, enterprises are still continuing to face challenges to cope with stakeholders' increasing expectations (Ghobakhloo et al., 2021; Kasych & Vochozka, 2017). A preliminary literature review showed that the published studies in enterprise development, business environment and sustainable development lacked content structure, limited in scope and coverage, questionable methodology and estimation procedures, thus producing mixed and inconsistent research findings. A general lack of awareness about the comprehensive framework of sustainable development might partly explain some managers remain skeptical about the benefits of sustainable development that secures developing an enabling external and internal business environment, accordingly, leading to enterprise response in terms of changes in management systems and development of new business activities. This indicates a need to understand the complexity of the current linkage structure that exists among enterprises development, sustainable development and business environment.

In recent years, a number of studies have been devoted to enterprise transformations and business environment changes due to sustainable development implementations. Most of these studies have focused on specific sustainable development issues such as changes in business ethics preferences and corporate social responsibility advancements (Elhennawy, 2019; Metzker et al., 2021; Pelikánová et al., 2021; Wang et al., 2020), business management systems improvements, including customer relationship management (Matsenko et al., 2021; Stuchlý et al., 2020), networking systems management (Do Rosário & De Jesus Breda, 2021), development of new business activities (Bilan et al., 2020) among others. This study systematically reviews three strands of research that have identified various contemporary challenges covered within enterprise development, sustainable development, and the business environment. However, they have been relatively concise and unidirectional in their analysis. Each academic research has provided insight into the study area, but additional bibliometric analysis of literature on enterprise development, sustainable development and the business environment followed by structural analysis could provide further grasped insights into structural pathways among them.

This study is pursuing a two-fold objective. First, it is committed to providing a comprehensive overview of research literature on enterprise development in decades-long, focusing on the sustainable development and business environment field. Second, it seeks to elaborate the most comprehensive structural model examining the multilateral and facilitative role of internal and external business environment changes in the relationship between sustainable development and enterprise development. By achieving defined objectives of the study, this paper provide input into the contemporary research in sustainable development by elaborating a structural model of complex linkages between sustainability, changes in the internal and external business environment, and business development that are being pursued holistically rather than separately.

To address the first objective, a bibliometric analysis via VOSviewer was applied to detect and visualize the research trends and display the research status of enterprise development under the changes in the business environment and sustainable development. The initial data is represented by 8333 articles for the period from 1984 through the third quarter of 2021. Gathering and analyzing data about authors, journals and documents (articles titles, abstracts, keywords) in terms of quantity has allowed co-occurrence, network and content analysis via VOSviewer to recognize research clusters, their interconnection and mutual influences.

The study's second objective was achieved by developing, implementing, and verifying a conceptual structural model examining the multilateral and facilitative role of internal and external business environment changes in the relationship between sustainable development and enterprise development. To validate the theoretical research model, several multivariate procedures were used. Specifically, a confirmatory factor analysis (CFA) and structural equation modeling (SEM) were performed to test the hypotheses developed. The data was sourced from Eurostat on business statistics and science, technology and innovation themes, the World Bank data, yearly reports published by the Heritage Foundation and the World Economic Forum. The initial statistics on the variables selected for hypothesis testing through structural equation modeling were collected for 30 countries of the European Economic Area (EEA).

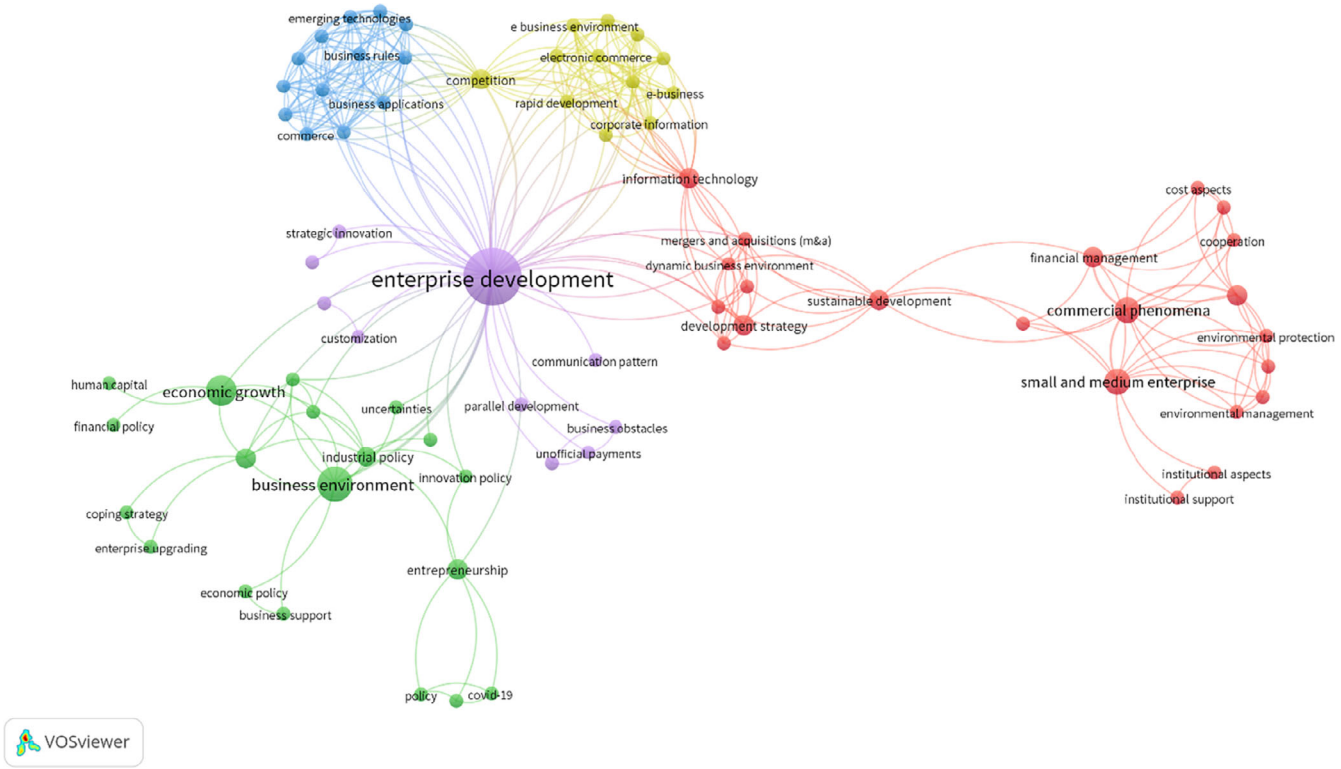

FIGURE 1 Graphical visualization of the relationship between research on business environment enhancing enterprise development [Colour figure can be viewed at wileyonlinelibrary.com]

The remaining part of the paper is structured as follows. The next section displays the bibliometric analysis comprising introduction and development structured methodology applied herein to identify and further refine the academic studies that will be reviewed and used to conceptual hypothesis development and bibliometric analysis results. The second part of the study is concerned with the theoretic model and hypothesis development. This part is followed by sample, data collection and measures development. Data analysis and results for both measurement and structural models are presented in the fourth part of the study, followed by the discussion section. The conclusion section summarizes research results, presents some limitations of this study, and discusses opportunities for future research.

2 | IDENTIFICATION OF TRENDS IN RESEARCH

In order to determine research gaps and highlight uncertainties addressed in established knowledge, the literature review is used. In supplement to the traditional literature review that is quite prejudiced and qualitative in scope, the bibliometric analysis was employed to gather data about researchers, journals, research organizations, and keywords in a clear and measurable manner to detect the most comprehensive and influential research papers, identify the trends and perspectives in the research field.

Scopus database was chosen for bibliometric analysis since it is the most extensive abstract and citation database of peer-reviewed academic literature (Guo et al., 2019; Bilan et al., 2020; Moya-Clemente et al., 2021). The initial search resulted in a total of 8,333 articles in the period from 1984 through the third quarter of 2021. According to further screening and eliminations, the initial search results were refined, and a total of 1957 unique publications were chosen for bibliometric analysis.

For further bibliometric analysis, the initial data were structured through the program VOSviewer. In this study, a pool of 520 keywords was drawn from 1957 articles. Refining keywords were made since a single keyword or phrase was expressed in different forms or due to synonymous existence. As a result, after merging abbreviations, overlapped items, plural forms, as well as the exclusion of irrelevant terms from unrelated spheres, a total of 76 keywords that characterized changes in the business environment enhancing enterprises development were selected.

The filtered 76 items were classified in five major clusters (Figure 1). The bigger is circle size, the highest occurrence of using keywords.

2.1 | Sustainable development dimensions and enterprise development

The first biggest cluster marked in red focused primarily on the relationship between the concept of sustainable development and enterprise development. Recent publications in the field relevant to different dimensions of sustainable development and enterprise development include the

following: Formankova et al. (2018), Yakubu et al. (2019), Elnadi and Gheith (2021).

The second research topic in Cluster 1 was related to sustainable development concerning institutional dimension (includes keywords: institutional aspects, institutional support, strategic alliance, commercial phenomena, etc.) and enterprise development. These are found by Meresa and Kidanemariam (2019), Shkarlet et al. (2019), Vasylieva and Skrynnyk (2020).

Furthermore, sustainable development is also related to its economic (keywords: cost aspects, economic development, financial planning, etc.) and social (keywords: cooperation, decision making, etc.) dimensions determining enterprise development. Recent publications in the field relevant to economic and social dimensions of sustainable development and enterprise responses include the following: Mokhova and Zinecker (2019), Mihardjo and Rukmana (2019), Li et al. (2020).

2.2 | External business environment and enterprise development

The second-largest cluster (green) included 19 items and was devoted mainly to the external business environment enhancing enterprise development. This cluster combines an array of research that focuses on identifying the relationship between permanent changes in an external business environment and enterprise development (keywords: business support, policy, policymaking, financial policy, industrial policy, innovation policy, etc.). The review also found a large focus on random for the last years changes in an external business environment and enterprise development (keywords: barriers to growth, COVID-19, etc.). These publications might include but are not limited to the following: Akoh (2020), Vorontsova et al. (2020), Dong et al. (2020), Du et al. (2020); Kyriakopoulos (2021), Pu et al. (2021).

2.3 | Internal business environment and enterprise development

During the analyzed period, the main array of scientific documents that were part of the third (blue) cluster focused on identifying the relationship between changes in the internal business environment and enterprise development. In this cluster, the most common concepts characterize changes in the internal business environment: modifications in the business market, business rules, business processes, commerce, integrations, emerging technologies, competitive advantages, etc. The following recent publications are worth mentioning here Jakimowicz and Rzeczkowski (2019), Gerards et al. (2020), Demircioglu and Chowdhury (2020). The way in which attributive characteristics of the internal business environment such as entrepreneurial motivation or risk acceptance is affected on enterprise development was studied extensively by Grabara et al., 2019; Rajan, 2019; Ik & Azeez, 2020; Kaya, 2020; Mamay et al., 2021.

2.4 | Technological innovations and enterprise development

The fourth (yellow) cluster is based on 12 categories and represents the relationship between enterprise development reached due to changes in internal business systems due to emerging new technologies. Scientific articles of the fourth cluster aim to study enterprise development, e-business environment, e-business, electronic commerce, network technologies, rapid development. Interesting contributions to this field were made by Remeikiene et al. (2019), Luo et al. (2021), Charaia et al. (2021), Alhaimer (2021).

2.5 | Business strategy and enterprise development

The last fifth (purple) cluster includes 10 items and contains a study of business responses to external and internal environments changes. Research publications of this cluster are devoted mostly to convergence revolution, strategic innovation, parallel development, communication patterns. Within the framework of the given direction, the following contemporary studies could be mentioned: Aqil et al. (2019), Razminiene (2019), Androniceanu et al. (2021), Samusevych et al. (2021).

2.6 | Spatio-temporal analysis

Figure 2 shows that the intensive development of research on business environment enhancing enterprise development under conditions of sustainable development in the world has occurred in the last decade. As a general observation, after economic shocks in terms of the global financial crisis with international dimensions that were spread through disruptions in international trade and financial flows, academics from various countries worldwide have responded impressively by increasing publications on changes in business climate affecting enterprise development. At the same time, 2019 launched an intensive new escalation of research due to the large-scale changes in the external environment. As shown in Figure 2, a tremendous upsurge of studies in that respect in the countries most affected by external shocks is increasing. Thus, researchers from the United Kingdom have attempted to estimate the impact of different versions and the end of the Brexit transition period on economic output. While the following countries have joined the list of countries whose scientists invigorate scholarly research on matters of business environment changes affecting enterprise development: China (the "motherland" of COVOD-19), Brazil (the second place in death cases), Colombia (in top-10 countries of total cases) and also Malaysia, Portugal, Vietnam. The intensification of research is related to business response to new regulations, the government's public health restrictions, and changes in people's behavior patterns in the face of the coronavirus pandemic.

Thus, separately, business environment, external environment, enterprise development, internal environment, sustainable development has

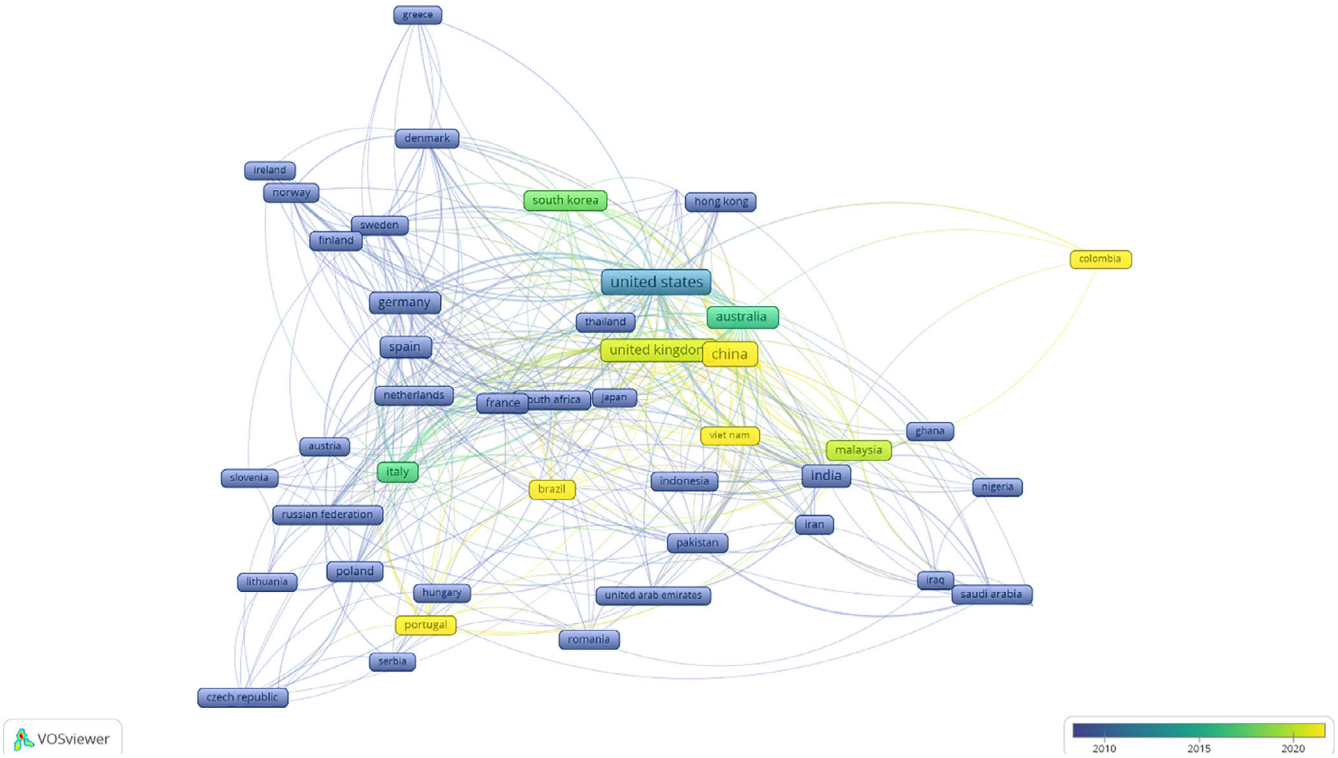

FIGURE 2 Visualization map of spatio-temporal measurement of research on business environment enhancing enterprise development [Colour figure can be viewed at wileyonlinelibrary.com]

been at the core of scholarly debate for numerous decades. However, and up to date, there have been no published studies that specifically ensure a complex integrated structure of linkages between them.

3 | THEORETICAL FRAMEWORK, AND HYPOTHESIS

Based on the bibliometric analysis and discussions summarized above, theoretical hypothesized causal connections between business environment, sustainable development, and enterprise development have been proposed. To test the conceptual research framework two theoretical hypotheses have been developed as follows:

> **H1**: Sustainable development secures developing an enabling external (H1a) and internal (H1b) business environment while contributing to eradicating poverty and protecting the environment.

> **H2**: Changes in the external business environment causes the changes in business management systems and other characteristics of the internal environment (H2a), which, accordingly, leads to enterprise response in terms of changes in management systems and development of new business activities (H2b) affecting new shifts in the external business environment (H2c).

To validate the theoretical research model, several multivariate procedures were used. Specifically, a confirmatory factor analysis (CFA) based on maximum likelihood estimation was applied to identify whether multiple observed indicators reliably reflected the multilayered, complex latent constructs of interest using the covariance matrix. When the measurement model is verified, the reliability and validity of potential variables are evaluated, the Structural equation models (SEMs) were performed to assess the extent of relationships among the multilayered, complex latent constructs and test the hypotheses developed. STATISTICA 12.6 was adopted to conduct confirmatory and PATH analysis and testing for its reliability and validity.

In carrying out structural equation modeling (SME), the election of all imperative but only relevant variables and indicators should give particular attention. Failure to comply with this rule threatens that the proposed conceptual model would be overly complex and cumbersome, and as a result, misspecified and have a lack of validity. Consequently, the theoretical research model should be formulated as a simplified structural model, comprising all the most important variables governing the true model. The theoretical measurement model comprises four multiple latent constructs, one of which is exogenous (independent) - sustainable development, and three endogenous (dependent) latent constructs, in particular, external business environment, internal business environment, and enterprise development.

The existing literature on sustainable development is extensive and focuses particularly on environmental, economic, and social principles/dimensions. Sustainable development (Sustain_Dev) is an

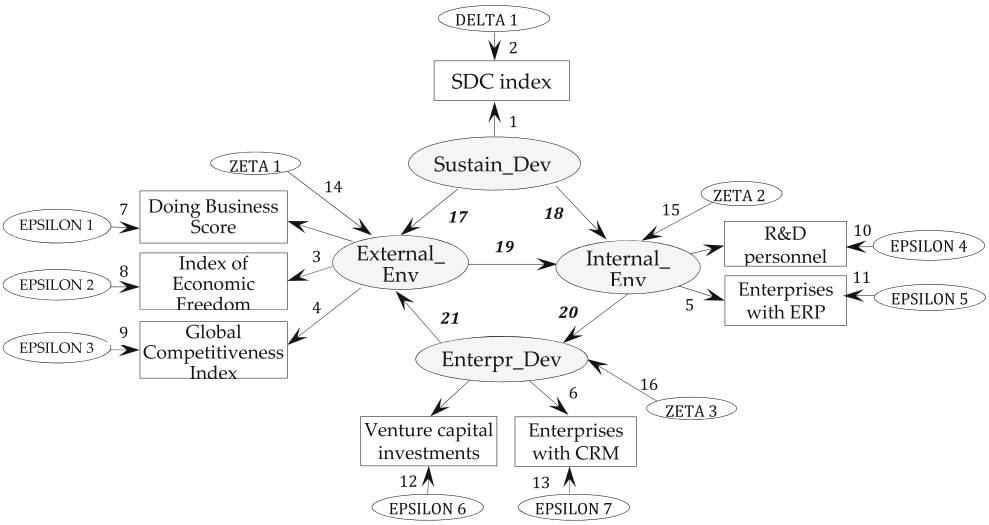

FIGURE 3 Path diagram model representing hypothetical interaction of variables

exogenous multilayered, complex latent construct that is impossible to measure directly by a single indicator. In this study, the Sustainable Development Goals (SDC) index was used as a proxy for sustainable development latent construct.

In this study, a panel of fundamental observed variables is chosen to encompass various dimensions of the external business environment. As proxies for the external business environment (External_Env) were used indicators of Doing Business, Index of Economic Freedom, and Global Competitiveness Index. Various modifications to the second measurement model based on confirmatory factor analysis (CFA) revealed that these three observed variables describe 89% of the external business environment.

The internal business environment (Internal_Env) was measured using R&D personnel and the number of enterprises with Enterprise Resource Planning (ERP) software package to share information between different functional areas. The justification for using these observed variables as proxies is based on contemporary studies on the internal business environment through labor and technological resources and business management systems. According to confirmatory factor analysis, selected observed variables, namely R&D personnel and the number of enterprises with ERP, describe the internal business environment by 72%.

The proposed conceptual model converted into a structural equation model allows multiple observed variables to be associated with enterprise development (Enterpr_Dev). Thus, the third endogenous latent construct is reflected in observed variables that represent changes in management systems (number of enterprises using Customer Relationship Management to analyze information about clients for marketing purposes) and development of new business activities (amount of venture capital investments). As a result of several modifications, the combination of the above two indicators formed 71% of the enterprise development.

Once the theoretical framework is developed, the model should be conceptualized and visualized in graphical form through the use of the path diagram. In Figure 3, hypothesized relations among sustainable development changes in the business environment affecting enterprise development were translated in a comprehensible and memorable visual form. Miss-specification problem is resolved by a visual display of hypothesized interaction of latent constructs and observed variables that could potentially be expelled, and links or dependencies could also be omitted, depending upon the circumstances (Diamantopoulos, 1994).

Model specification entails the identification of parameters that would be fixed by the researcher or autonomously by the program STATISTICA to a constant. All other parameters are considered as free, and therefore, should be assessed. In the structural equations model, four latent constructs (depicted in Figure 3 by elliptical shapes) measured indirectly by observed variables were hypothesized. Eight observed variables (enclosed by rectangular boxes in Figure 3) were aggregated into the corresponding latent constructs. In line with the conventional position that in overwhelming actual models, the endogenous variables are not completely described by the independent variables, and therefore, are dependent upon other constraints that are not taken into account by the developed conceptual model. Thus, EPSILON 1–7 and DELTA 1 corresponds to an error term and are integrated into the model for each observed variable. At the same time, ZETA 1–3 describes disturbances of structural equations. It is not allowed to apply any cross-loadings, considering that each observed variable was incorporated into one latent construct.

Parameters estimation cannot be carried out without targeted effects having been defined. Targeted effects identification implies defining path coefficients and factor loadings. In the path diagram depicted in Figure 3, directional arrows (→) are used for denoting targeted effects. Directional arrows also might benefit endogenous and exogenous variables recognition. In case the arrows are pointing in the item direction, such variables are endogenous. In contrast, variables without arrows pointing to them are viewed as exogenous. Directional arrows constitute factor loadings if they are pointed out from latent constructs to observed variables (in Figure 3 are shown by arrows 1, 3–6). It should be noted that factor loadings Doing Business Score, R&D personnel, and Venture capital investments have no numbers on directional arrows. These model parameters, as mentioned above, are fixed autonomously by the program STATISTICA to a constant. Furthermore, that is, their factor loadings are equal to one. Directional arrows 17–21 depict path coefficients that describe

TABLE 1 Descriptive statistics of the sample

Variables	Mean	SD	Min.	Max.
Sustainable Development (Sustain_Dev)				
SDC index	77.899	4.212	68.485	85.607
External business environment (External_Env)				
Doing Business	76.250	4.823	65.498	84.595
Index of Economic Freedom	69.757	6.250	55.000	79.100
Global Competitiveness Index	4.857	0.492	4.020	5.660
Internal business environment (Internal_Env)				
R&D personnel	0.673	0.388	0.100	1.256
Enterprises with ERP	32.833	9.745	14.000	54.000
Enterprise development (Enterpr_Dev)				
Venture capital investments	278.982	562.355	1.532	2405.171
Enterprises with CRM	19.400	5.899	9.000	29.000

relationships between latent constructs. Path coefficients are free model parameters and should be quantitatively estimated from the empirical data by the STATISTICA program.

4 | SAMPLE, DATA COLLECTION, AND MEASURES

Considering the peculiarities of the latent multiplex constructs, a number of sources were used to generate the initial data. The data was sourced from Eurostat for sustainable development. For the first endogenous latent construct that is, external business environment, for which the Doing Business, Index of Economic Freedom, and Global Competitiveness Index were used as proxies, the data was sourced from the World Bank data, yearly reports published by the Heritage Foundation and the World Economic Forum. For the second endogenous latent construct, which is an internal business environment, the data was sourced from Eurostat on business statistics theme. For the third endogenous latent construct, the data was sourced from Eurostat on both business statistics and science, technology and innovation themes. The initial statistics on the variables selected for hypothesis testing through structural equation modeling were collected for 30 countries of the European Economic Area (EEA). As of December 2019, the database consisted of 28 Member States of the European Union (EU) and two countries of the European Free Trade Association (EFTA) (Iceland and Norway). Table 1 represents the descriptive statistics for the observed variables that constitute latent constructs in the conceptual research framework.

5 | DATA ANALYSIS AND RESULTS

5.1 | Measurement model assessment

CFA was used for convergent validity and reliability evaluation. From the data in Table 2, it is apparent that all variables in their respective latent constructs are statistically significant. The following means the individual item reliability given that factor loadings for each observed variable are greater than 0.50 and *t* values are larger than 2. The internal consistency reliability of latent constructs was measured in accordance with suggested by Bagozzi and Yi (1988) and Hair et al. (2011) threshold of 0.7 or above. In Fornell and Larcker (1981), a CR value of 0.60 or more is recommended. As presented in Table 2, composite reliability for each of the latent constructs exceeds the widely-recognized rule of thumb; thus, the adequate internal consistency reliability of the measures is it is concluded. As suggested by Fornell and Larcker (1981), the latent constructs' convergent validity was assessed with an average variance extracted (AVE). Fornell and Larcker (1981) provided a rule of thumb for interpreting the convergent validity of latent constructs according to which the AVE coefficient should achieve a minimum of 0.5. Table 2 displays the convergent validity scores for each of the latent constructs of the present study. Calculated AVE scores indicate adequate convergent validity since all latent constructs of the present research had exceeded 0.6.

In order to test how well the developed model fits the sample data, the absolute fit indices were determined (McDonald & Ho, 2002). This group of indices includes the Chi-Squared statistics (χ^2), RMSEA, GFI, and the SRMR. For the absolute fit model, it is discovered that the calculated Chi-square statistics (χ^2) value is 21.803. According to Barrett (2007), the threshold of 0.05 should be passed for a good model fit. Considering the calculated Chi-square statistics (χ^2) value is higher than the recommended threshold, conclusive evidence suggests the model's internal consistency. However, previous structural modeling research (Kenny & McCoach, 2003; Peugh & Feldon, 2020) has shown that model absolute fit indexes values are sensitive to sample size, model complexity and missing data. In this regard, additional absolute and incremental fit measures were calculated.

The goodness fit index (GFI) value is 0.964, which is larger than the traditionally established cut-off point of 0.95 (Miles and Shevlin (1998)) and indicate relatively good model-data fit. RMSE and SRMR value is 0.011 and 0.025, respectively, which is less than 0.05 and indicates a "close fit" (Browne & Cudeck, 1993). For incremental fit

TABLE 2 Confirmatory factor analysis results: latent construct reliability and validity analysis

Latent constructs and observed variables	Factor loadings (*t* values)	AVE	CR	The goodness of fit indexes
External business environment (External_Env)				
Doing Business	1.000 (–)	9.049	2.205	Chi-square statistics (χ^2) = 21.803; GIF = 0.964; RMSEA = 0.011; SRMR = 0.025; NFI = 0,956; CFI = 0.996; TLI = 0.998
Index of Economic Freedom	5.082 (4.496)			
Global Competitiveness Index	0.565 (2.251)			
Internal business environment (Internal_Env)				
R&D personnel	1.000 (–)	0.658	0.782	
Enterprises with ERP	0.563 (4.243)			
Enterprise development (Enterpr_Dev)				
Venture capital investments	1.000 (–)	0.705	0.820	
Enterprises with CRM	0.640 (2.466)			

TABLE 3 Results of path analysis with standardized parameters

Paths (hypothesis relationship)				Estimates	SE	*t* statistics	*p* value
H1a	Sustainable development	→17	External business environment	0.046	0.013	3.674	0.000
H1b	Sustainable development	→18	Internal business environment	0.173	0.057	3.027	0.002
H2a	External business environment	→19	Internal business environment	1.151	0.445	2.590	0.010
H2b	Internal business environment	→20	Enterprise development	2.128	0.640	3.328	0.001
H2c	Enterprise development	→21	External business environment	0.093	0.025	3.674	0.000

measures that are less influenced by sample size and complexity of the model, this study is used TLI, CFI and NFI. According to the data in Table 2, all calculated incremental model fit estimations closer to 1.0 and indicate a well-fitting model.

5.2 | Structural model assessment

The structural model was performed for revealing the possible causal effects of sustainable development toward enterprises development through the changes in the business environment. Table 3 provides full estimates of the structural hypothesized model. The structural model has been estimated and verified according to the hypothesized relationships among the latent constructs visualized with the help of a path diagram.

As reported in Table 3, developed hypotheses have been fully confirmed. First research Hypothesis 1a, in which it was hypothesized that sustainable development positively affects developing an enabling external business environment, was supported (β = 0,046, t = 3674, p < 0.000). Additionally, as hypothesized, sustainable development was found to positively affect an enabling internal business environment (β = 0,173, t = 3027, p < 0.002), thereby supporting Hypothesis 1b.

The results also revealed that the relationship between changes in the external business environment and the changes in business management systems and other characteristics of the internal business environment is significant and positive (β = 1151, t = 2590, p < 0.010), which supported Hypothesis 2a. Furthermore, changes in internal business environment do have a significant influence on enterprise development (β = 2128, t = 3328, p < 0,001), and the latter on the new shifts in the external business environment (β = 0,093, t = 3674, p < 0,000). Thus, hypothesis 2b and c have also been confirmed.

The structural model shows that the model's overall fit to the data resulted in acceptable statistics. Table 4 displays full information on the goodness of model fit indexes grouped into three major categories.

GFI is closer to 1, while the index of RMSE (0.030) and SRMR (0.062) is less than the standard-fit index (0.05 and 0.08, respectively), confirming a well-fitting model. All measures from the incremental group that is, the fit index Tucker-Lewis index (TLI), Comparative fit index (CFI) and Normed fit index (NFI), are above 0.9 (widely accepted standard model fit). The Chi-square statistics (χ^2) also had satisfied the standard criteria.

Performed by STATISTICA software, the goodness-of-fit statistics of the developed structural model adequacy show that fit indices values described above have complied with recommended threshold values. Therefore, one might conclude that construct validity was achieved in this study since fit indexes from each category meet the thresholds for adequate evidence of a well-fitting model. Therefore, it can be assumed that concluded structural model is statistically significant.

6 | DISCUSSION AND THEORETICAL CONTRIBUTION

Issues of sustainable, self-sufficient economic agents' development that do not deplete natural resources have gained increasing popularity and taken into account by policymakers worldwide. This implies

TABLE 4 Goodness-of-fit statistics for a structural model

Name of fit index	Fit value	Structural model value	Inference
Absolute fit measures			
GFI	Close to 1	0.995	Fit
RMSE	≤0.05	0.030	Fit
SRMR	≤0.08	0.062	Fit
Incremental fit measures			
TLI	≥0.9	0.922	Fit
CFI	≥0.9	0.938	Fit
NFI	≥0.9	0.917	Fit
Parsimonious fit measures			
χ^2	$p > 0.05$	227.87	Fit

that these issues are becoming increasingly important to business development. In the recent past, sustainable development goals conducive to entrepreneurship and enterprises development have become the paramount attention across the world, especially during COVID-19.

The present study has provided theoretical implications by producing additional empirical evidence on changes that are taking place in the business environment under the advancement of sustainable goals. This study extends previous sustainable development research by clarifying the potential causal linkages among sustainable development, external and internal business environments. The research results of this study go beyond corroborating with prior empirical studies that suggest various dimensions of the external and internal business environment evolvement according to the sustainable development goals fulfillment (Aerni, 2021; Camilleri, 2020; Nasiri et al., 2022; Ren & Jackson, 2020). In this study, sustainable development was found to positively cause changes in freedoms of movement for labor, capital, and goods, an absolute absence of coercion or constraint of economic liberty. Thus, the progress of states on various dimensions of sustainable development based on such parameters as health, institutions, economic growth, education, climate change and environment, among others, lead to permanent and random for the last years changes in an external business environment (Androniceanu et al., 2021; Hoffrén & Apajalahti, 2009; Moya-Clemente et al., 2021; Pu et al., 2021). Accordingly, the observed correlation might mean higher scores of Indexes of Economic Freedom, Global Competitiveness, and Doing Business due to increased performance by the Sustainable Development Goals (SDC) index.

Both developed and developing countries admit the growing importance of adopting and evolving sustainable development goals in the internal business environment changes. Regarding the impact of sustainable development on the internal business environment, findings reveal a positive, statistically significant link. These results are in agreement with Peng (2020), Liu and Kong (2021), Martínez Hernández et al. (2021) that among others have indicated changes in business strategies, enterprise personnel and management potential, motivational mechanisms, environmental friendliness, and social efficiency, among many others attributive and variable characteristics, resulting from global commitments and initiatives for sustainable development following social, economic and environmental perspectives.

Knowing that a sustainable development framework fosters changes in an external and internal business environment, this study explains the integral approach to sustainable development goals indirectly affects enterprise development generating new shifts in the external business environment. That finding is of particular relevance in the light of the need to consider the complex interrelationship among sustainable development, business environment and enterprise development. The comparison of the current research findings with those of previous studies that have not clearly identified these interactions indicates that a better understanding of the effects of sustainable development on enterprise development can be achieved by incorporating linkages among external business environment and the internal environment that contribute to the achievement of enterprise development with a consequent impact on business external environment change. Thus, studies on sustainable development that consider only one aspect of the business environment or ignore linkage among external, internal environment and enterprise development or performance may generate intrinsically uncertain, vague, and confusing results or lead to erroneous conclusions.

This study indicates that managers need to develop an integrated synergic sustainable development strategy. To achieve enterprise development through sustainable development, it is relevant for firms to implement different approaches and methods of adaptive management, whereby expected and random changes in the external and internal environment are monitored that contribute to the development of new business activities. These insights give managers new knowledge of how sustainable development practices change the business environment, complementary interactions, and pathways enhancing superior business development.

7 | CONCLUSIONS

The present study was designed to present a holistic picture of the sustainable development research related to the business environment and enterprise development toward figuring out the knowledge map between these research topics. The bibliometric analysis method was used to conduct co-author analysis, co-country analysis, co-citation analysis of authors and articles, co-word analysis, keyword cluster analysis, timeline and timezone analysis on sustainable development, business environment and enterprise development academic literature in the Scopus database from 1984 to 2021. In order to conduct quantitative analysis and visualize the knowledge map of the sustainable development, business environment and enterprise development scientific research, VOSviewer v.1.6.10 was used. The bibliometric analysis via VosViewer has found that generally, researchers have made significant efforts to investigate different links that arise between enterprises development, sustainable development, business environment separately in different combinations.

Ample scope of contribution to contextual analysis and coverage, theoretical framework development and methodologies had been made. However, far too little attention has been paid to comprehensive research that considers the complexity of the current linkage structure among enterprises development, sustainable development and business environment.

This study contributes significantly to the sustainable development literature by developing, implementing and verifying a conceptual structural model examining the multilateral and facilitative role of internal and external business environment changes in the relationship between sustainable development and enterprise development. The vague, incoherent, and sometimes confusing findings of previous research warrant exploration of the linkages among sustainable development, changes in the internal and external business environment and enterprise development tracked in a holistic manner rather than separately. Our findings of the complementary role of the business environment as well as setting up certain connexions among internal and external business environments help clarify ambiguous empirical findings regarding the impact of following sustainable development goals separately on the external business environment, internal business environment, and enterprise development. The research findings show that the argument that sustainable development directly causes enterprise development is disputable since sustainable development focuses on changes in the internal and external business environment that eventually influence enterprise development, which in turn leads to a further new shift in the external environment.

The findings of this study have several important implications for future practice. In practical terms, the research findings of this study provide managers and different groups of stakeholders with a deeper understanding of how to ensure preferred enterprise development through implementing sustainable development goals by monitoring and assessing the internal and external business environment changes. Thus, obtained results can be used by policymakers to develop targeted interventions aimed at the long-run effects of sustainable development on the business environment and related enterprise development that in turn reinforce sustainable and inclusive economic growth.

From a policy standpoint, the results of this study can help policymakers to identify and support policy design and adjustment considerations for the implementation of the sustainable development goals. The insights gained from this study can help governments and policy makers to argue the importance of sustainable development practices to direct and indirect, through changes in external business environment, improvements in internal business environment by providing relatively large empirical evidence. This study shows that without direct intervention in business affairs, but by changing the business environment, the implementation of sustainable development goals promotes enterprises development. Another important practical implication is that ongoing sustainability policy adjustments should be made on the basis of changes in the external business environment resulting from enterprise developments under previous sustainable development regulations.

Certain limitations of current research may require further exploration in future studies. In this study, sustainable development was conceptualized as a single one-dimensional construct represented by the Sustainable Development Goals (SDG) index. Even though SDG Index describes the country's performance on the 17 goals, comprising 120 indicators that reflect all sustainable development dimensions, further research needs to examine individual sustainable development goals more closely. Other research could also be undertaken to determine the importance and relevance of each dimension of sustainable development in improving enterprise development. Moreover, sustainable development indicators changes, time lags in data reporting and time-to-time methodology refinements contemplate the placement of limitations on the use of SDG Index rankings and scores in cross-country and intertemporal comparisons. Further studies conceptualizing sustainable development as a multidimensional construct, combining simultaneously variables of economic, environmental, and social dimensions, are strongly recommended.

ACKNOWLEDGMENTS

This work would not have been possible without the financial support of the Ministry of Education and Science of Ukraine. The paper was prepared as part of the Young Scientist Research (registration number 0121U100469).

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How to cite this article: Brychko, M., Bilan, Y., Lyeonov, S., & Streimikiene, D. (2023). Do changes in the business environment and sustainable development really matter for enhancing enterprise development? *Sustainable Development*, *31*(2), 587–599. https://doi.org/10.1002/sd.2410