ENHANCING ORGANIZATIONAL BEHAVIOUR THROUGH CORPORATE GOVERNANCE: THE CRUCIAL ROLE OF ORGANIZATIONAL CULTURE AND SUSTAINABILITY

Nadia Abdelhamid Abdelmegeed Abdelwahed *, Bahadur Ali Soomro **

 * Corresponding author, Department of Business Management, College of Business Administration, King Faisal University, Al-Ahsa, Saudi Arabia Contact details: College of Business Administration, King Faisal University, P. O. Box 400, Al-Ahsa 31982, Saudi Arabia
** Department of Economics, Federal Urdu University of Arts, Science and Technology, Abdul Haq Campus, Karachi, Pakistan



How to cite this paper:

Abdelwahed, N. A. A., & Soomro, B. A. (2024). Enhancing organizational behaviour through corporate governance: The crucial role of organizational culture and sustainability. *Corporate Governance and Organizational Behavior Review*, 8(1), 94–104. https://doi.org/10.22495/cgobrv8i1p8

Copyright © 2024 The Authors

This work is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0). https://creativecommons.org/licenses/by/ 4.0/

ISSN Online: 2521-1889 ISSN Print: 2521-1870

Received: 14.08.2023 **Accepted:** 19.01.2024

JEL Classification: L1, L2, L6, O3, Q5 **DOI:** 10.22495/cgobrv8ilp8

Abstract

Corporate sustainability (CS) has become the world's most persistent matter, which enormously enhances the success of organizations. The purpose of the study is to explore the factors that affect CS in small and medium-sized enterprises (SMEs) in Saudi Arabia. The study develops a model based on vigorous literature and proposes a few hypotheses based on the studies of Moslehpour et al. (2022) and Wijethilake et al. (2023). The study employed a survey strategy and found the results on 336 valid samples. The researchers applied a path analysis using SmartPLS 4 to predict the effects. The results of the study demonstrate a positive significant impact of organizational culture (OC), business infrastructure (BI) and corporate governance (CG) on CS. On the other hand, corporate alignment (CA) is a negative significant predictor of CS. Besides, CG mediates the relationship between OC, BI and CS but does not mediate the connection between CA and CS. The SMEs' top management may enhance performance by considering OC, BI, CA and CG constructs. Finally, the findings support to literature to overcome gaps in the direct and indirect role of CG integrated with OC, BI and CA towards CS.

Keywords: Corporate Sustainability, Organizational Culture, Business Infrastructure, Corporate Alignment, Corporate Governance, SMEs

Authors' individual contribution: Conceptualization — N.A.A.A.; Methodology — N.A.A.A. and B.A.S.; Software — B.A.S.; Validation — N.A.A.A.; Formal Analysis — B.A.S.; Investigation — N.A.A.A. and B.A.S.; Resources — N.A.A.A.; Data Curation — N.A.A.A. and B.A.S.; Writing — Original Draft — N.A.A.A. and B.A.S.; Writing — Review & Editing — N.A.A.A. and B.A.S.; Visualization — N.A.A.A.; Supervision — N.A.A.A.; Project Administration — N.A.A.A.; Funding Acquisition — N.A.A.A.

Declaration of conflicting interests: The Authors declare that there is no conflict of interest.

Acknowledgements: The Authors thank the King Faisal University for awarding the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia (Project Grant No. 4685).

VIRTUS

1. INTRODUCTION

Corporate sustainability (CS) in organizational theory and practice has become necessary in the present era. Even though it is still unclear what corporate sustainability is and the best ways to achieve it, many researchers claim that adopting a sustainabilityfocused organizational culture (OC) is the most significant way to implement CS ideas (Linnenluecke & Griffiths, 2010). In this connection, sustainable development is at the center of international policymaking in many nations. This addresses without jeopardizing the ability of future generations to meet their demands. Sustainability is often viewed as a long-term goal or vision, i.e., sustainable innovativeness or sustainable creation (Jansen, 2003). Consequently, sustainability is a comprehensive notion that contains activities and consequences associated with the environment, society, and the economy (Peters et al., 2019). The long-term improvement in financial performance is claimed by proponents of the beneficial benefits of CS, which eventually increase corporate value and image and the firm's brand positioning (Mousiolis et al., 2015). Correctly applying economic, social, and governance criteria is frequently taken to imply more incredible financial performance and returns (Daugaard, 2020). The main thrust of this claim is that engaging in sustainability initiatives helps companies develop their ethnic identities, which raises stakeholder satisfaction and boosts financial performance (Okafor et al., 2021).

In the literature, factors such as OC, business infrastructure (BI), corporate alignment (CA), and corporate governance (CG) are found to be strong predictors of CS in several contexts, including manufacturing, health and small and medium-sized enterprises (SMEs). However, the SMEs of Saudi Arabia confront a few issues in enhancing their productivity, sustainability and performance, despite their massive contribution to stabilizing and accelerating the country's economic growth (Koe et al., 2015). As the heart of the Saudi government. This important step will also realize the Vision 2030 of Saudi Arabia (Alsughayer, 2021). Based on these gaps; we developed the research questions:

RQ1: How do organizational culture, business infrastructure, corporate alignment, and corporate governance affect corporate sustainability in SMEs in Saudi Arabia?

RQ2: How does corporate governance mediate the relationship between organizational culture, business infrastructure, corporate alignment, and corporate sustainability in SMEs of Saudi Arabia?

The study aims to explore organizational behaviour through corporate governance along with of organizational the crucial role culture and sustainability. The present study applied the quantitative methods. The study's conclusions would give policymakers and planners in the SME sector a roadmap for advancing organizations' performance by boosting CS through OC, BI, and CG. The study will also help organizations develop dependable leadership that puts their organization first while implementing successful plans and strategies.

Apart from the introduction, the structure of the paper is as follows. Section 2 provides a literature

review and hypotheses development. Section 3 explains the methods. Section 4 presents the results of the analysis. Section 5 discusses the results, and Section 6 concludes the study.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Organizational culture

Organizational culture has a good reputation for developing the organization's sustainability and performance as it belongs to the leading organizational values. Individuals within the organization who direct corporate policies on workforce management uphold and cultivate these principles. Likewise, OC helps organizations achieve substantial organizational goals (Bellot, 2011). In this way, the connection between CS and OC tends to be overlooked in the debate over sustainable development. For the ambitious CS initiatives and plans to be effective, they must be integrated into the OC. CS initiatives will not effectively influence the core company and are more likely to fail if leaders and organization members do not adopt sustainable development features in their thinking (Baumgartner, 2009). In a similar dimension, the empirical investigation of Halmaghi et al. (2023) tried to develop a conceptual paradigm related to the link between sustainable development management and OC among Romanian educational institutes. The study's findings reveal a massive contribution of OC in developing a sustainable development and education environment.

2.2. Business infrastructure

Understanding the infrastructure system can help you better comprehend the fundamental buildings, installations, tools, and facilities constructed to suit the demands of the community and ensure the smooth operation of the economic and social systems (Grigg, 2000; Flintsch & Chen, 2004). Apart from the direct role of infrastructure in building performance and sustainable development, infrastructure plays a pivotal role in mediating the connection between the social and economic systems in maintaining and sustaining the environment and human life. This situation arises to maintain the harmony of life in the sense that infrastructure is neither too little (impacting humans) nor too much without considering the booming ability of the natural environment because doing so would harm the environment, which will ultimately have an impact on humans and other living things (Brodny & Tutak, 2023; Ebekozien et al., 2023). Furthermore, infrastructure systems are reinforced by the natural environment; however, the economic system is maintained by social systems, with infrastructure systems as objects and goals underpinned by the economic system. To sum it up, the BI has a grand promenade in developing a conducive environment for organizations where organizations can significantly get maximum profit and sustainable development.

VIRTUS

2.3. Corporate alignment

Although CA might mean various things to different people, at its core, corporate goal alignment is all about a set of well-articulated, agreed principles. Some insist that everyone must be on the same page, while others emphasize the significance of considering the larger picture (Balmer, 2012). CA is essential to increase an organization's productivity and profitability since it encourages collaboration and the joint pursuit of corporate goals. CA may also improve customer experiences and worker satisfaction (Heywood & Arkesteijn, 2017). In the perception of Keel et al. (2017), CA in a business feasibility study is carried out to determine whether starting a firm is feasible. Umar (2005) underlines a business feasibility study is an examination of a business idea that examines a firm's viability and how it should be run regularly to generate the most profit over an unspecified period of time. Suppose a leader or organization can match their future with a management leadership plan and a personal agenda. In that case, everything will be an outstanding indicator of the organization of the future. As a result, a leader must ensure that everyone is aware of the organization's objective. In times of transition, the mission serves as a point of reference, a road map, and an inspiration. It will provide those who fulfil the mission objectives and meanings and inspire ingenuity, efficiency, and quality in work related to human values. Hence, this study considers CA the significant predictor in determining SMEs' friendliness.

2.4. Corporate sustainability

At the moment, sustainability is one of the most persistent matters in the world (Al Doghan et al., 2022). CS refers to doing business that builds sustainable, long-term value for shareholders, employees, consumers, and society by pursuing ethical environmental, social, and economic (or governance) initiatives (Lu, 2021; Siyal et al., 2022). CS can be seen as a shift away from business tactics and initiatives that serve the requirements of businesses and stakeholders while preserving, enhancing, and sustaining the natural and human resources that may be required in the future (Searcy, 2011). Environmental, social, and economic factors are considered while calculating CS. A new and developing corporate management paradigm is known as CS. It urges the corporation to work towards societal goals, especially those linked to sustainable development, such as environmental preservation, social justice, and economic advancement, while acknowledging corporate growth's value and profitability (Pedersen et al., 2018).

The Arab world has embraced several corporate social responsibility (CSR) best practices during the past few decades, emphasizing environmental sustainability, water conservation, and healthy living (Kouaib, 2022). In Saudi Arabia, the social life of the nation and the promotion of CSR projects are significantly influenced by Saudi social and cultural factors. In this regard, CSR strategies are demonstrated to be a strategic business management idea and a business approach that supports sustainable development by delivering benefits to all stakeholders on an economic, social, and environmental level (Kouaib, 2022).

As a result, the domain literature provides direct relationships of the constructs such as OC, BI, and CA on CS (Loeser et al., 2013; Giannakis et al., 2019; Siyal et al., 2022; Moslehpour et al., 2022; Wijethilake et al., 2023). Besides, the relationship of CG is also examined towards CS (Bae et al., 2018; Crifo et al., 2019; Lu, 2021; Chandrakant & Rajesh, 2023; Gold & Taib, 2023). However, the literature unveils the gaps which need to be filled. First, the relationship of OC, BI and CA integrated with CG is not properly examined. Second, the role of CG as a mediator between OC, BI, CA, and CS has substantially disappeared despite the consistent relationship of these constructs with CS. Finally, contextually, these constructs still need to be tested in the SME context of Saudi Arabia. One of the nations that substantially supports sustainability objectives is Saudi Arabia. All publicly listed Saudi firms must produce non-financial disclosures on their governance, environmental, and social programmes under the Saudi Arabian CG code (Ghardallou, 2022). Thus, realizing the need based on existing relationships, we proposed Figure 1 to explore the SMEs of Saudi Arabia.

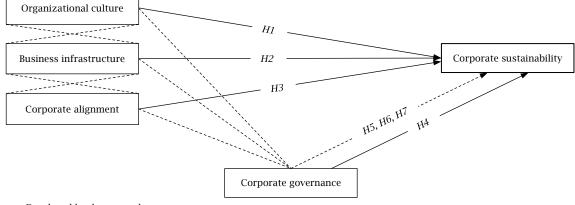


Figure 1. Conceptual model

Source: Developed by the researchers.

NTER PRESS VIRTUS 96

2.5. Organizational culture, business infrastructure, corporate alignment and corporate sustainability

In recent years, CS has become more significant in organizational theory and practice. The outcomes of the investigation of Linnenluecke and Griffiths (2010) provide a closer link between the cultural orientation, OC and CS of organizations. Only the OC significantly influences social and institutional aspects, leading to the conclusion that measures must be created to elevate the sustainability dimensions to the status of substantive axis within the corporate culture (Carro-Suarez et al., 2017). Siyal et al. (2022) exert a positive and significant impact on OC, CSR and the reputation of CS among managers in Pakistan. By using CS, the automakers are attempting to tackle this issue. Technology use, OC, and business sustainable practices all have a positive and substantial relationship with how sustainably the vehicle sector performs (Moslehpour et al., 2022). The results of Wijethilake et al.'s (2023) study show that OC tends to play a proactive role by going above and beyond the needs of compliance and regulation in organizational transformation for sustainability. The OC is the dominant predictor which provides the signal to address the effectiveness and ineffectiveness of sustainability manufacturing industries in the Asian context, specifically.

The effect of OC, CG, BI and CA on CS is direct and positive (Utami et al., 2020). According to the insights by Schaltegger et al. (2012), generating economic value while enhancing business social and environmental performance. Innovations in business models aid in the continual development of business justifications for sustainability. Sustainable development indicators (SDIs) with existing BI are the positive and sustainable predictor of organizational sustainability (Searcy et al., 2006). Likewise, among managers within the Swedish fashion industry, businesses with creative business models are more likely to discourse CS. In contrast, businesses with new business models and organizations that respect discretion and flexibility are more likely to address CS. Thus, the organization's foundational principles are where business model innovation and CS find their roots (Pedersen et al., 2018).

Firms' sustainability also massively depends upon CA to enhance their innovation capability and sustainable operations. The CA meaningfully enhances CS directly and indirectly through corporate hospitality (Utami et al., 2020). In a similar dimension, Loeser et al. (2013) demonstrate the predictive power of CA in bringing sustainability and green performance. According to Giannakis et al. (2019), the impact of human resource management (HRM) and CA on sales is on their ability to maintain a competitive edge. Services and relationship quality will be improved with the right alignment of HRM and sales, relational marketing strategy, and implementation, preventing any chance of CS acquiring a competitive edge. CSR and social impact assessment activities should be aligned with local community efforts that promote sustainable community development and enhance the company's reputation (Manohar, 2019).

As a result, the factors such as OC, BI and CA are significant predictors of CS and CSR in diverse contexts. Besides, in the SME context of Saudi Arabia,

these constructs need severe consideration. Thus, the hypotheses are formulated as follows:

H1: Organizational culture positively and significantly enhances corporate sustainability.

H2: Business infrastructure positively and significantly enhances corporate sustainability.

H3: Corporate alignment positively and significantly enhances corporate sustainability.

2.6. Corporate governance and corporate sustainability

The CG system inside the business and throughout the entire economy aids in building the trust and confidence required for a market economy. It helps as a meaningful corporate strategy to effectively attain CS and its long-term corporate goals. This step of CG enhances the organizations' performance and competitiveness and develops the sustainability aspects of economic, environmental and social performance (Elkington, 2006). The assessment of Aras and Crowther (2008) shows the importance of CG as a fundamental construct that supports governments in continuing their operations. CSR engagement and CG significantly and positively affect corporate financial performance. The associations between CG and CSR are significant (Jo & Harjoto, 2012). Strategic sustainability investment is one of the essential decisions that CG monitors and advises management on. The study examines a sample of 456 top largest U.S. public companies to inspect CS performance and CG together. The study's findings confirmed a positive link between CG and the companies' sustainability (Lu, 2021). According to Bae et al. (2018), CG elements have a powerful ability to sway the market in a way that reduces information asymmetry and ensures sincere signals from various stakeholders.

Similarly, CG corporate governance has a hazy effect on CS due to conflicting internal, external, and intermediary pressures. On the other hand, the success of businesses' governance appears to be inversely correlated with investor relations officers' perceptions that CS is primarily motivated by investors' ethical ideals (Crifo et al., 2019). In the perception of Chandrakant and Rajesh (2023), CG and social sustainability are abstracted in Western countries, and their practices are industrialized over the globe. The study suggests a positive and strong correlation between social sustainability and CG, which affected how well businesses performed overall in terms of sustainability. The CG characteristics and activist investors' have an impact on comprehensive sustainability practices for businesses in developed and developing countries (Gold & Taib, 2023).

Consequently, CG has a great prominence and reputation for enhancing CS significantly and positively. However, in the presence of other predictors such as OC, BI and CA, the role of CG is still ambiguous. Therefore, the following hypothesis can be formulated:

H4: Corporate governance positively and significantly enhances corporate sustainability.

VIRTUS

2.7. Corporate governance as a mediator

Corporate governance is the robust construct which directly and indirectly contributes to sustainable development. In the literature, OC is confirmed to be a massive and robust predictor of CS (Linnenluecke & Griffiths, 2010; Siyal et al., 2022; Wijethilake et al., 2023). OC is inclined to contribute a proactive role in organizational change towards sustainability (Wijethilake et al., 2023). Likewise, the association of BI with CS are consistent in the literature with positive connections (Searcy et al., 2006; Pedersen et al., 2018; Utami et al., 2020). Besides, BI appears as a significant appliance which enormously enhances the performance (environmental, economic and social) in diverse firms and organizations (Utami et al., 2020; Wijethilake et al., 2023). Similarly, sustainability hugely depends on CA to improve its innovation capability and operations (Utami et al., 2020). According to Loeser et al. (2013), CA conveys sustainability along with green performance.

Consequently, the literature offers a consistent relationship between OC, BI and CA with CS directly (Loeser et al., 2013; Pedersen et al., 2018; Utami et al., 2020; Siyal et al., 2022; Wijethilake et al., 2023). Besides, CG is also found to be a direct and consistent predictor in the domain literature (Bae et al., 2018; Crifo et al., 2019; Lu, 2021; Chandrakant & Rajesh, 2023; Gold & Taib, 2023). Thus, to confirm the mediating role of CG in developing the connection between OC, BI, CA and CS among the employees of SMEs of Saudi Arabia, and suggest:

H5: Corporate governance mediates the relationship between organizational culture and corporate sustainability.

H6: Corporate governance mediates the relationship between BI and corporate sustainability.

H7: Corporate governance mediates the relationship between corporate alignment and corporate sustainability.

3. METHODS

3.1. Survey strategy and respondents

We applied a survey strategy to get responses from the respondents. This approach has high representativeness and enables depicting a big population with a high level of general competency. This technique is well known for convenient data assembly through worthy statistical significance. Moreover, it provides precise and valid results from the data (Verschuren, 2003; Hendren et al., 2023). In the previous literature, this technique is employed by several scholars like Linnenluecke and Griffiths (2010), Carro-Suarez et al. (2017), Pedersen et al. (2018), Giannakis et al. (2019), Manohar (2019), Utami et al. (2020), Lu (2021), Siyal et al. (2022) Moslehpour et al. (2022), Wijethilake et al. (2023), Chandrakant and Rajesh (2023), and Gold and Taib (2023).

The facts of the universe are systematically captured by the quantitative method (Hoang et al., 2021). We chose the best executives in Saudi Arabia's manufacturing sectors and senior managers in the industry. They are leading individuals who significantly ease workers' anxieties (Gimenez & Tachizawa, 2012). Additionally, they are informed of how each business is doing. More specifically in SMEs, Saudi Arabia's SMEs exert a significant role in stabilizing and quickening the country's economic growth. In return, it creates sustainable employment due to its vigorous and foremost role in the economic development of the country (Koe et al., 2015). The Saudi Arabian government firmly supports SMEs as the engine of the Saudi economy. Furthermore, this is an essential step towards realizing Saudi Arabian Vision 2023 (Alsughayer, 2021). However, the top management of SMEs has had to deal with significant challenges and issues to grow their businesses. They must use their companies' ingenuity to solve the problems of CS, OC, BI, CA, and CG.

3.2. Data collection modes and sample size

We used the survey instrument to gather data with high levels of authenticity and make it easy for the respondents (Lietz, 2010). We used convenience sampling since it was quick, affordable, and simple to reach many Saudi Arabian SMEs (Masud et al., 2016). In-depth research was done between August 2022, and December 2022. To contact the respondents, we used both methods (personal visits and online questionnaires). Before releasing the questionnaire, we got the respondents' permission. The respondents were informed through email of the goals and purpose of the survey, and they were requested to return the filled-out form. Initially, we distributed/sent 500 questionnaires and received 336, yielding an overall response rate of 67.2%. We cleaned the data by detecting missing data and outliers. As a result, we only found one missing questionnaire with greater than 5% and no outliers. This sample size satisfies the partial least squares (PLS) software's minimal criterion. We used 336 examples in the final analysis to deduce the outcomes.

3.3. Common method bias

Following the recommendations of Kock and Lynn (2012) and Kock (2015) to eliminate the issue of common method bias since data were gathered using a single source. In such a method, we regressed all constructs against a common variable. For example, if the variance inflation factor (VIF) \leq 3.3, there is no bias from the single-source data. As mentioned in Table 1, all values of VIF for the inner model appear to be less than 3.3; hence, single/source bias is not a serious data issue.

Table 1. Full collinearity testing

Construct	VIF
Business infrastructure (BI)	1.552
Corporate alignment (CA)	1.000
Corporate governance (<i>CG</i>)	1.062
Corporate sustainability (CS)	1.628
Organizational culture (OC)	1.008

3.4. Measures

In total, we applied twenty items in the study. The items of the scale were adopted from Utami et al. (2020). More specifically, we measure *OC* based on four items with sample indicators as "strategic leadership" and "organization priority". Likewise, *BI* is assessed on five items showing indicators as "resource aspect" and "information communication technology (ICT) aspect". We gauged *CA* constructs on five indicators which mention "strategic concept"



and "work behaviour". The *CG* is measured on four indicators with sample indicators "transparency" and "accountability". Finally, the *CS* factor is assessed on two indicators which highlight indicators such as "general triple bottom line" and "specific triple bottom line" We measured these items by using a five-point Likert scale ranging from strongly agree = 1 to strongly disagree = 5.

4. ANALYSIS

4.1. Respondents' profile

Regarding respondent demographics, the survey included most male participants (62.5%, n = 210) compared to females (37.5%, n = 126). Regarding educational levels, the majority of respondents held undergraduate degrees (70.24%, n = 236), while 18.45% (n = 62) had postgraduate degrees, 8.33%

(n = 28) held diplomas, and only 2.98% (n = 10) had other educational qualifications. In terms of work experience, 72.62% (n = 244) of respondents had more than ten years of experience, 14.29% (*n* = 48) had five to ten years, and only 13.09% (*n* = 44) had less than five years of experience. Furthermore, respondents represented various industries, with 25.59% (n = 86) from the new materials industry, 22.92% (n = 77) from the software industry, 16.67% (n = 56) from solar energy, 13.99% (n = 47) from pharmaceuticals, 13.69% (*n* = 46) from manufacturing, and 7.14% (n = 24) from other sectors. Regarding firm size, most respondents (69.05%, n = 232) worked in organizations with over a hundred employees. In comparison, 26.19% (*n* = 88) were part of firms with 50-100 employees, and only 4.76% (n = 16) were in companies with fewer than 50 employees (see Table 2).

Table 2. Respondents' profi

Indicator	Category	Frequency	%
	Male	210	62.5
Gender	Female	126	37.5
	Total	336	100.0
	Diploma	28	8.33
	Undergraduate	236	70.24
Educational level	Postgraduate	62	18.45
	Others	10	2.98
	Total	336	100.0
	< 5	44	13.09
Working experience (years)	5-10	48	14.29
working experience (years)	> 10	244	72.62
	Total	336	100.0
	Manufacturing	46	13.69
	Pharmaceuticals industry	47	13.99
	Software industry	77	22.92
Industry	New materials industry	86	25.59
	Solar energy industry	56	16.67
	Others	24	7.14
	Total	390	100.0
	< 50	16	4.76
Firm size (employees)	50-100	88	26.19
rifin size (employees)	> 100	232	69.05
	Total	390	100.0

Source: Authors' questionnaire data.

4.2. Measurement model

We employed partial least squares structural equation modeling (PLS-SEM) in our research, primarily owing to the exploratory nature of the study, as advocated by Hair et al. (2019). Furthermore, our statistical objective revolved around both in-sample and out-of-sample prediction. PLS-SEM is particularly well-suited in this context, as Hair et al. (2019) and Ofori et al. (2022) emphasized. In addition, the utilization of PLS-SEM aligns with its well-established position in the research literature, making our findings more easily comparable to previous studies, as evidenced by Lu (2021), Chandrakant and Rajesh (2023), Gold and Taib (2023).

1. Loadings, average variance extracted (AVE), composite reliability (CR) and alpha. In the measurement model, we assessed the three main components: AVE, loadings and CR. As presented in Table 3 and Figure 2, the scores of loadings have appeared between the ranges of 0.818 (CA5) to 0.965 (OC3), which is > 0.708. Likewise, the values of AVE appeared with a range between 0.726 (CA) to 0.874 (CS), which are acceptable (> 0.5). We also noticed the values of CR > 0.7, within the ranges 0.930 (CA)

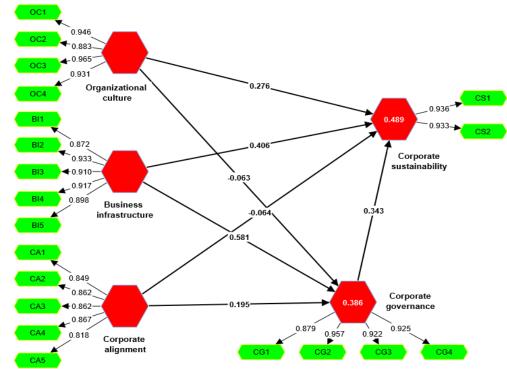
to 0.963 (*OC*). Besides, Cronbach's alpha for all the constructs is also noticed with good scores within ranges from 0.856 (*CS*) to 0.950 (*OC*).

Table 3. Measurement model assessment

Factor	Item	Loadings	AVE	CR	α	
	BI1	0.872		0.958	0.946	
Dessites	BI2	0.933				
Business infrastructure (<i>BI</i>)	BI3	0.910	0.821			
iiiiastructure (<i>bi</i>)	BI4	0.917				
	BI5	0.898				
	CA1	0.849		0.930	0.913	
Corporato	CA2	0.862				
Corporate alignment (<i>CA</i>)	CA3	0.862	0.726			
	CA4	0.867				
	CA5	0.818				
	CG1	0.879		0.957	0.940	
Corporate	CG2	0.957	0.849			
governance (CG)	CG3	0.922	0.045			
	CG4	0.925				
Corporate	CS1	0.936	0.874	0.933	0.856	
sustainability (<i>CS</i>)	CS2	0.933	0.074	0.555	0.050	
	OC1	0.946		0.963	0.950	
Organizational	OC2	0.883	0.868			
culture (<i>OC</i>)	OC3	0.965	0.000	0.303		
Courses Authons' alak	OC4	0.931				

Source: Authors' elaboration.





Source: Authors' elaboration.

2. *Discriminant validity (DV).* Furthermore, we judged the DV using the heterotrait-monotrait (HTMT) criterion as suggested by Henseler et al. (2015) and restructured by Franke and Sarstedt (2019). For the proven DV between two latent variables, the HTMT scores should be 0.85 for the harsher criteria and 0.90 for the more compassionate

criterion. Table 4 highlights the HTMT value < 0.9. These values ensure that the variables are sufficiently distinct from each other. Consequently, the validity test reveals that the corresponding five constructs utilized in this study are conceptually unique and may, thus, be applied to analyze the hypothesized relationships.

Table 4. Heterotrait-monotrait ratio of correlations

Constructs	BI	СА	CG	CS	ОС
BI					
CA	0.06				
CG	0.61	0.199			
CS	0.635	0.05	0.6		
ОС	0.056	0.05	0.094	0.238	

Source: Authors' elaboration.

4.3. Structural model

4.3.1. Hypotheses confirmation (direct paths)

We applied PLS-SEM using the SmartPLS 4 version to assess the hypotheses. With regard to direct paths, the analysis shows a positive significant effect of *OC* on *CS* ($H1 = OC \rightarrow CS = \beta = 0.279$; p < 0.01), which

supported *H1*. Likewise, the effect of *BI* on *CS* is positive and significant ($H2 = BI \rightarrow CS = \beta = 0.408$; p < 0.01) which accepted *H2*. Further, the association between *CG* and *CS* is supported ($H4 = OG \rightarrow CS = \beta = 0.340$; p < 0.01). On the other hand, we noticed the negative significant effect of *CA* on *CS* ($H3 = CA \rightarrow CS = \beta = -0.065$; p > 0.01), which rejected the *H3* (Table 5).

Table	5.	Direct	paths
-------	----	--------	-------

H No.	Hypothesized paths	Std. (β)	Mean	Std. dev.	t-value	p-value	BCI LL	BCI UL	Supported
H1	$OC \rightarrow CS$	0.279	0.278	0.043	6.513	0.000	0.193	0.360	Yes
H2	$BI \rightarrow CS$	0.408	0.409	0.051	8.01	0.000	0.309	0.509	Yes
H3	$CA \rightarrow CS$	-0.065	-0.065	0.054	1.214	0.225	-0.168	0.038	No
H4	$CG \rightarrow CS$	0.340	0.341	0.054	6.252	0.000	0.232	0.445	Yes

Source: Authors' elaboration.

Note: $p \le 0.01$. BCI LL — Biased corrected interval lower limit, BCI UL — Biased corrected interval upper limit.

VIRTUS 100

4.3.2. Hypotheses confirmation (indirect paths)

Furthermore, the indirect effects show a mediating effect of *CG* between *BI* and *CS*, and *CA* and *CS* [($H6 = BI \rightarrow CG \rightarrow CS = \beta = 0.198$; p < 0.01) ($H7 = CA \rightarrow CS = \beta = 0.198$; p < 0.01)

 $CG \rightarrow CS = \beta = 0.066$; p < 0.01)]. As a result, *H6* and *H7* are accepted. On the other hand, *CG* negatively mediates the relationship between *OC* and *CS* (*H5* = *OC* \rightarrow *CG* \rightarrow *CS* = β = -0.021), which rejects the *H5* (see Table 6 and Figure 3).

H No.	Hypothesized paths	Std. (β)	Mean	Std. dev.	t-value	p-value	BCI LL	BCI UL	Supported
H5	$OC \rightarrow CG \rightarrow CS$	-0.021	-0.021	0.015	1.437	0.151	-0.051	0.008	No
H6	$BI \rightarrow CG \rightarrow CS$	0.198	0.198	0.036	5.437	0.000	0.13	0.272	Yes
H7	$CA \rightarrow CG \rightarrow CS$	0.066	0.067	0.02	3.301	0.001	0.031	0.106	Yes

Table 6. Indirect paths

Source: Authors' elaboration.

Note: $p \le 0.01$. BCI LL — Biased corrected interval lower limit, BCI UL — Biased corrected interval upper limit.

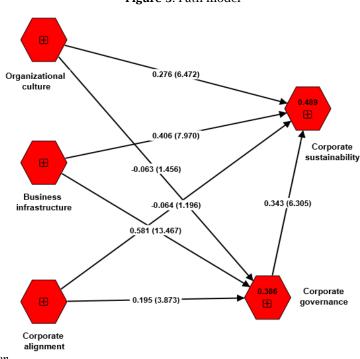


Figure 3. Path model

5. DISCUSSION

The present proposal is to investigate *CS* in SMEs through factors such as *OC*, *BI*, *CA* and *CG* directly and indirectly. We applied *CG* as the mediator between *OC*, *BI*, *CA* and *CS*. With regard to *H1*, the results suggest a positive effect of *OC* on *CS*. These results are in line with previous literature like Linnenluecke and Griffiths (2010), Carro-Suarez et al. (2017), Siyal et al. (2022), Moslehpour et al. (2022) and Wijethilake et al. (2023) who claimed the positive role of *OC* in enhancing *CS* in diverse contexts. These positive results suggest that the OC of SMEs in Saudi Arabia is influential leadership. The SMEs have the top priority of developing *CS* through a conducive environment and *OC*.

Moreover, we found a positive contribution of *BI* in bringing sustainability to SMEs. These results are also consistent with the studies of Searcy et al. (2006), Schaltegger et al. (2012), Pedersen et al. (2018) and Utami et al. (2020), who emphasized the same outcomes. These positive connections between *BI* and *CS* demonstrate that the prominence of resources in developing a favourable *CS* is

essential. These had a strong ICT system. The robust *BI* generates economic values, which ultimately promote social, business and environmental performance (Schaltegger et al., 2012). These results confirmed the enormous predictive effect which helps organizations achieve their sustainable development goals and organizational sustainability (Searcy et al., 2006; Pedersen et al., 2018).

We found a negative significant effect of *CA* on *CS*, which is not reinforced by the literature (Loeser et al., 2013; Giannakis et al., 2019; Manohar, 2019; Utami et al., 2020). The results demonstrate that the respondents are not fully aware of the strategic concept of the organizations and work behaviour. The SMEs did not provide fruitful and valuable performance. They did not consistently receive the proper rewards. The industry does not offer them reasonable motivation and recognize their efforts for the development and sustainability of the organizations.

The study also confirmed a significant effect of *CG* on *CS*. The literature also supports these findings (Bae et al., 2018; Crifo et al., 2019; Lu, 2021; Chandrakant & Rajesh, 2023). These results suggest that SME individuals are confident about

VIRTUS

Source: Authors' elaboration.

the transparency of their organization. They believe there would be pure accountability if someone made any mistake or negligence. There is also helpful predictability and participation of everyone to promote and make the organization successful.

Finally, the role of *CG* is confirmed as a mediator, which develops the connection of *BI* and *CA* with *CS*. These results confirmed the based on previous consistency of the association between these constructs and *CS* (Loeser et al., 2013; Pedersen et al., 2018; Utami et al., 2020; Siyal et al., 2022; Wijethilake et al., 2023). On the other hand, the *OC* factor did not appear as a significant factor with mediating effects. Hence, the results show that *CG* is an influential factor that helps make these strong associations of *BI* and *CA* with *CS*, except *OC*.

In conclusion, the overall findings demonstrated a positive and significant effect of *OC*, *BI* and *CG* on *CS*. On the other hand, *CA* is found to be a negative predictor of *CS*. Besides, the *CG* is a mediating factor which developed the strong linkages between *BI*, *CA* and *CS*. On the other hand, OC did not develop the connection between *CA* and *CS*. These results suggest that *BI*, *CA* and *CG* factors are necessary to enhance organizations' sustainable development and sustainability. These also reinforced the economic, social and environmental performance by creating a conducive and favourable business environment and culture, which supported the success of the organizations. However, *OC* did not do all the functions.

6. CONCLUSION

This study would provide guidelines to policymakers and planners of the SME sector to enhance the success of organizations by promoting CS through BI, CA and CG. However, CC does not play a robust role in developing CS; hence it would open avenues of debate among policymakers. The study also would assist the organizations to produce reliable leadership which prioritizes their organization with effective plans and strategies. The study would open dimensions to create healthy and effective CG, which may massively make their system of accountability and predictability. Besides, the findings support the organizations to develop a conducive business environment which may govern the good environmental, social and economic performance of the organizations. Hopefully, the top management of SMEs would develop a strategic concept and friendly work behaviour to achieve high performance of employees by offering a valid reward with great motivation.

With regard to theoretical contribution, the study provides novel assistance in the shape of a model which directly and indirectly predicts CS. The study also recognizes the mediating role of CG in developing the connection between BI, CA and CS in a meaningful way. However, the negative predictor power of OC on CS would open new motivations for researchers to confirm its dual role (positive and negative). More specifically, the study offers an integrated model where CG simultaneously plays its dual roles (direct and mediation). Moreover, the study provides a picture of the empirical confirmation among the top management of SMEs in Saudi Arabia. Finally, the study would fill the gaps by overcoming the role of CG directly and indirectly in predicting CS in SMEs precisely.

The study is restricted to the SME context of Saudi Arabia, where top managers of SMEs are targeted as study respondents. The study did not apply a meaningful theory to support the conceptual framework of the study. The study's conceptualization has appeared with a few constructs, such as OC, BI, CA and CG, applied to predict CS. We conclude the study based on 336 cases. The study is limited to convenience sampling where both sources, i.e., online and offline data collection techniques, are applied. Finally, the single source of data collection may create the issue of response bias.

In future, longitudinal data must be applied to test the model. Factors such as the need for achievement, innovation, capability and digitalization may be used to examine CS. In mediation, entrepreneurial culture, entrepreneurial intention, strategic planning etc., may be considered in future. Besides, the concerned theories may be applied to underprop the conceptual framework. Finally, other sectors, such as education, health and tourism, may be investigated through these constructs.

REFERENCES

- 1. Al Doghan, M. A., Abdelwahed, N. A. A., Soomro, B. A., & Ali Alayis, M. M. H. (2022). Organizational environmental culture, environmental sustainability and performance: The mediating role of green HRM and green innovation. *Sustainability*, *14*(12), Article 7510. https://doi.org/10.3390/su14127510
- 2. Alsughayer, S. A. (2021). VAT compliance challenges among SMEs: Evidence from Saudi Arabia. *Journal of Accounting, Finance and Auditing Studies, 7*(3), 34–59. https://doi.org/10.32602/jafas.2021.018
- 3. Aras, G., & Crowther, D. (2008). Governance and sustainability: An investigation into the relationship between corporate governance and corporate sustainability. *Management Decision*, *46*(3), 433-448. https://doi.org/10.1108/00251740810863870
- 4. Bae, S. M., Masud, M. A. K., & Kim, J. D. (2018). A cross-country investigation of corporate governance and corporate sustainability disclosure: A signaling theory perspective. *Sustainability*, *10*(8), Article 2611. https://doi.org/10.3390/su10082611
- 5. Balmer, J. M. T. (2012). Strategic corporate brand alignment: Perspectives from identity based views of corporate brands. *European Journal of Marketing*, *46*(7-8), 1064–1092. https://doi.org/10.1108 /03090561211230205
- 6. Baumgartner, R. J. (2009). Organizational culture and leadership: Preconditions for the development of a sustainable corporation. *Sustainable Development*, *17*(2), 102–113. https://doi.org/10.1002/sd.405
- 7. Bellot, J. (2011). Defining and assessing organizational culture. *Nursing Forum*, *46*(1), 29–37. https://doi.org /10.1111/j.1744-6198.2010.00207.x
- 8. Brodny, J., & Tutak, M. (2023). Assessing regional implementation of Sustainable Development Goal 9 "Build resilient infrastructure, promote sustainable industrialization and foster innovation" in Poland. *Technological Forecasting and Social Change, 195*, Article 122773. https://doi.org/10.1016/j.techfore.2023.122773

VIRTUS

- 9. Carro-Suarez, J., Sarmiento-Paredes, S., & Rosano-Ortega, G. (2017). Organizational culture and its influence in business sustainability. The importance of culture in corporate sustainability. *Estudios Gerenciales, 33*(145), 352–365. http://www.scielo.org.co/scielo.php?script=sci_abstract&pid=S0123-59232017000400352
- 10. Chandrakant, R., & Rajesh, R. (2023). Social sustainability, corporate governance, and sustainability performances: An empirical study of the effects. *Journal of Ambient Intelligence and Humanized Computing*, *14*(7), 9131–9143. https://doi.org/10.1007/s12652-022-04417-4
- 11. Crifo, P., Escrig-Olmedo, E., & Mottis, N. (2019). Corporate governance as a key driver of corporate sustainability in France: The role of board members and investor relations. *Journal of Business Ethics*, *159*, 1127–1146. https://doi.org/10.1007/s10551-018-3866-6
- 12. Daugaard, D. (2020). Emerging new themes in environmental, social and governance investing: A systematic literature review. *Accounting & Finance*, *60*(2), 1501–1530. https://doi.org/10.1111/acfi.12479
- 13. Ebekozien, A., Aigbavboa, C. O., Samsurijan, M. S., Radin Firdaus, R. B., & Rohayati, M. I. (2023). Expanded corporate social responsibility framework: Companies' role in improving higher education institutions infrastructure to Sustainable Development Goal 4. *Journal of Facilities Management*. Advance online publication. https://doi.org/10.1108/JFM-11-2022-0120
- 14. Elkington, J. (2006). Governance for sustainability. *Corporate governance: An international Review, 14*(6), 522–529. https://doi.org/10.1111/j.1467-8683.2006.00527.x
- 15. Flintsch, G. W., & Chen, C. (2004). Soft computing applications in infrastructure management. *Journal of Infrastructure Systems*, *10*(4), 157–166. https://doi.org/10.1061/(ASCE)1076-0342(2004)10:4(157)
- 16. Franke, G., & Sarstedt, M. (2019). Heuristics versus statistics in discriminant validity testing: A comparison of four procedures. *Internet Research*, *29*(3), 430–447. https://doi.org/10.1108/IntR-12-2017-0515
- 17. Ghardallou, W. (2022). Corporate sustainability and firm performance: The moderating role of CEO education and tenure. *Sustainability*, *14*(6), Article 3513. https://doi.org/10.3390/su14063513
- 18. Giannakis, D., Chalikias, I., & Tsirigoti, E. (2019). The effect of sales and HRM strategic alignment on a corporate sustainable competitive advantage: The significant role of the HR business partner. *International Journal of Innovation, Management and Technology, 10*(6), 207–218. https://doi: 10.18178/ijimt.2019.10.6.863
- 19. Gimenez, C., & Tachizawa, E. M. (2012). Extending sustainability to suppliers: A systematic literature review. *Supply Chain Management*, *17*(5), 531–543. https://doi.org/10.1108/13598541211258591
- 20. Gold, N. O., & Taib, F. M. (2023). Corporate governance and extent of corporate sustainability practice: The role of investor activism. *Social Responsibility Journal*, *19*(1), 184–210. https://doi.org/10.1108/SRJ-06-2021-0228
- 21. Grigg, N. S. (2000). Where are we in infrastructure education? *Public Works Management & Policy, 4*(3), 256–259. https://doi.org/10.1177/1087724X0043011
- 22. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203
- 23. Hair, J. F., Jr., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, *109*, 101–110. https://doi.org/10.1016/j .jbusres.2019.11.069
- 24. Halmaghi, E.-E., Ranf, D.-E., & Badea, D. (2023). Interdisciplinary exploration between organizational culture and sustainable development management applied to the Romanian higher education environment. *Sustainability*, *15*(13), Article 10688. https://doi.org/10.3390/su151310688
- 25. Hendren, K., Newcomer, K., Pandey, S. K., Smith, M., & Sumner, N. (2023). How qualitative research methods can be leveraged to strengthen mixed methods research in public policy and public administration? *Public Administration Review*, *83*(3), 468-485. https://doi.org/10.1111/puar.13528
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variancebased structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135. https://doi.org/10.1007/s11747-014-0403-8
- 27. Heywood, C., & Arkesteijn, M. (2017). Alignment and theory in corporate real estate alignment models. *International Journal of Strategic Property Management, 21*(2), 144–158. https://doi.org/10.3846/1648715X .2016.1255274
- 28. Hoang, G., Le, T. T. T., Tran, A. K. T., & Du, T. (2021). Entrepreneurship education and entrepreneurial intentions of university students in Vietnam: The mediating roles of self-efficacy and learning orientation. *Education + Training*, *63*(1), 115–133. https://doi.org/10.1108/ET-05-2020-0142
- 29. Jansen, L. (2003). The challenge of sustainable development. *Journal of Cleaner Production*, 11(3), 231–245. https://doi.org/10.1016/S0959-6526(02)00073-2
- 30. Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics, 106*, 53–72. https://doi.org/10.1007/s10551-011-1052-1
- 31. Keel, G., Savage, C., Rafiq, M., & Mazzocato, P. (2017). Time-driven activity-based costing in health care: A systematic review of the literature. *Health Policy*, *121*(7), 755–763. https://doi.org/10.1016/j.healthpol .2017.04.013
- 32. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101
- 33. Kock, N., & Lynn, G. S. (2012). Lateral collinearity and misleading results in variance-based SEM: An illustration and recommendations. *Journal of the Association for Information Systems, 13*(7), 546–580. https://doi.org /10.17705/1jais.00302
- 34. Koe, W.-L., Omar, R., & Sa'ari, J. R. (2015). Factors influencing propensity to sustainable entrepreneurship of SMEs in Malaysia. *Procedia Social and Behavioral Sciences, 172*, 570–577. https://doi.org/10.1016/j.sbspro .2015.01.404
- 35. Kouaib, A. (2022). Corporate sustainability disclosure and investment efficiency: The Saudi Arabian context. *Sustainability*, *14*(21), Article 13984. https://doi.org/10.3390/su142113984
- 36. Lietz, P. (2010). Research into questionnaire design: A summary of the literature. *International Journal of Market Research*, *52*(2), 249–272. https://doi.org/10.2501/S147078530920120X
- 37. Linnenluecke, M. K., & Griffiths, A. (2010). Corporate sustainability and organizational culture. *Journal of World Business*, *45*(4), 357–366. https://doi.org/10.1016/j.jwb.2009.08.006

<u>VIRTUS</u> 103

- Loeser, F., Erek, K., & Zarnekow, R. (2013). Green IT strategies: A conceptual framework for the alignment of information technology and corporate sustainability strategy. In P. O. de Pablos (Ed.), *Green technologies and business practices: An IT approach* (pp. 58–95). IGI Global. https://doi.org/10.4018/978-1-4666-1972-2.ch004
- 39. Lu, L. W. (2021). The moderating effect of corporate governance on the relationship between corporate sustainability performance and corporate financial performance. *International Journal of Disclosure and Governance, 18*(3), 193–206. https://doi.org/10.1057/s41310-020-00099-6
- 40. Manohar, E. (2019). Essential alignment: Corporate social responsibility and social impact assessment for sustainable development-an empirical study. *Journal of Management, 6*(3), 186–191. https://doi.org/10.34218/JOM.6.3.2019.021
- 41. Masud, M. M., Al-Amin, A. Q., Junsheng, H., Ahmed, F., Yahaya, S. R., Akhtar, R., & Banna, H. (2016). Climate change issue and theory of planned behaviour: Relationship by empirical evidence. *Journal of Cleaner Production*, *113*, 613–623. https://doi.org/10.1016/j.jclepro.2015.11.080
- 42. Moslehpour, M., Chau, K. Y., Tu, Y.-T., Nguyen, K.-L., Barry, M., & Reddy, K. D. (2022). Impact of corporate sustainable practices, government initiative, technology usage, and organizational culture on automobile industry sustainable performance. *Environmental Science and Pollution Research*, *29*(55), 83907–83920. https://doi.org/10.1007/s11356-022-21591-2
- 43. Mousiolis, D. T., Zaridis, A. D., Karamanis, K., & Rontogianni, A. (2015). Corporate social responsibility in SMEs and MNEs. The different strategic decision making. *Procedia-Social and Behavioral Sciences*, *175*, 579–583. https://doi.org/10.1016/j.sbspro.2015.01.1240
- 44. Ofori, K. S., Anyigba, H., Adeola, O., Junwu, C., Osakwe, C. N., & David-West, O. (2022). Understanding postadoption behaviour in the context of ride-hailing apps: The role of customer perceived value. *Information Technology & People*, *35*(5), 1540–1562. https://doi.org/10.1108/ITP-06-2019-0285
- 45. Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US tech firms. *Journal of Cleaner Production, 292*, Article 126078. https://doi.org/10.1016/j .jclepro.2021.126078
- 46. Pedersen, E. R. G., Gwozdz, W., & Hvass, K. K. (2018). Exploring the relationship between business model innovation, corporate sustainability, and organisational values within the fashion industry. *Journal of Business Ethics*, *149*, 267–284. https://doi.org/10.1007/s10551-016-3044-7
- 47. Peters, G. F., Romi, A. M., & Sanchez, J. M. (2019). The influence of corporate sustainability officers on performance. *Journal of Business Ethics*, *159*, 1065–1087. https://doi.org/10.1007/s10551-018-3818-1
- Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2012). Business cases for sustainability: The role of business model innovation for corporate sustainability. *International Journal of Innovation and Sustainable Development*, 6(2), 95–119. https://doi.org/10.1504/IJISD.2012.046944
- 49. Searcy, C. (2011). Updating corporate sustainability performance measurement systems. *Measuring Business Excellence*, *15*(2), 44–56. https://doi.org/10.1108/13683041111131619
- 50. Searcy, C., Karapetrovic, S., & McCartney, D. (2006). Integrating sustainable development indicators with existing business infrastructure. *International Journal of Innovation and Sustainable Development*, *1*(4), 389–411. https://doi.org/10.1504/IJISD.2006.013737
- 51. Siyal, S., Ahmad, R., Riaz, S., Xin, C., & Fangcheng, T. (2022). The impact of corporate culture on corporate social responsibility: Role of reputation and corporate sustainability. *Sustainability*, *14*(16), Article 10105. https://doi.org/10.3390/su141610105
- 52. Umar, M. B. (2005). Legal issues in the management of Nigeria's production sharing contracts from a study of the Nigerian national petroleum corporation's (national petroleum management services') perspective. *Oil, Gas and Energy Law Journal, 3*(1). https://www.ogel.org/article.asp?key=1740
- 53. Utami, H. N., Cahyana, B. E., Nimran, U., & Iqbal, M. (2020). Organizational transformation as a determinant of corporate hospitality and its effect on corporate sustainability. *International Trade, Politics and Development,* 4(2), 105–125. https://doi.org/10.1108/ITPD-04-2020-0014
- 54. Verschuren, P. (2003). Case study as a research strategy: Some ambiguities and opportunities. *International Journal of Social Research Methodology*, *6*(2), 121–139. https://doi.org/10.1080/13645570110106154
- 55. Wijethilake, C., Upadhaya, B., & Lama, T. (2023). The role of organisational culture in organisational change towards sustainability: Evidence from the garment manufacturing industry. *Production Planning & Control*, 34(3), 275–294. https://doi.org/10.1080/09537287.2021.1913524

VIRTUS 104