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RESEARCH ARTICLE
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Determinants of Firms' Sustainable Development Goals Alignments: Empirical Insights from the Middle East Green Initiative

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ABSTRACT

This study examines the determinants of firms' sustainable development goals alignments in the Gulf Cooperation Council (GCC), focusing on the Middle East Green Initiative (MEGI) launched on March 27 March 27, 2021. This initiative aims to combat climate change by intensifying efforts and fostering regional cooperation. The study data are extracted from two sources, Refinitiv Eikon Database and the World Bank, from 2020 to 2023. The study sample comprises 138 firms with 552 observations (firms*years) comprising firms from 6 Gulf countries. The panel fixed effect model is utilized to estimate the results. Results reveal that only one economic factor (GDP Growth) significantly and positively affects the disclosure of Sustainable Development Goals made by firms in the Gulf Region. Similarly, the Middle East Green Initiative has a positive and significant effect. Regarding non-economic factors, results show that while board independence positively affects Sustainable Development Goals disclosure, board tenure has a significant negative impact. The study bridges an existing gap by providing empirical evidence on SDGs disclosure in the Gulf Region, highlighting how governmental programs affect firms' alignment with SDGs.

Keywords: Sustainable Development Goals, Gulf Region, SDGs Disclosure, Economic Growth

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INTRODUCTION

The Gulf Region has witnessed rapid economic growth and development over the past few decades, becoming a global hub for business and industry. However, this growth has also come with significant environmental challenges, including concerns about climate change, resource depletion, and ecological degradation. In response to these challenges, the region has increasingly turned its efforts toward sustainability, with many governments and organizations committing to align their strategies with the United Nations' Sustainable Development Goals (SDGs). A key initiative in this regard is the MEGI, launched in March 2021, which aims to combat climate change through regional cooperation and adopting sustainable environmental practices. By setting goals for reducing carbon emissions, enhancing renewable energy usage, and promoting sustainability in urban and industrial development, MEGI has become a cornerstone of the Gulf Region's sustainability programs (Noach, 2022; Ghanem & Alamri, 2023). Hence, firms are urged to implement solutions consistent with the SDGs' tenets (United Nations Global Compact 2015).

Additionally, companies have been under increasing pressure from investors and standard-setting bodies to implement sustainable business practices (Al-Shaer & Zaman, 2018; Aureli et al., 2020). As a result, there is now a greater need to provide helpful information on the non-financial components of success (Caputo et al., 2021). As demonstrated by the current legal movement toward required non-financial information (e.g., Directive 2014/95/EU or Directive), a sustainable company strategy that attends to stakeholders' interests challenges traditional reporting approaches (Aureli et al., 2020). Due to this change, non-financial disclosure (NFD) must get more attention (Santamaria et al., 2021).

Gulf countries experienced many social and economic challenges, including elevated unemployment rates, a significant gender disparity in labor force participation and an inequitable distribution of female employment (Zaidan et al., 2019). These challenges hindered Gulf countries' sustainability and impede the attainment of

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Sustainable Development Goals (SDGs). Furthermore, studying SDG alignment in the context of Gulf countries is critical since the region has unique challenges and opportunities that influence its sustainable development journey. Since the adoption of the Sustainable Development Goals (SDGs) in 2015, Gulf Cooperation Council (GCC) nations have made significant progress in their achievement (Mahmood & Furqan, 2021). Nonetheless, the GCC area has progressed on several SDGs, including poverty alleviation, health, and education. However, there are considerable challenges in environmental sustainability and climate action, which are crucial pillars of the SDGs (Canton, 2021). Salem et al. (2023) argue that GCC countries have encountered and continue to encounter several environmental difficulties, notably the escalating levels of CO2 emissions across the region, with Qatar, Kuwait, and the UAE at the forefront. Hence, this study is motivated to investigate the determinants of SDGs alignment in the GCC countries' context.

Despite the growing emphasis on sustainability, there is limited empirical research on how firms in the Gulf Region align their operations with SDGs, and how government initiatives such as MEGI influence this alignment. Given the region's strategic importance in the global economy and its role in addressing climate change, exploring the determinants influencing firms' sustainable development practices and their SDG disclosures is essential. Therefore, this study contributes to existing literature in several ways: Firstly, this study extends sustainability research by focusing on the MEGI to foster regional cooperation. This shows how governmental programs affect firms' alignment with SDGs. Secondly, unlike previous research that focused on developed countries, this study provides a novel contribution by providing empirical insights into how firms respond to macroeconomic conditions and government-driven sustainability efforts. Thirdly, the findings of this paper offer valuable contributions to both the academic literature on corporate sustainability and the practical implications for policymakers and business leaders seeking to enhance SDGs alignment in the Gulf Region. Fourth, the study compares the disclosure of sustainable development goals before and after launching the Middle East Green Initiative (Saudi Green Initiative, 2021).

This research examines the determinants of firms' alignment of sustainable development goals in the Gulf Cooperation Council (GCC), focusing on the Middle East Green Initiative (MEGI). Data were extracted from Refinitiv Eikon Database and the World Bank website, from 2020 to 2023, to achieve this objective based on data availability. The final sample comprises 138 firms with 552 observations (firms*years) comprising firms from all Gulf States. Hence, this study uses a qualitative research approach to explore the alignment of the recent SDGs in the Gulf Region.

The rest of this study is organized as follows: Section 2 reviews prior research and literature reviews, Section 3 provides a brief overview of the methodological approach, Section demonstrates data analysis, followed by findings and discussion, and Section concludes the study.

The Sustainable Development Goals (SDGs), established by the United Nations in 2015, serve as a global schema for addressing various societal, economic, and environmental challenges. Aligning corporate strategies with SDGs enhances a company's reputation and contributes to global sustainability efforts (Bebbington & Larrinaga, 2014). Businesses are focusing on profit maximization and addressing broader social and environmental concerns (Elkington, 2000). The alignment with SDGs has become an essential aspect of corporate strategy, signaling the firm's commitment to sustainability and responsible governance (KPMG, 2020). There has been a growing recognition of the importance of SDGs in the Gulf States, particularly due to the region's economic diversification efforts, environmental challenges, and social obligations (Samy & Susanna, 2018). The alignment of Gulf firms with SDGs has been driven by external pressures, e.g., government policies, global market trends, and internal factors, e.g., firm size and governance structures. As part of government initiatives, MEGI is pivotal in influencing corporate alignment with the SDGs. MEGI aims to tackle climate change and promote environmental sustainability across the Middle East. The initiative is part of a broader effort to reduce carbon emissions, enhance renewable energy use, and foster regional cooperation for climate action. As such, governmental programs have the potential to directly influence corporate behavior by creating an enabling environment that encourages firms to adopt sustainability practices and disclose their SDGs commitments (Lozano, 2013).

Existing literature on the impact of governmental policies on corporate sustainability suggests that policies that promote environmental and social responsibility often lead firms to increase the alignment of SDGs (Porter & Linde, 1995; Manner, 2010). In the Gulf States, studies indicate that firms are increasingly aligning with government-driven sustainability initiatives due to regulatory requirements, financial incentives, and reputational benefits (Habbash, 2017). The MEGI has generated significant regional attention, prompting firms to enhance their sustainability reporting practices.

Economic factors, such as GDP growth, have long been identified as significant drivers of corporate sustainability practices. Research shows that a higher GDP growth rate typically correlates with greater financial resources, which can be allocated to sustainability initiatives (Freeman, 2010). Firms in economically growing regions often have the capital to invest in sustainable practices, resulting in greater alignment with SDGs (Husted & Allen, 2006).

In the context of the Gulf States, economic diversification and growth have prompted many firms to adapt their business strategies to reflect more sustainable practices (Bagadeem, 2016). However, the relationship between economic growth and the alignment of SDGs is complicated. Previous studies have suggested that while economic factors may provide the resources necessary for SDGs alignment, they may not always guarantee a genuine commitment to sustainability (Carroll, 1999). (Groner & Moradi, 2024) highlighted that GDP growth can motivate firms to engage in SDG-related activities, as growth often increases the demand for sustainable and responsible corporate behavior, especially in regions undergoing significant transformation.

Non-economic factors, such as board characteristics, play a crucial role in determining the level of alignment of SDGs in firms. Board independence has been widely studied as an influential factor in corporate governance and sustainability performance (Bhagat & Black, 2000). Independent boards are believed to provide greater oversight. They are more likely to pursue strategies aligning with SDGs due to their ability to balance stakeholder interests, reduce agency costs, and encourage transparency (Adams & Ferreira, 2007).

Conversely, other studies have suggested that specific board characteristics may negatively influence SDGs alignment. For instance, board tenure, or the length of time directors have been in their positions, has been linked to less innovative and less sustainable decision-making (Vafeas, 2000). Long-tenured boards may be more resistant to adopting new sustainability practices or pursuing long-term SDGs due to a preference for traditional business strategies prioritizing short-term financial returns (Naciti et al., 2021).

The governance context in the Gulf States presents unique challenges and opportunities for the alignment of firms' SDGs. While board independence is often a positive factor, the region has historically faced governance challenges, such as limited independence and concentration of ownership (Al-Shaer, 2019). Recent reforms and efforts to enhance regional corporate governance practices are expected to improve firms' alignment with global sustainability standards, including SDGs (OECD, 2020). The Gulf States, including countries like Saudi Arabia, the UAE, Qatar, Kuwait, Bahrain, and Oman, present a unique context for SDGs alignment due to their economic dependency on oil and gas industries, social structures, and ongoing diversification efforts. While the region is one of the highest emitters of greenhouse gases globally, it has also been at the forefront of integrating sustainability into its national strategies. Governments in the Gulf States have adopted ambitious visions, such as Saudi Arabia's Vision 2030 and the UAE's Green Agenda 2030, which strongly focus on environmental sustainability and corporate responsibility. Implementing these initiatives has spurred an increase in corporate sustainability reporting, particularly in response to the rising demand for environmental, social, and governance transparency (Elkington, 2000). These policies have also contributed to the growing importance of SDGs disclosures as firms seek to comply with regulatory requirements and global sustainability standards.

This literature review highlights the critical factors that influence firms' alignment with SDGs, particularly in the Gulf States. Government initiatives like MEGI play an essential role in shaping corporate sustainability behavior, while economic factors, such as GDP growth, provide the financial means for firms to invest in sustainable practices. Non-economic factors, such as board independence and tenure, also significantly influence the alignment of SDGs. Given the ongoing transformation of the Gulf Region, driven by economic diversification and government-led sustainability efforts, further research on the impact of these determinants on SDGs disclosures is crucial to understanding the region's corporate response to global sustainability challenges.

MATERIALS & METHODS

Sampling and Data

This study examines the determinants of firms' alignment with sustainable development goals in the Gulf Region, focusing on the Middle East Green Initiative. MEGI seeks to solve environmental issues and promote sustainable development in the area. The MEGI promotes integrating environmental education into the curriculum, addressing gaps in knowledge and comprehension of sustainability concerns (Onyeaka & Akinsemolu, 2025). The effort encourages green construction approaches, although they confront challenges such as high starting expenditures, cultural inclinations for older methods, and little government assistance (Elnaklah et al., 2024). MEGI emphasizes the region's renewable energy resource potential to reduce dependency on fossil fuels and increase energy efficiency.

Based on data availability, the study data are extracted from two sources, Refinitiv Eikon Database and World Bank, from 2020 to 2023. Most Middle East firms recently started disclosing SDG information after launching the Green Middle East initiative. Further, data are extracted for 2 years before and 2 years after the initiative to capture the impact of the Green Middle East initiative. The study sample comprises 138 firms with 552 observations (firms*years) comprising firms from all Gulf States; Table 1 below shows country tabulation. The results indicate that most firms in the sample are in Saudi Arabia and Qatar; they account for 30.43 and 26.09% of the total sample, respectively. In contrast, the sample's lowest percentage is for businesses in Oman and Bahrain, with 7.25% and 7.79% of the total sample, respectively.

Table 1: The study sample

Country	Firms Freq	Obs. Freq.	%	Cum.
Bahrain	11	44	7.97	7.97
Kuwait	13	52	9.42	17.39
Oman	10	40	7.25	24.64
Qatar	36	144	26.09	50.72
Saudi Ar	42	168	30.43	81.16
United A	26	104	18.84	100.00
Total	138	552	100.00	

i. Study Variables

The dependent variable is the Sustainable Development Goals (SDGs). Independent variables are board attributes measured by board composition, tenure, and gender diversity; firms' specific attributes represented by current ratio, leverage, and return on equity; economic factors measured by gross domestic product growth (GDP) and Foreign direct investment and the dummy variable Middle East Green Initiative. Table 2 shows the variables' coding and measurements.

ii. Model Specifications

This research uses popular econometric estimation techniques, including the Random Effects (RE) and Fixed Effects (FE) methods, to determine the alignment of firms' sustainable development goals. The data extracted from 6 Gulf Countries includes Sustainable Development Goals, board characteristics, and firms' specific and economic

Table 2: Variables Identification

Variable Name	Code	Measurement
Sustainable Development Goals	SDGs	It is a complete score that assesses the firm's disclosure using data from the 16 SDGs
Board Composition	BC	The number of independent members is divided by the total number of members sitting on the board.
Board tenure	BT	The average number of years each board member has been on the board.
Board gender diversity	BGD	Percentage of females on the board
Current Ratio	CR	Current assets/current liabilities
Leverage	LEV	Total debt/shareholders' equity
Return on Equity	ROE	Net income divided by its average shareholders' equity
Gross domestic product growth	GDP	(GDP_Year2/ GDP_Year 1) - 1.
Foreign direct investment	FDI	It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital, as shown in the balance of payments.
Middle East Green Initiative	GREENI	The dummy variable was coded "0" before launching the Middle East Green Initiative and "1" after launching the Middle East Green Initiative.

factors. Testing for specifications is also performed, such as the Breusch-Pagan LM and Hausman tests. Results of the Hausman test suggest that the Fixed effect model is appropriate over the random model. The validity of the finding was confirmed using a robust regression model. The following model has been developed to examine the determinants of firms' sustainable development goal alignments in the Gulf Region.

$$(SDGs)_{it=} = \alpha + \beta_1 (BC)_{it} + \beta_2 (BT)_{it} + \beta_3 (BGD)_{it} + \beta_4 (CR)_{it} + \beta_5 (LEV)_{it} + \beta_6 (ROE)_{it} + \beta_7 (GDP)_{it} + \beta_8 (FDI)_{it} + \beta_8 (GREENI)_{it} + \varepsilon_{it} \quad (1)$$

I. Data Analysis

i. Descriptive Statistics

This Section represents the variables' central tendencies: Mean, Standard deviation, Minimum, and Maximum values for all variables. Table 3 shows that the average SDGs disclosure is 0.22 with a standard deviation of 0.323. This implies that, on average, firms disclose 22% of the expected SDGs-related information, suggesting low overall disclosure. The high standard deviation (0.323) implies significant variation, with some firms disclosing much more while others disclose very little or nothing. Further, the table reveals that the mean values for board composition, tenure, and gender diversity are 42.566, 6.913 years, and 3.185%, respectively. These results indicate low female representation on the board, which might limit the disclosure of sustainable development goals. Moreover, the results in Table 3 show that the mean values for the current ratio, leverage, and return on equity are 0.043, 0.788, and 0.154, respectively. These results indicate that selected firms face liquidity issues, evident from the high leverage and moderate profitability, which might not be a strong driver for the disclosure of sustainable development goals. Regarding economic factors, the results in Table 3 reveal that the mean value of GDP growth and foreign direct investment are 1.668 and 9697455711, respectively. This result indicates that low GDP growth would not support SDG disclosure, and high foreign direct investment would encourage more disclosure of SDGs to meet international investors' expectations.

ii. Wilcoxon Signed Ranks Test

The Shapiro-Wilk and Kolmogorov-Smirnov normality tests were used to look at the data's normal distribution to find the difference between sustainable development goals before and after the launch of the Middle East Green Initiative. The normality test indicated that the data is not normally distributed. As a result, the non-parametric Wilcoxon Signed Ranks Test, an alternative to the parametric test (paired sample test), is used to assess whether there is a significant difference. The results of the Wilcoxon test in Table 4 show a significant difference in disclosure of sustainable development goals before and after the Middle East Green Initiative launch in the Gulf region. This significance is at the 0.01 level, implying that SDG disclosure increased significantly after launching the Middle East Green Initiative. This result could be attributed to the regulatory pressures and green investment incentives.

Table 3: Descriptive statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
SDGs	552	.221	.323	0	1
BC	552	42.566	25.868	0	100
BT	552	6.413	3.698	1	23.15
BGD	552	3.185	5.832	0	27.27
CR	552	.043	1.105	-10.59	14.49
LEV	552	.788	1.087	0	8.86
ROE	552	.154	.563	-.7	13.01
GDP	552	1.668	4.221	-5.911	9.577
FDI	552	9697455711	10945848255	-2434065934	28055082624

Table 4: Wilcoxon Signed Ranks Test

		N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
After - Before	Negative Ranks	17[a]	16.97	288.50	-7.752[b]	.000
	Positive Ranks	84[b]	57.89	4862.50		
	Ties	175[c]				
	Total	276				

a. after < before; b. after > before; c. after = before

iii. Correlation Matrix

The correlation matrix is a statistical test that measures the association between the dependent and individual variables. Further, it indicates the absence or presence of multicollinearity in the model. Results in Table 5 reveal that board independence, board gender diversity, GDP growth, foreign direct investment, and Middle East green initiatives are positively and significantly associated with SDGs disclosure made by the sampled firms. This implies that good representation of board independence and gender diversity, along with supportive economic conditions such as GDP growth and foreign direct investment, enhances higher SDG disclosure. Additionally, Middle East Green initiatives play a significant role in promoting sustainability reporting among firms. On the other hand, board tenure, current ratio, leverage, and return on equity have insignificant correlations with SDGs disclosure made by the sampled firms. Regarding multicollinearity, results indicate the absence of multicollinearity as the highest coefficient is 0.506.

Table 5: Correlation Matrix

Variables	SDGs	BC	BT	BGD	CR	LEV	ROE	GDP	FDI	GREENI
SDGs	1.000									
BC	0.165	1.000								
	(0.000)									
BT	0.080	-0.119	1.000							
	(0.059)	(0.005)								
BGD	0.106	0.188	-0.134	1.000						
	(0.013)	(0.000)	(0.002)							
CR	0.017	-0.015	0.023	0.032	1.000					
	(0.685)	(0.720)	(0.589)	(0.454)						
LEV	-0.048	0.025	-0.007	-0.102	-0.027	1.000				
	(0.258)	(0.557)	(0.875)	(0.016)	(0.530)					
ROE	0.066	0.072	-0.030	0.009	0.004	-0.022	1.000			
	(0.124)	(0.092)	(0.477)	(0.838)	(0.933)	(0.602)				
GDP	0.168	0.157	0.004	0.046	0.019	-0.040	0.042	1.000		
	(0.000)	(0.000)	(0.930)	(0.281)	(0.651)	(0.350)	(0.321)			
FDI	0.237	0.383	-0.132	0.156	0.001	-0.139	0.070	0.506	1.000	
	(0.000)	(0.000)	(0.002)	(0.000)	(0.982)	(0.001)	(0.101)	(0.000)		
GREENI	0.225	0.071	-0.001	0.069	-0.093	-0.011	0.040	0.465	0.186	1.000
	(0.000)	(0.098)	(0.990)	(0.104)	(0.028)	(0.790)	(0.344)	(0.000)	(0.000)	

Table 6: Regression models

	(1)	(2)	(3)	(4)
VARIABLES	SDGs_OLS	SDGs_Randam	SDGs_Fixed	SDGs_Robust
BC	0.001**	0.001**	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
BT	-0.000	-0.000	-0.012**	-0.000
	(0.004)	(0.004)	(0.006)	(0.006)
BGD	0.004*	0.004*	0.004	0.004
	(0.002)	(0.002)	(0.003)	(0.003)
CR	0.010	0.010	0.011	0.010**
	(0.007)	(0.007)	(0.007)	(0.005)
LEV	0.009	0.009	0.028	0.009
	(0.015)	(0.015)	(0.020)	(0.015)
ROE	-0.008	-0.008	-0.013	-0.008**
	(0.016)	(0.016)	(0.016)	(0.004)
GDP	0.003	0.003	0.006**	0.003
	(0.003)	(0.003)	(0.003)	(0.003)
FDI	0.000	0.000	-0.001	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
GREENI	0.120***	0.120***	0.119***	0.120***
	(0.018)	(0.018)	(0.018)	(0.022)
Constant	0.068	0.068	0.153***	0.068
	(0.047)	(0.047)	(0.053)	(0.054)
Observations	552	552	552	552
Number of FirmID	138	138	138	138
R-squared	0.2090	0.2090	0.222	0.2090

Standard errors in parentheses; *** P<0.01, ** P<0.05

Regression Analysis

Cleaning and editing data is essential for verifying accuracy, consistency, and completeness. Data cleaning includes checking and tackling outliers in the dataset and handling the missing values that would affect the regression model results. To run the regression model, the study employed the replacement method to handle outliers, and for missing values, it replaced them with the mean of all values. For panel data, there are three models for running the regression model: OLS, random, and fixed effect models. The choice between these models depends on the Hausman test. The study employs the Hausman test to determine whether a one-way fixed or random effects model is adequate. The Hausman test results confirm that the fixed effect model is suitable. Hence, the interpretation of the results will be based on the fixed-effects model. The fixed effects model is significant, and the R-squared value is 0.22, indicating that 22% of the variation in the dependent variable (SDGs disclosure) is attributable to changes in the independent variables.

Results in Table 6 reveal that the board of directors' independence positively and insignificantly affects Sustainable Development Goals disclosure (coefficient=0.001). On the other hand, the board of directors' tenure negatively and significantly impacts Sustainable Development Goals disclosure made by firms in the Gulf region (coefficient=-0.012; P<0.05). Regarding economic factors, the results in Table 6 show that GDP growth has a positive and significant impact on Sustainable Development Goals disclosure by firms in the Gulf region (coefficient=0.006; P<0.05). On the contrary, foreign direct investment has a negative and insignificant impact on the disclosure of Sustainable Development Goals in the Gulf region. However, this significance is very weak (coefficient=0.001). More importantly, results in Table 6 reveal that the Middle East green initiative positively and significantly affects Sustainable Development Goals disclosure made by firms in the Gulf region (coefficient= 0.119; P<0.01).

DISCUSSION

The results in Table 6 reveal that the board of directors' independence positively and significantly affects the disclosure of sustainable development goals. This result indicates that the higher the number of independent directors on the board, the better the disclosure of sustainable development goals. Sasanti et al. (2023) argue that independent board members are more likely to result in robust accountability and oversight on the disclosure of sustainable development goals. Similarly, Casciello et al. (2025) believe that disclosure of SDGs is positively associated with independent directors as they provide unbiased oversight of the firms' directions. These results align with Sekarlangit & Wardhani (2021) and Ding et al. (2024), who affirm that independent board members tend to be more committed toward sustainable initiatives. On the contrary, Sasanti et al. (2023) argue that a higher proportion of independent directors does not guarantee increased disclosure of SDGs. These results suggest that firms should prioritize appointing more independent directors to improve the Sustainability Development Goals. Further, policymakers are suggested to mandate board independence to align with the state's SDGs agenda.

Concerning the board of directors' tenure negative impacts on Sustainable Development Goals disclosure, it is concluded that board members who serve longer tend to disclose less on SDGs, which could be attributed to resistance to change, or they prefer adopting traditional corporate strategies over sustainable strategies. This result contradicts Almaqtari et al. (2023) and Marheni et al. (2025), who found board tenure positively associated with disclosure of sustainable development goals. The study findings imply that companies in the Gulf region should refresh the board with new members to enhance transparency and innovation in suitability practices. At the same time, investors can also perceive board refreshment policy as an indicator of governance effectiveness, positively affecting disclosure of sustainable goals.

Regarding economic factors, the results in Table 5 show that GDP growth positively and significantly impacts the disclosure of Sustainable Development Goals by firms in the Gulf region. This indicates that when GDP growth increases, SGDs disclosure by firms increases, which could be attributed to the fact that economic growth may provide firms with more resources, incentives, and regulatory pressures to enhance transparency on SDGs-related activities. These results align with Gerged et al. (2021) and Bose et al. (2024), who believe that stakeholders tend to require firms to be more transparent and accountable for sustainability when the economy increases. Thus, policymakers should leverage booming economic conditions to improve SDG regulations, and companies should align their strategies with the national development goals to attract more funding from the government. Further, for investment decisions, investors can view companies in advanced economies as more committed to sustainable development goals.

More importantly, the results in Table 5 reveal that the Middle East Green Initiative positively and significantly affects the disclosure of Sustainable Development Goals by firms in the Gulf region. This implies that Middle East Green Initiative policies and frameworks encourage firms to disclose more information about their commitment to SDGs. This could be explained by stakeholder pressure, regulatory incentives, and the increased awareness of environmental and social responsibilities, highlighting the effectiveness of Gulf region environmental strategies. Hence, companies are motivated to align with green initiatives to improve their sustainability practices and increase SDGs disclosure. Moreover, policymakers in Gulf states should mandate green policies to speed up the progress of SDG disclosure. Furthermore, investors can view firms committed to green initiatives as lower risk and future-oriented.

Finally, results indicated that foreign direct investment does not affect the disclosure of Sustainable Development Goals in the Gulf region. According to Qin & Imran (2024), foreign direct investment has been demonstrated to have a detrimental long-term impact on environmental quality in the Gulf Region, significantly influencing SDG disclosure. In other words, FDI can increase green quality, implying that the kind and emphasis of FDI initiatives are critical in evaluating their influence on sustainability in the region. Bannour & Abdelkawy (2024) argue that strong Sovereign Environmental, Social, and Governance (SESG) frameworks in the GCC are positively connected with larger FDI inflows, implying that FDI can boost economic diversification and perhaps improve SDG disclosure if matched with sustainability goals. Trade openness enhances SESG's favorable impact on FDI, implying that liberal trade policies might improve the sustainability of FDI projects.

It is concluded that the Gulf region's dependency on oil and the effects of climate change pose significant hurdles to reaching specific SDGs, notably those connected to environmental sustainability. The transition to cleaner energy and decarbonization is crucial for achieving SDG 7, with GCC nations revising their Nationally Determined Contributions to mitigate climate risks and foster sustainable economies (Truby, 2023). Hence, the enormous breadth of SDG objectives and methodological constraints in monitoring them provide hurdles for successful SDG disclosure in the GCC area. Improving SDG disclosure requires prioritizing critical environmental action areas and matching national development realities with global sustainability frameworks (Al-Saidi, 2022).

Conclusion and Policy Implementations

This study provides valuable insights into the factors influencing firms' alignment with the SDGs in the Gulf States, with a specific focus on the MEGI. The findings suggest that economic factors, such as GDP growth, significantly enhance SDG disclosures. At the same time, governmental initiatives like MEGI also positively impact firms' alignment with sustainability goals. Additionally, corporate governance factors, including board independence, promote greater transparency of SDGs, whereas longer board tenure hinders such efforts. These results underscore the importance of economic conditions and government-led initiatives in driving regional corporate sustainability. Based on these findings, policymakers should continue to strengthen and expand such government programs. Efforts should focus on creating more comprehensive frameworks that provide clear incentives and support for firms to adopt sustainable practices. This could include offering tax incentives, grants, or access to low-cost financing for firms that align with environmental and social goals. Governments could create stronger partnerships between public institutions and private firms to align the private sector with the SDGs further. This could involve collaborations on technology research and development, knowledge-sharing initiatives, and joint ventures to address climate change and other regional challenges.

Since MEGI emphasizes regional cooperation, policymakers could consider creating cross-border initiatives that promote the SDGs among firms operating across the Gulf Region. Finally, governments should establish mechanisms to monitor the progress of SDG alignment among firms, ensuring that policies effectively drive sustainable practices.

By bridging a gap in existing literature, this study highlights the critical role of government programs and corporate governance structures in shaping SDG disclosures, offering implications for policymakers, investors, and companies in the Gulf States. Future studies could focus on addressing gaps in the literature by exploring the impact of regional cooperation on SDG programs or evaluating the economic benefits of SDG alignment in the Gulf States. Both topics have the potential to provide valuable insights into enhancing sustainable business practices and aligning them more effectively with global development goals.

Despite the significant contribution of this research, it is crucial to disclose certain limitations. Firstly, the study data is limited to 4 years from 2020 to 2023 due to data availability. Future research could cover a more extended period. Secondly, Gulf countries could be compared to provide recommendations for each country's policymakers. This presents a viable recommendation for future research. Thirdly, the study did not examine the indirect effect of some variables affecting the association between governance mechanisms and firms' specific and sustainable development goals. Hence, researchers could examine the moderation effect of ESG and audit committee attributes.

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Data Availability: The data that supports the findings of this study are available from the corresponding author upon reasonable request

Ethics Statement: The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Generative AI Statement: The authors declare that no Gen AI/DeepSeek was used in the writing/creation of this manuscript.

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