

Research Article

THE ROLE OF FUNDING AGENCIES IN PROMOTING IMPACT INVESTING AND FUTURE SUSTAINABILITY IN THE MENA REGION

*Ahmed Elidrisy

Environmental and Social Governance (ESG) and Sustainability Manager, Qatar

Received 12th February 2024; Accepted 20th March 2024; Published online 30th April 2024

Abstract

The impact investing practices in the Middle East and North Africa (MENA) region and its implication for sustainable development. Through a comprehensive review of literature and empirical analysis we investigate the role of funding availability, policy support, investor education and technical assistance in driving sustainable development initiatives in MENA. Our findings explored that funding agencies, policy initiatives, and investor education programs are crucial driver of impact investing, promoting renewable energy projects, job creation and the integration of sustainability into business operations. The study highlights the crucial role of funding availability, policy support, investor education and technical assistance in promoting sustainable development and technological innovation in the MENA region as this has shown significance (p < 0.05) with less p value in all the factors. This study contributes to the understanding of the factors influencing impact investing practices in MENA and provides insights for policymakers, investors and practitioners observing to promote sustainable development in the region.

Keywords: Funding Availability, MENA region, Sustainable Development, Policy Support, Investor Education.

INTRODUCTION

The promotion of renewable energy production in the MENA region is significantly influenced by political stability, governance effectiveness, and financial development (Belaïd et al., 2021). The impact on investors prioritize the founding team's authenticity, societal problem importance, and financial sustainability in social enterprises, while donors prioritize societal problem significance and equity investors focus on large-scale implementation (Block et al., 2021). The Middle East and North Africa (MENA) region is undergoing a significant shift towards sustainable development due to climate change, water scarcity, urbanization, and economic diversification (Waha et al., 2017). Funding agencies, development banks, international including finance institutions, and private investors, are playing a crucial role in mobilizing capital for sustainable projects, particularly in the renewable energy sector (Kaminker & Stewart, 2012). Largescale projects like the Mohammed bin Rashid Al Maktoum Solar Park in UAE and Benban Solar Park in Egypt contribute to energy security and economic sustainability (Hafner et al., 2023). The use of cultural heritage in sustainable development, focusing on poverty alleviation, gender equality, and environmental sustainability, highlighting achievements and common pitfalls (Giliberto & Labadi, 2022). The impact of development finance resources and institutional quality on human development in MENA countries, examining why they fail to efficiently utilize available financial inflows. The Awdeh uses co-integration analysis, vector error correction model, and Granger causality test on 13 countries from 1996-2019 (Awdeh & Jomaa, 2022). The objective of the study is to explore the role of funding agencies in promoting sustainability in the Middle East and North Africa.

The study assesses the effectiveness of these initiatives, exploring current trends, evaluating the sustainability practices and providing insights through survey and content analysis. The study aims to inform policy recommendations and future trajectory of the impact in investing and sustainability.

Theoretical Framework

Stakeholder Theory

Stakeholder theory considered that organisations that should consider the interests and impact of all stakeholders, including not only shareholders but also employees, customers, communities and the environment (Freeman et al., 2010). In the context of funding agencies, this theory could guide the study in understanding that how their initiatives affect different stakeholders and contribute towards sustainability in the MENA region. However, it's crucial to refer towards the actual study or research paper for accurate information related to the chosen theoretical framework (Barney & Harrison, 2020). Although stakeholder theory offers a comprehensive analysis based on funding agency creating an impact in sustainability projects in the MENA region, considering interests, impacts and communities. Funding agencies invest in projects with financial returns assessing long-term shareholder interests. Supporting renewable energy projects in the MENA region benefit the shareholders while promoting environmental sustainability. Stakeholder theory helps in understanding the impact of funding agency initiatives on different stakeholders in the MENA region. It helps in understanding how these initiatives enhance the employee well-being and productivity, promote responsible consumption patterns, addressing the community needs, and ensure environmental sustainability. By engaging stakeholders in project planning and implementation funding agencies can prioritize community interest and achieve sustainable outcomes.

^{*}Corresponding Author: *Ahmed Elidrisy*

Environmental and Social Governance (ESG) and Sustainability Manager, Qatar.

LITERATURE REVIEW

Impact investing initiatives in the mena region: fostering renewable energy, social entrepreneurship, and education

The ethical and contextual basis of clean-tech entrepreneurship in the Arab world, focusing on Qatari examples, suggesting the need for countries to integrate entrepreneurial education into national action plans (Tok et al., 2018). The AP EGO fund aims to convert global institutional savings into sustainable infrastructure investments in emerging markets. It's a specialpurpose securitization vehicle, backed by green bonds issued by banks in multiple countries. It uses a securitization technique with "first-loss" protection (Bolton et al., 2020). Funding agencies in the MENA region are crucial in impact of investing, promoting sustainability, knowledge sharing, capacity-building and collaboration thereby generating financial returns and addressing social and environmental challenges. Mandatory IFRS adoption doesn't significantly enhance FDI inflows in the Middle East and North Africa, but their interaction positively impacts these inflows (Elhamma, 2023). Renewable electricity finance in the Middle East and North Africa is becoming increasingly crucial due to decreasing costs, favorable policy environments, and environmental concerns (Krupa et al., 2019). Financial globalization significantly development and impact environmental quality in MENA nations, while energy use and foreign direct investment positively influence it (J. Zhang et al., 2023). Economic institutions play a crucial role in mitigating the trade-off between human well-being and ecological footprint in MENA countries (Kassouri & Altıntaş, 2020). The promotion of renewable energy production in the MENA region is significantly influenced by political stability, governance effectiveness, and financial development (Belaïd et al., 2021). Renewable energy consumption and financial development have a slight impact on CO2 emissions and economic growth in the Middle East and North Africa (MENA) (Charfeddine & Kahia, 2019). MENA countries should customize their generic policies to suit their unique health systems for enhanced efficiency and cost-effectiveness, considering both supply-side and demand-side policies (Kamphuis & Kanavos, 2021). MENA countries, including UAE, Saudi Arabia, and Kuwait, are providing significant health development assistance through bilateral and multilateral agencies, primarily focusing on strengthening the health system (Zhao et al., 2020).

Funding Availability: A Critical Component for Promoting Impact Investing and Future Sustainability

Funding agencies in the Middle East and North Africa has promoted impact in investing and sustainability through providing financial resources and strategic support. Businesses are integrating sustainability into operations, addressing societal and environmental challenges, and collaborating with governments, international organizations, and private sector stakeholders for sustainable economy growth (Emara & El Said, 2021). The Ozmen&Taşdemir examines natural resource endowments' impact on growth in 13 Middle East and North Africa countries from 1970-2019, finding that NRE encourages growth up to a certain threshold, decreasing for Gulf Cooperation Council countries (Ozmen & Taşdemir, 2022). The study explores macro determinants affecting financial development in the MENA region, focusing on domestic credit, stock market capitalization ratio, corruption perception index, financial freedom, political stability, and trade openness. Results show positive impacts on GDP and stock market performance (Ashour *et al.*, 2023). The long-term economic impact of resource abundance on 11 Middle East and North African countries from 1987-2015, revealing that this effect is more pronounced in countries with lower financial development (Chebab *et al.*, 2021). Government cashless policies significantly enhance financial inclusion in MENA countries, especially benefiting the poor, less educated, and young individuals (Mouna & Jarboui, 2022).

H¹: Funding Availability is significant (p < 0.05) with a p-value of .001, indicating that it also has a significant impact on MENA.

Policy Support for Funding Agencies in MENA Sustainability

Funding agencies in the MENA region has shown a crucial role in promoting sustainable practices and investment. They collaborate with governments in developing policies that has encourages sustainable practices, promoting transparency and encourage responsible investment. They also provide technical expertise and capacity-building support to policymakers, shaping regulatory landscapes and driving sustainable development. The IMF's policies in the MENA region should not only promote women's labor force participation but also consider both productive and reproductive aspects (Jrad et al., 2023). The EU's assistance to MENA countries has become politicized due to increased opinions on EU funds for migration and security, with internal policy-making dynamics limiting polarization (Youngs & Zihnioğlu, 2021). Good governance effectively combats multidimensional poverty in middle-income countries, but not in low-income countries (Kilishi et al., 2023). A new generation of social protection research, focusing on political and policy-making processes in the Global South, categorizing it into social risk management, social justice/contracts, and institutionalization of social protection (Jawad, 2019). The Jabbouri exposes dividend policy in MENA emerging markets is influenced by factors like size, current profit, liquidity, leverage, growth, and economy, potentially indicating agency issues (Jabbouri, 2016). The MENA region, accounting for only 5% of global exports and 4.3% of imports, is vulnerable to terms-of-trade shocks. To achieve economies of scale, it can use production sharing networks and global value chains. FDI inflows increased between 2000 and 2008, but slowed after the 2008 financial crisis (Saidi & Prasad, 2018).

H²: Policy support is significant (p < 0.05) with a p-value of .000 indicating that it has a significant impact on MENA

Investor Education for MENA Sustainable Investing

Financial education programs significantly decrease the likelihood of investors investing in fraudulent products, particularly among risk-averse individuals (Gu *et al.*, 2022). The MENA region faces challenges in education, including unemployment, poor quality, and technology inefficiency, but this Al Rashidi explores the impact of education systems on socioeconomic development (Al Rashidi *et al.*, 2021). This Giliberto&Labadi examines the use of cultural heritage in sustainable development, focusing on poverty alleviation, gender equality, and environmental sustainability, highlighting

achievements and common pitfalls (Giliberto & Labadi, 2022). The MENA region's environmental quality is negatively impacted by FDI and corruption, necessitating increased awareness among political and economic actors about the harmful effects of corruption (Giliberto & Labadi, 2022). The promotion of renewable energy production in the MENA region is significantly influenced by political stability, governance effectiveness, and financial development (Belaïd et al., 2021). Moreover, investor education and awareness programs play a crucial role in promoting impact of investing and fostering future sustainability in the MENA region. enhance Financial education programs investment diversification, improve financial welfare by reducing attention bias, fostering social trust, and encouraging the use of professional advisors (Y. Zhang et al., 2023). Financial advisors enhance investors' financial awareness, especially among independent clients, by providing a gradual and stable method to improve financial literacy without directly impacting public funds (Lozza et al., 2022).

 H^3 : Investor education is significant (p < 0.05) with a p-value of .000, indicating that it also has a significant impact on MENA.

Technical Assistance Funding Availability: A Critical Component for Promoting Impact Investing and Future Sustainability and Expertise: Facilitating Impact Investing in MENA

Technical assistance and expertise provided by funding agencies has shown a crucial role in promoting impact investing and advancing future sustainability in the MENA region. However, these agencies offer valuable support to investors, businesses and organisations by providing spcialised knowledge guidance and resources to navigate the complexities of impact investing. Renewable electricity finance in the Middle East and North Africa is becoming increasingly crucial due to decreasing costs, favorable policy environments, and environmental concerns (Al-Sarihi & Mansouri, 2022). Project management is vital for UAE's sustainable development initiatives, with both corporate and government stakeholders working together to achieve success (Al-Marri & Pinnington, 2022). The promotion of renewable energy production in the MENA region is significantly influenced by political stability, governance effectiveness, and financial development (Belaïd *et al.*, 2021). MENA countries, including UAE, Saudi Arabia, and Kuwait, are providing significant health development assistance through bilateral and multilateral agencies, primarily focusing on strengthening the health system (Zhao *et al.*, 2020).

 H^4 : Technical Assistance is significant (p < 0.05) with a p-value of .010, indicating that it has a significant impact on MENA.

METHODOLOGY

The study analyzed 219 participants through quantitative methods, including correlation and regression analysis, and content analysis for subjective results.

QUANTITATIVE ANALYSIS

Correlation Analysis

The correlation matrix provides insights in to the relationships between the variables included in the analysis that has included policy support, investor education, technical assistance, funding availability, and MENA (Adoption of impact investing practices in MENA region). The Pearson correlation coefficient has indicated that the strength and direction of the linear relationships between pairs of variables. Notably significant correlations were observed between MENA and policy support (r = -0.278, p < 0.01) and MENA investor education (r = 0.356, p < 0.01). The study suggested that the moderate negative and positive linear associations between certain variables and the adoption of impact investing practices in the MENA region. Further, a significant positive correlation is observed between investor education and technical assistance (r = -0.141, p < 0.05), Showing a weak positive linear relationship between these two variables. However, the correlations between MENA and technical assistance as well as between MENA and funding availability are statistically significant (p > 0.05), suggesting that there were weaker linear associations among these variables and the adoption of impact investing practices in the MENA region.

Table 1. Correlation Analysis

Correlations							
		PolicySupport	MENA	Investoreducation	technicalass	Fundingavailability	
PolicySupport	Pearson Correlation	1	278**	-0.089	276**	-0.124	
	Sig. (2-tailed)		0.000	0.191	0.000	0.067	
MENA	Pearson Correlation	278**	1	.356**	-0.121	.231**	
	Sig. (2-tailed)	0.000		0.000	0.073	0.001	
Investoreducation	Pearson Correlation	-0.089	.356**	1	141*	0.006	
	Sig. (2-tailed)	0.191	0.000		0.037	0.932	
technicalass	Pearson Correlation	276**	-0.121	141*	1	0.050	
	Sig. (2-tailed)	0.000	0.073	0.037		0.459	
Fundingavailability	Pearson Correlation	-0.124	.231**	0.006	0.050	1	
	Sig. (2-tailed)	0.067	0.001	0.932	0.459		
	Ν	219	219	219	219	219	

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.501 ^a	0.251	0.237	0.08943

Table 3. Anova							
Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	0.575	4	0.144	17.968	.000 ^b	
	Residual	1.712	214	0.008			
	Total	2.287	218				

Со	efficients					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		-
1	(Constant)	1.456	0.061		23.678	0.000
	Policy Support	-0.086	0.020	-0.270	-4.323	0.000
	Investoreducation	0.123	0.024	0.307	5.101	0.000
	technicalass	-0.048	0.018	-0.163	-2.609	0.010
	funding availability	0.075	0.022	0.204	3.424	0.001

Table 4. Coeffecient

Regression Analysis

The model summary has found that 25.1% of the variance in the MENA region's adoption of impact investing practices has been explained through independent variables that has included policy support, investor education, technical assistance and funding availability. Though model complexity with 23.7% of the variance has been explained.

The ANOVA table has shown that the significance of the regression model in explaining the variance with MENA through independent variables have been included. The model significance has been confirmed with the p-value of .000 and an F-statistic of 17.968 indicating high variability with the dependent variable.

The results of the coefficient analysis from table 4 have shown different factors that has shown significant roles influencing the dependent variable MENA. First policy support demonstrates a significant impact with a p-value .000 underscoring the importance of supportive policies in the region's economic landscape. Similarly, Investor Education also emerges as a significant contributor with p-value .000 suggesting that enhancing investor knowledge and awareness can positively affect outcomes in the MENA region. Further, technical assistance despite having a slightly higher p-value of .010 exhibits significant influence, implied that targeted assistance programs can yield low p-value .001, indicating that adequate financial resources are crucial for fostering through p-value .001, showing that adequate financial resources are crucial for fostering economic development in MENA.

CONTENT ANALYSIS

Impact of Funding Availability on Sustainable Development in MENA:

Renewable energy projects in the MENA region are becoming economically viable due to falling capital costs, favorable policy environments, technical sustainability, increased liquidity, job creation opportunities, and sustainable growth (Kassi, 2020). However, financial development and renewable energy sectors have limited impact on CO2 emissions and growth (Charfeddine & Kahia, 2019). A 100% renewable energy system, primarily solar and wind, is technically feasible and cost-competitive in the MENA region, with an estimated levelised electricity cost of 40.3-52.8 €/MWh (Aghahosseini *et al.*, 2020). Innovations are crucial for achieving the Sustainable Development Goals by 2030, but Middle East and North African countries struggle due to dependence on hydrocarbon resources and inability to spread them. The COP22 summit aimed to address these issues, emphasizing the need for a resurgence of innovation in education and employment (Sinha et al., 2020). Financial inclusion is crucial for poverty reduction and sustainable development, especially in the MENA region with high unemployment rates and political instability. SMEs contribute significantly to GDP and employment, with formal SMEs contributing up to 45% (Emara & Mohieldin, 2020). The Middle East and North Africa are transitioning towards a more environmentally sustainable electricity supply, driven by economics, falling renewable energy capital costs, policy environments, technical suitability, and concerns about climate change and pollution (Al-Sarihi & Mansouri, 2022; Salim & Alsyouf, 2020). The MENA region is leveraging funding for sustainable development, particularly renewable energy projects, due to falling capital costs and supportive policies. This has led to job creation and entrepreneurial finance. Despite challenges like dependence on hydrocarbon resources, efforts towards achieving sustainable development goals emphasizing innovation in education and employment. This region is transitioning towards environmentally sustainable electric supply.

Policy Support for Sustainable Practices and Investment in MENA:

Hamilton Lane aims to generate attractive returns and measurable social and environmental impact through impact investments. Since, 2001 they have developed customized portfolio solutions for clients, leveraging Hamilton's Lane's global platform and deal flow (Hill, 2020). The impact of human development and political stability on environmental quality in 16 Middle Eastern and North African countries from 1990-2016. It reveals an inverted U-shaped relationship between human development and ecological footprint, with political unrest delaying environmental improvements. The findings are crucial for policymakers to improve education and healthcare systems (Mrabet et al., 2021). The impact of egovernment on good governance, sustainable development, and resilience in the MENA region. It expects significant impacts on good governance indicators, sustainable development dimensions, and various indicators of sustainable development (Dhaoui, 2022).

The impact of institutions on economic performance in MENA countries, revealing that improvements in labor, investment, public, and political institutions are key to enhancing real per capita GDP. Resource-rich, labor-poor, and OECD countries have better capacity for institutional effects, while laborabundant countries experience lower performance due to weak institutions. Policy implications include enhancing knowledge setting within institutions (AlShammari et al., 2023). Over the past two decades, international capital inflows from developed countries to developing countries have significantly boosted economic activities. This has led to the transfer of advanced technology and job creation. FDI, particularly Greenfield investment (GDI), is a key driver for developing economies, particularly in countries with abundant natural resources and skilled workers. GDI reduces income disparities between rich and poor countries (Raza et al., 2021). Industry 4.0 has facilitated digital transformation and automation, but increasing energy demand is a global issue. The Sustainable Development Goals (SDGs) emphasize reducing energy consumption, particularly in emerging economies like the Middle East and North Africa (MENA). Chen utilizes the CS-ARDL method and Panel Causality test to address the shadow economy and informal employment in countries heavily reliant on fossil fuels, thereby hindering technological progress and economic development (Chen et al., 2021).

Role of Investor Education and Awareness Programs in Promoting Sustainability:

ESD fosters the acquisition of knowledge, skills, values, and actions for a sustainable world, promoting environmental protection, social equity, and economic sustainability. Sustainable investment is influenced by corporate governance, economic performance, and market risks, with transparency, anti-corruption, and board diversity being key criteria (Darsono et al., 2022). Sustainable investing, incorporating environmental, social, and governance criteria, can enhance performance and social impact by promoting greener firms and shifting real investment towards green firms (Pástor et al., 2021). Khan suggests an open method for generating sustainable funding for higher education, reducing government costs and presenting market opportunities for institutional investors and systems (Khan et al., 2022). The impact of knowledge transfer activities on green innovation in manufacturing firms. It found that buyer-driven activities have a greater positive impact on green product innovation than green process innovation. Investment in environmental management fully mediates the relationship between buyerdriven knowledge transfer activities and green process innovation. The study suggests that internal competencies and buyer involvement are critical for explaining green product and process innovation (Awan et al., 2021). The MENA region's economic sustainability is bolstered by economic development, trade openness, and political stability, despite government expenditures and corruption hindering its progress (Ibrahim & Alola, 2020). AI and block chain technologies can enhance sustainable tourism growth in the Middle East and North Africa by balancing economic prosperity and environmental conservation (Kashem et al., 2022).

Impact of Technical Assistance and Expertise on Sustainable Development Initiatives:

Technological innovation enhances energy efficiency in MENA countries, but shadow economy growth negatively

impacts it, highlighting the need for structural transformation for sustainable development (Chen et al., 2021). AI's impact on Sustainable Development Goals is assessed using consensus-based expert elicitation. AI can achieve 134 targets but may inhibit 59. However, current research overlooks regulatory oversight for AI-based technologies, causing gaps in transparency, safety, and ethical standards. AI's increasing prevalence threatens sustainability (Vinuesa et al., 2020). ICT, excluding fixed telephones, drives economic growth in MENA and SSA developing countries, with MENA countries leading in internet usage and broadband adoption (Vinuesa et al., 2020). The impact of environmental regulations (ER), trade, economic growth, and energy consumption on the ecological footprint (EF) in the Middle East and North Africa (MENA) countries. It found that ER has no significant influence on EF, suggesting that ER is not yet at a desirable level for enhancing environmental sustainability. The study also revealed that economic growth is energy-dependent in MENA. Future research and policy directions are proposed (A Omojolaibi & P Nathaniel, 2022). The transfer of technology from Europe to the MENA region can expedite sustainable development and economic reactivation by utilizing local resources for circular economy-based building components (Antoniol & Ferrari, 2021). Machine learning-based modeling, utilizing remote sensing and video analytics, can accurately predict urban growth in MENA cities, thereby aiding in sustainable growth policy development (Jaad & Abdelghany, 2021).

DISCUSSION

The findings suggested that policy support pose challenges, enhancing investor education, providing targeted technical assistance, and ensuring adequate funding can collectively contribute to the advancement of impact investing practices in the MENA region thereby fostering sustainable development. The growing population in MENA countries necessitates a solution to limited access to freshwater resources, seawater desalination. However, this process requires significant energy, primarily from fossil fuels. Advancements in renewable energy technologies offer a promising alternative (Sayed et al., 2023). In the MENA region, a multi-faceted approach towards sustainable development is underway, driven by various factors (Salem et al., 2022). By 2030, the Middle East and North Africa region aims to transition to a 100% renewable energy-based power system, utilizing cost-competitive solar and wind energy sources (Aghahosseini et al., 2020). Financial literacy in the Middle East and North Africa is linked to positive savings behaviors and reduced borrowing, but not equally for all individuals, especially those most vulnerable (Lyons & Kass-Hanna, 2021). ICT and renewable energy in the MENA region are questioned for their potential to improve environmental quality, with initial effects on CO2 emissions lasting 1-7 years (Charfeddine & Kahia, 2021). The study analyzes FDI allocation and direction in 24 countries from 1995-2016, revealing sensitivity in the Middle East and highincome countries. Practical implications include high-income countries attracting funds, updating trade regulations, and reducing tariffs (Hussain et al., 2021). The impact of environment-related technologies and renewable energy on reducing CBCO2 emissions in seven emerging economies, suggesting increased investment in ERT is necessary for sustainable reduction (Hussain et al., 2022). Funding availability is increasingly supporting renewable energy projects, encouraged by falling capital costs and supportive policies, thus fostering job creation and entrepreneurial finance

(Tian & Zhang, 2023). Alongside, policy support from organisations like Hamilton Lane is channeling investments towards impactful ventures, while governmental initiatives focus on improving human development, political stability, and e-government to nurture sustainable practices. The Abu Dhabi Fund for Development, Arab Fund, Kuwaiti Fund for Arab Economic Development, Qatar Fund for Development, and Saudi Fund for Development are international Islamic financial institutions promoting social and economic development in developing countries (Fund, 2022). They focus on job creation, education, health, information technology, community development, humanitarian aid, and collaboration with national and international partners to achieve sustainable development goals. Investor education programs, such as Education for Sustainable development are enhancing awareness and knowledge acquisition, influencing sustainable investing practices guided by corporate governance and economic performance metrics (El Amine, 2023). Moreover, technical assistance and expertise are propelling technological innovation and ICT advancements, complemented through environmental regulations and technology transfer, thus facilitating sustainable development endeavors. Though these initiatives holistically address environmental challenges, stimulate economic growth and evaluate societal well-being across the MENA region (Kader et al., 2022). The study examines impact funds, primarily Venture Capital and growth equity funds, which aim to generate both social and financial returns. It uses Preqin data to identify 159 impact funds from 24,000 VC and growth equity investments by 3500 investors among 1995-2014. These funds focus on reducing greenhouse gas emissions, encouraging women and minority-owned firms, and developing local business communities (Barber et al., 2021). The study explores Africa's green bond market, revealing its early stages, but countries adapting to economic conditions and investment attractiveness.

The first certified global green bond was issued in Africa (Taghizadeh-Hesary et al., 2022). The MENA region, known for its oil and gas deposits, is transitioning to greener, lowcarbon economies to reduce carbon emissions and reduce reliance on unpredictable oil and gas sources, contributing to global climate change (Albaker et al., 2023). The MENA region, rich in natural resources, is experiencing rising CO2 emissions due to foreign trade and investments. Exports reduce emissions, while imports increase them. The pollution Haven hypothesis suggests promoting exports and reducing energyintensive imports (Mahmood et al., 2023). The study explores the effects of economic growth, patents, industrialization, and urbanization on CO2 emissions in 17 MENA economies, finding that urbanization increases emissions but reduces neighboring nations (Sinha et al., 2020). Bahrain case study has highlighted the importance of transparency and governance in driving economic development in the MENA region. Since the mid-1970s Bahrain has focused on creating stable administration and frameworks, legal maintaining stability, and establishing transparent macroeconomic regulatory environments. Its membership in international organisations and the commercial company's law in 2002 further demonstrate its commitment to a liberalized economy (McCall, 2004).

Conclusion

The study conducted quantitative analysis on 219 participants by using correlation and regression analysis along with the content analysis in exploring the impact of different factors on the adoption of the impact investing practices in the MENA region. The correlation analysis has found significant relationship between policy support, investor education, technical assistance, funding availability and MENA adoption with positive correlations. Whereas, in regression analysis all factors have contributed 25.1% of the variance in MENA adoption, highlighting the significance of these factors in sustainable development. Further, content analysis has highlighted the multifaceted approach needed for sustainable development in the MENAS region, including renewable energy, policy support, investor education and technical assistance.

Recommendation

- Initiatives should be initiated to boost investor education on impact investing, utilising educational programs, workshops, and seminars to equip investors with necessary knowledge and skills.
- Technical assistance programs should be developed to support organisations and entrepreneurs in impact investing, offering mentorship, capacity-building training and access to resources and networks.
- Increased funding availability for impactful projects can be achieved through collaboration between public and private sectors, impact investment funds, and innovative financing mechanisms like green bonds and social impact bonds.
- Promoting renewable energy and green technologies is crucial to handle environmental issues and reduce reliance on fossil fuels, through investments in infrastructure and research.

Acknowledgment

The authors declare that there was no external funding received for this research.

Statement of Competing Interest

The authors declare that they have no competing interests.

List of Abbreviation

MENA - Middle East and North Africa NGO - Non-Governmental Organization ESG - Environmental, Social, and Governance SDGs - Sustainable Development Goals SMEs - Small and Medium Enterprises

REFERENCES

- A Omojolaibi, J., & P Nathaniel, S. (2022). Assessing the potency of environmental regulation in maintaining environmental sustainability in MENA countries: An advanced panel data estimation. *Journal of Public Affairs*, 22(3), e2526.
- Aghahosseini, A., Bogdanov, D., & Breyer, C. (2020). Towards sustainable development in the MENA region: Analysing the feasibility of a 100% renewable electricity system in 2030. *Energy Strategy Reviews*, 28, 100466.
- Al-Marri, M., & Pinnington, A. H. (2022). Managing Sustainability Projects for Social Impact from a Corporate Social Responsibility Perspective. *Sustainability*, 14(11), 6418.

- Al-Sarihi, A., & Mansouri, N. (2022). Renewable energy development in the Gulf cooperation council countries: Status, barriers, and policy options. *Energies*, 15(5), 1923.
- Al Rashidi, F., Diab-Bahman, R., & Al-Enzi, A. (2021). The impact of socio-economic factors on human capital investments. *International Journal of Entrepreneurship*, 25, 1-14.
- Albaker, A., Abbasi, K. R., Haddad, A. M., Radulescu, M., Manescu, C., & Bondac, G. T. (2023). Analyzing the impact of renewable energy and Green Innovation on carbon emissions in the MENA region. *Energies*, 16(16), 6053.
- AlShammari, N., Al-Adwani, S., & AlDhafeeri, H. (2023). Economic Performance in MENA: it Is in the Institutions. *Journal of the Knowledge Economy*, 1-22.
- Antoniol, E., & Ferrari, M. (2021). From crisis to a sustainable future. Processes of technology transfer from Europe to the MENA region. *TECHNE-Journal of Technology for Architecture and Environment*, 55-62.
- Ashour, G. H., Sayed, M. N., & Abbas, N. A. (2023). Macro determinants of sustainable financial development in the Middle East and North Africa (MENA) region countries. *Management & Sustainability: An Arab Review.*
- Awan, U., Arnold, M. G., & Gölgeci, I. (2021). Enhancing green product and process innovation: Towards an integrative framework of knowledge acquisition and environmental investment. *Business Strategy and the Environment*, 30(2), 1283-1295.
- Awdeh, A., & Jomaa, Z. (2022). Development finance, institutional quality and human development in the MENA region. *International Journal of Emerging Markets*.
- Barber, B. M., Morse, A., & Yasuda, A. (2021). Impact investing. *Journal of Financial Economics*, 139(1), 162-185.
- Barney, J. B., & Harrison, J. S. (2020). Stakeholder theory at the crossroads. In (Vol. 59, pp. 203-212): SAGE Publications Sage CA: Los Angeles, CA.
- Belaïd, F., Elsayed, A. H., & Omri, A. (2021). Key drivers of renewable energy deployment in the MENA Region: Empirical evidence using panel quantile regression. *Structural Change and Economic Dynamics*, 57, 225-238.
- Block, J. H., Hirschmann, M., & Fisch, C. (2021). Which criteria matter when impact investors screen social enterprises? *Journal of Corporate Finance*, 66, 101813.
- Bolton, P., Musca, X., & Samama, F. (2020). Global Public-Private Investment Partnerships: A Financing Innovation with Positive Social Impact. *Journal of Applied Corporate Finance*, 32(2), 31-41.
- Charfeddine, L., & Kahia, M. (2019). Impact of renewable energy consumption and financial development on CO2 emissions and economic growth in the MENA region: a panel vector autoregressive (PVAR) analysis. *Renewable* energy, 139, 198-213.
- Charfeddine, L., & Kahia, M. (2021). Do information and communication technology and renewable energy use matter for carbon dioxide emissions reduction? Evidence from the Middle East and North Africa region. *Journal of Cleaner Production*, 327, 129410.
- Chebab, D., Ibrahim, A., & Raza Rabbani, M. (2021). Natural Resources and Economic Growth: The Role of Financial Development Evidence from MENA Region. *Available at SSRN 3925501*.
- Chen, M., Sinha, A., Hu, K., & Shah, M. I. (2021). Impact of technological innovation on energy efficiency in industry 4.0 era: Moderation of shadow economy in sustainable

development. *Technological Forecasting and Social Change*, 164, 120521.

- Darsono, S. N. A. C., Wong, W.-K., Nguyen, T. T. H., & Wardani, D. T. K. (2022). The economic policy uncertainty and its effect on sustainable investment: A panel ARDL approach. *Journal of Risk and Financial Management*, 15(6), 254.
- Dhaoui, I. (2022). E-government for sustainable development: Evidence from MENA countries. *Journal of the Knowledge Economy*, 13(3), 2070-2099.
- El Amine, R. (2023). The GCC countries diplomatic approaches and its impact on economic development: a comparative study of the UAE, Saudi Arabia, Qatar, and Kuwait Notre Dame University-Louaize].
- Elhamma, A. (2023). Impact of mandatory IFRS adoption on foreign direct investment: the moderating role of conflict of interest regulation. *Journal of Financial Reporting and Accounting*.
- Emara, N., & El Said, A. (2021). Financial inclusion and economic growth: The role of governance in selected MENA countries. *International Review of Economics & Finance*, 75, 34-54.
- Emara, N., & Mohieldin, M. (2020). Financial inclusion and extreme poverty in the MENA region: a gap analysis approach. *Review of Economics and Political Science*, 5(3), 207-230.
- Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & De Colle, S. (2010). Stakeholder theory: The state of the art.
- Fund, A. M. (2022). Islamic Banks and Sustainable Development Goals in the Arab World: A Case Study of Selected Countries.
- Giliberto, F., & Labadi, S. (2022). Harnessing cultural heritage for sustainable development: An analysis of three internationally funded projects in MENA Countries. *International Journal of Heritage Studies*, 28(2), 133-146.
- Gu, D., Gui, Z., & Huang, Y. (2022). Fintech Market and Regulation: Lessons from China's Peer-to-peer Lending Platforms. Available at SSRN 4109877.
- Hafner, M., Raimondi, P. P., & Bonometti, B. (2023). Lowcarbon energy strategies in mena countries. In *The Energy Sector and Energy Geopolitics in the MENA Region at a Crossroad: Towards a Great Transformation?* (pp. 175-261). Springer.
- Hill, J. (2020). Environmental, Social, and Governance (ESG) investing: A balanced analysis of the theory and practice of a sustainable portfolio. Academic Press.
- Hussain, M., Bashir, M. F., & Shahzad, U. (2021). Do foreign direct investments help to bolster economic growth? New insights from Asian and Middle East economies. World Journal of Entrepreneurship, Management and Sustainable Development, 17(1), 62-84.
- Hussain, M., Mir, G. M., Usman, M., Ye, C., & Mansoor, S. (2022). Analysing the role of environment-related technologies and carbon emissions in emerging economies: a step towards sustainable development. *Environmental Technology*, 43(3), 367-375.
- Ibrahim, M. D., & Alola, A. A. (2020). Integrated analysis of energy-economic development-environmental sustainability nexus: Case study of MENA countries. *Science of the Total Environment*, 737, 139768.
- Jaad, A., & Abdelghany, K. (2021). The story of five MENA cities: Urban growth prediction modeling using remote sensing and video analytics. *Cities*, 118, 103393.

- Jabbouri, I. (2016). Determinants of corporate dividend policy in emerging markets: Evidence from MENA stock markets. *Research in International Business and Finance*, 37, 283-298.
- Jawad, R. (2019). A new era for social protection analysis in LMICs? A critical social policy perspective from the Middle East and North Africa region (MENA). World Development, 123, 104606.
- Jrad, S., Bouzaine, A., Mezher, N., & Chernova, A. (2023). Pandemic Responses in the MENA Region: Lessons learned for an inclusive economic recovery.
- Kader, Z., Leung, C., Dobbs, M., Masui, K. W., Michilli, D., Mena-Parra, J., Mckinven, R., Ng, C., Bandura, K., & Bhardwaj, M. (2022). High-time resolution search for compact objects using fast radio burst gravitational lens interferometry with CHIME/FRB. *Physical Review D*, 106(4), 043016.
- Kaminker, C., & Stewart, F. (2012). The role of institutional investors in financing clean energy.
- Kamphuis, B. W., & Kanavos, P. (2021). Assessing pricing and reimbursement policies for generic pharmaceuticals in the MENA region for improved efficiency, affordability and generic penetration. *Health Policy OPEN*, 2, 100045.
- Kashem, M. A., Shamsuddoha, M., Nasir, T., & Chowdhury, A. A. (2022). The role of artificial intelligence and blockchain technologies in sustainable tourism in the Middle East. *Worldwide Hospitality and Tourism Themes*(ahead-of-print).
- Kassi, D. D. F. (2020). Dynamics between financial development, renewable energy consumption, and economic growth: Some international evidence. *Renewable Energy Consumption, and Economic Growth: Some International Evidence (June 12, 2020).*
- Kassouri, Y., & Altıntaş, H. (2020). Human well-being versus ecological footprint in MENA countries: a trade-off? *Journal of environmental management*, 263, 110405.
- Khan, P. A., Johl, S. K., Akhtar, S., Asif, M., Salameh, A. A., & Kanesan, T. (2022). Open innovation of institutional investors and higher education system in creating open approach for SDG-4 quality education: a conceptual review. *Journal of Open Innovation: Technology, Market,* and Complexity, 8(1), 49.
- Kilishi, A. A., Abdulganiyu, A. I., & Daniel, O. G. (2023). Governance and Multidimensional Poverty in Sub-Saharan Africa. *African Journal of Economic Review*, 11(5), 34-49.
- Krupa, J., Poudineh, R., & Harvey, L. D. (2019). Renewable electricity finance in the resource-rich countries of the Middle East and North Africa: A case study on the Gulf Cooperation Council. *Energy*, *166*, 1047-1062.
- Lozza, E., Castiglioni, C., Bonanomi, A., & Poli, F. (2022). Money as a symbol in the relationship between financial advisors and their clients: a dyadic study. *International Journal of Bank Marketing*, 40(4), 613-630.
- Lyons, A. C., & Kass-Hanna, J. (2021). Financial inclusion, financial literacy and economically vulnerable populations in the Middle East and North Africa. *Emerging Markets Finance and Trade*, 57(9), 2699-2738.
- Mahmood, H., Saqib, N., Adow, A. H., & Abbas, M. (2023). FDI, exports, imports, and consumption-based CO2 emissions in the MENA region: spatial analysis. *Environmental Science and Pollution Research*, 30(25), 67634-67646.
- McCall, P. J. (2004). Overcoming barriers to private investment in the Middle East and North Africa Region. Arab Financial Forum,

- Mouna, A., & Jarboui, A. (2022). Understanding the link between government cashless policy, digital financial services and socio-demographic characteristics in the MENA countries. *International Journal of Sociology and Social Policy*, *42*(5/6), 416-433.
- Mrabet, Z., Alsamara, M., Mimouni, K., & Mnasri, A. (2021). Can human development and political stability improve environmental quality? New evidence from the MENA region. *Economic modelling*, 94, 28-44.
- Ozmen, E., & Taşdemir, F. (2022). Financialization, Growth and Resource Curse: The MENA Evidence. *Available at SSRN* 4166725.
- Pástor, Ľ., Stambaugh, R. F., & Taylor, L. A. (2021). Sustainable investing in equilibrium. *Journal of Financial Economics*, 142(2), 550-571.
- Raza, A., Akbar, S., & Sadiqa, B. A. (2021). Relationship among economic growth, health, education, economic development and green-field investment as mode of FDI: evidence from MENA countries. *Int. Rev. Soc. Sci*, 9(5), 271-280.
- Saidi, N., & Prasad, A. (2018). Trends in trade and investment policies in the MENA region.
- Salem, H. S., Pudza, M. Y., & Yihdego, Y. (2022). Water strategies and water-food Nexus: challenges and opportunities towards sustainable development in various regions of the World. Sustainable Water Resources Management, 8(4), 114.
- Salim, A. M., & Alsyouf, I. (2020). Development of renewable energy in the GCC region: status and challenges. *International Journal of Energy Sector Management*, 14(6), 1049-1071.
- Sayed, E. T., Olabi, A., Elsaid, K., Al Radi, M., Alqadi, R., & Abdelkareem, M. A. (2023). Recent progress in renewable energy based-desalination in the Middle East and North Africa MENA region. *Journal of Advanced Research*, 48, 125-156.
- Sinha, A., Shah, M. I., Sengupta, T., & Jiao, Z. (2020). Analyzing technology-emissions association in Top-10 polluted MENA countries: How to ascertain sustainable development by quantile modeling approach. *Journal of environmental management*, 267, 110602.
- Taghizadeh-Hesary, F., Zakari, A., Alvarado, R., & Tawiah, V. (2022). The green bond market and its use for energy efficiency finance in Africa. *China Finance Review International*, *12*(2), 241-260.
- Tian, G., & Zhang, Z. (2023). Exploring the impact of natural Resource utilization on human capital development: A sustainable development perspective. *Resources Policy*, 87, 104207.
- Tok, M. E., Olawuyi, D. S., & D'Alessandro, C. (2018). Advancing Clean Technology Entrepreneurship in the Middle East and North African (mena) Region: Law, Education and Policy Imperatives. *Global Journal of Comparative Law*, 7(1), 115-133.
- Vinuesa, R., Azizpour, H., Leite, I., Balaam, M., Dignum, V., Domisch, S., Felländer, A., Langhans, S. D., Tegmark, M., & Fuso Nerini, F. (2020). The role of artificial intelligence in achieving the Sustainable Development Goals. *Nature communications*, 11(1), 1-10.
- Waha, K., Krummenauer, L., Adams, S., Aich, V., Baarsch, F., Coumou, D., Fader, M., Hoff, H., Jobbins, G., & Marcus, R. (2017). Climate change impacts in the Middle East and Northern Africa (MENA) region and their implications for vulnerable population groups. *Regional Environmental Change*, 17, 1623-1638.

- Youngs, R., & Zihnioğlu, Ö. (2021). EU aid policy in the Middle East and North Africa: Politicization and its limits. *JCMS: Journal of Common Market Studies*, 59(1), 126-142.
- Zhang, J., Ahmad, M., Muhammad, T., Syed, F., Hong, X., & Khan, M. (2023). The Impact of the Financial Industry and Globalization on Environmental Quality. *Sustainability*, 15(2), 1705.
- Zhang, Y., Lu, X., & Xiao, J. J. (2023). Can financial education improve consumer welfare in investment markets? Evidence from China. *Journal of the Asia Pacific Economy*, 28(3), 1286-1312.
- Zhao, Y., Micah, A. E., Gloyd, S., & Dieleman, J. L. (2020). Development assistance for health and the Middle East and North Africa. *Globalization and Health*, *16*(1), 1-13.
