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ORIGINAL ARTICLE

The Role of Islamic Principles in Promoting Sustainable Operations in The Business Sector Among Muslim Millennials

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ABSTRACT

Purpose – This research investigates how integrating Islamic principles—emphasizing ethics, social justice, and environmental care—into business practices can promote sustainability, especially among Muslim millennials. The study aims to develop guidelines for incorporating these values into business operations.

Methodology – Data were collected over two months (July-August 2023) via online questionnaires distributed to Indonesian Muslim millennials through social media and WhatsApp. The sample size was sufficient for multivariate analysis. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS software. The analysis included measurement model evaluation for validity and reliability and structural model analysis for statistical significance and predictive relevance.

Findings – The study found that applying Islamic principles significantly enhances sustainability in business practices, particularly for Indonesian Muslim millennials. The analysis confirmed the validity and reliability of the data and demonstrated that the model not only met statistical significance criteria but also had robust predictive relevance, thereby reinforcing the reliability of the study's findings.

Originality/Novelty – This research is unique in its focus on applying Islamic principles to modern business practices for sustainability, mainly targeting the Muslim millennial generation. It provides a detailed framework and new insights into integrating these principles, bridging gaps in existing literature and sparking new interest in the field.

Implications – The study provides a practical framework for businesses to align with ethical and environmental standards while respecting cultural values. It also offers actionable recommendations for enhancing sustainability and social responsibility, thereby demonstrating the practical usefulness of the research.

Keywords: Islamic Principles, Business Sector, Sustainable Operations, SmartPLS Approach

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INTRODUCTION

The business sector is crucial for global economic growth. However, sometimes, in pursuit of profits, environmental and social responsibilities are neglected. This is evidenced by three aspects, namely environmental pollution, non-compliance with environmental regulations, and the existence of greenwashing practices. Firstly, environmental pollution. Some companies have been involved in environmental pollution that damages natural ecosystems. (Nidhi Gaur, Swati Sharma, 2023) For example, industrialization and the growth of production units that dispose of hazardous waste. (Liu et al., 2019) Moreover, some industries generate significant pollution that harms ecosystems due to continuously rising pollution levels. (Gana A.J & Toba A. Peter, 2015) (Shakila M Ahmed, 2024) From a different perspective, environmental pollution is a serious problem that has a significant impact on human health in most developing countries (Nahar et al., 2021) (Jindal et al., 2020)

The second aspect is non-compliance with environmental regulations. Despite the existence of environmental regulations (Flatt, 1997), They are not consistently enforced due to low compliance among businesses (Prasetyaningsih et al., 2022). It is further explained that developing countries often prioritize material well-being, reflected in the early stages of their development where regulatory compliance is low, and environmental pollution is an accepted side effect of economic growth (Priyadarshini and Gupta 2003). Thirdly, there has been an increased interest in greenwashing practices lately (Santos et al., 2023). In an effort to create a positive image among the public, companies display positive or pretend to be environmentally friendly in their communications, but what is communicated differs from their actual behavior (Gatti et al., 2021). In short, companies deceive the public about the environmental practices of their products or services, and this practice is known as greenwashing.

In this study, we adopted a multidisciplinary approach by integrating two main theories, namely Green Marketing and Sharia Compliance, to delve into the impact of various variables in the context of sustainable operations and Islamically principled businesses. Firstly, Green Marketing Theory is a marketing theory that emphasizes the promotion and sale of products or services with a positive impact on the environment (Kishore Kumar & Anand, 2013). Secondly, Sharia Compliance theory serves as the foundation for businesses wishing to operate in accordance with Islamic principles (Atan et al., 2017), ensuring that their business decisions and practices respect religious values and have positive impacts across various aspects (Bugshan et al., 2021). Furthermore, the observed variables include technological innovation, the role of human resources, market dynamics and competition, the impact of environmental and social issues, as well as sustainable operational practices. Additionally, a moderating variable, namely Islamic principles, was added to investigate the extent to which Islamic principles are integrated with sustainable operational practices in the business sector.

Research on the role of Islamic principles in promoting sustainable operations in the business sector has received limited attention among researchers. While previous research has examined sustainable management practices, especially in the operational aspects of companies, it has not specifically focused on the role of Islamic principles as a driving force. Therefore, to fill this gap in the literature, further exploration is needed through confirmation of previous research. Several relevant studies in the field of sustainable business operations include research by (Annachiara Longoni, 2016) on the relationship between human resources and customer benefits through sustainable operations, a study by (Hong et al., 2021) applying sustainable operations management with a multi-party interaction framework,

and (Labuschagne et al., 2005) examining the assessment of sustainability performance in industries. Other research has been conducted by (Raut et al., 2019) in the analysis of predictors of sustainable business performance using big data analysis, as well as research by (Sreenivasan & Suresh, 2023) on sustainable operations in startup companies through the Total Interpretive Structural Modeling (TISM) approach. Among these studies, it is evident that this research is unique as it is the first to explore the role of Islamic principles, which is the distinctive hallmark of this study's originality.

In general, this research has the primary objective of filling a gap in the literature regarding the role of Islamic principles in driving sustainable operations within the scope of business among Muslim millennial generations. Specifically, it aims to investigate the influence of Technological Innovation (TI), the role of Human Resources (HR), Market and Competition dynamics (MaC), as well as Environmental and Social Issues (EaSI) on Sustainable Operations in the Business Sector (SOBS). Furthermore, this research also explores how the role of Islamic Principles as a moderating variable can affect the relationship between Technological Innovation (TI), the role of Human Resources (HR), Market and Competition dynamics (MaC), as well as Environmental and Social Issues (EaSI) with Sustainable Operations in the Business Sector (SOBS). Thus, this study is pioneering in exploring the moderating role played by Islamic principles in driving sustainable operations in the business sector among Muslim millennials. As a result, this research makes a significant contribution to the literature by emphasizing the interactions among the impacts of technological innovation, the role of human resources, market dynamics, and competition, as well as environmental and social issues on sustainable operations in the business sector, and identifying their consequences in promoting sustainable operations in the business sector.

This study illustrates the relationship between independent variables such as technological innovation, human resources, market dynamics, competition, and environmental and social issues and the dependent variable, which is sustainable operations in the business sector. The model also considers the moderating role of Islamic principles in these relationships. It provides a comprehensive framework for understanding the factors influencing sustainable operations, particularly among millennials in the culinary business sector. The model highlights the significance of technological innovation, human resource management, and ethical considerations represented by Islamic principles in the context of sustainability. Thus, this research serves as a pioneer in exploring the moderating role of Islamic principles in promoting sustainable operations within the business sector among Muslim millennials. As a result, this study presents novelty through its specific approach to applying Islamic principles, such as ethical behavior and social justice based on the Qur'an and Hadith, as a guide for sustainable business practices. Furthermore, the research is unique in targeting Muslim millennials in Indonesia, providing insights into how they can play a pioneering role in adopting Islamic principles in sustainable business.

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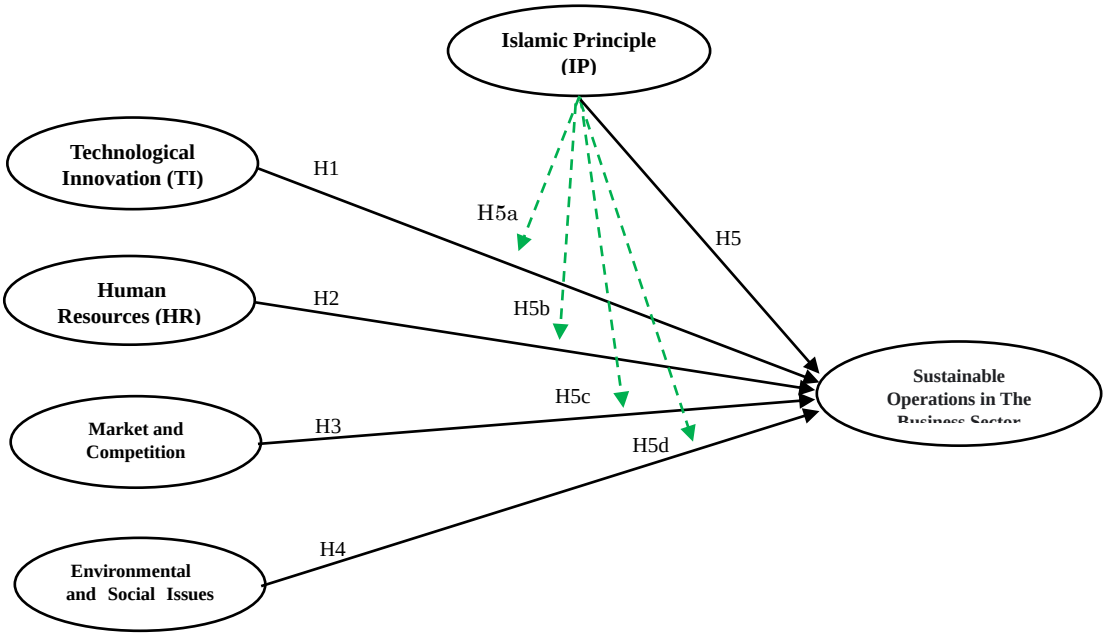

Figure 1. Conceptual Framework

The study tests several hypotheses in alignment with the conceptual framework. Hypothesis 1 (H1) posits that technological innovation has a significant impact on sustainable operations within the business sector. Hypothesis 2 (H2) suggests that human resources play a crucial role in influencing sustainable operations. Hypothesis 3 (H3) examines the effect of market dynamics and competition on sustainable business practices. Hypothesis 4 (H4) addresses the influence of environmental and social issues on sustainable operations. Hypothesis 5 (H5) asserts that Islamic principles significantly affect sustainable operations in the business sector. Furthermore, Hypotheses 5a, 5b, 5c, and 5d explore how Islamic principles moderate the relationships between sustainable operations and factors such as technological innovation, human resources, market and competition, as well as environmental and social issues.

METHOD

To validate the proposed conceptual model in this study, a questionnaire was designed, consisting of two main sections. The initial section provides a brief overview of the research objectives, instructions for completing the questionnaire, and requests socio-demographic information from respondents, such as age, marital status, occupation, education, and income. The second section is tailored to develop the structural model and employs a five-point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). This section comprises 30 questions, distributed as follows: 5 questions about Sustainable Operations in the Business Sector (SOBS), 5 questions about Islamic Principles (IP), 5 questions about Technological Innovation (TI), 5 questions about Human Resources (HR), 5 questions about Market and Competition (MaC), and 5 questions about Environmental and Social Issues (EaSC) related to the Promotion of Sustainable Operations in the Business Sector.

Data Collection

In this study, data collection was conducted over two months, from July to August, using the convenience sampling method to distribute questionnaires to Millennial Muslim respondents. The questionnaires were practically distributed through social media platforms and WhatsApp using Google Forms. Out of a total of 240 samples that responded and were validly recorded in Google Forms, this sample size met the minimum recommended criteria for multivariate analysis. This recommendation aligns with the guidelines provided by (Joseph F. Hair et al., 2019) which suggest a minimum of ten times the number of research instruments, a point also emphasized by (Schermelleh-Engel et al., 2003).

SEM-PLS Analysis

The analysis in this study employs the Partial Least-Squares Structural Equation Modeling (PLS-SEM) method using SmartPLS software version 4.0.9 (Ringle, C. M., Wende, S., and Becker, 2022). SEM-PLS Data Analysis consists of two critical stages. First, the measurement model analysis stage is evaluated for the validity and reliability of the instruments. Convergent validity is assessed based on factor loading scores above 0.7, along with construct reliability (CR) scores above 0.7, and average variance extracted (AVE) scores above 0.5 (Joseph F. Hair et al., 2019). Discriminant validity is assessed through cross-loading and Fornell-Larcker criteria. Cross-loading criteria are met if each indicator has a higher loading than indicators of other variables (Chawla & Joshi, 2019), while Fornell-Larcker criteria are met when the squared AVE correlations between variables are greater than correlations with other variables in the research model (Banerji & Singh, 2022). Reliability is measured with Cronbach's alpha, with values above 0.6 considered reliable (Gottems et al., 2018). Adherence to these measurement model criteria is essential before hypothesis testing.

Second, the structural model analysis stage requires statistical significance based on weighted p-values < 0.05 for conclusions. The R-squared (R2) value is used to measure the strength of relationships, where 0.75 indicates a strong relationship, 0.50 indicates a moderate relationship, 0.25 indicates a weak relationship, and values > 0.90 indicate overfitting. Adjusted R-Square values above 0.25 and 0.50 indicate the model's relevance for predicting small, medium, and large-scale constructs (Joseph F. Hair et al., 2019). Effect size (f-Square value) is used to assess the magnitude of influence, with 0.02 indicating a small effect, 0.15 indicating a moderate effect, and 0.35 indicating a large effect (Joe F. Hair et al., 2014).

RESULTS

Respondent Demographic Profile

Table 1 presents the demographic profile of the respondents, reflecting significant diversity in various characteristics such as age, marital status, occupation, education level, and income. The gender distribution shows that 29.2% of respondents are male, while 70.8% are female. Concerning occupations, a considerable variation is observed, with the majority (55%) being students, followed by entrepreneurs (7.9%) and various other professions (19.6%). The majority of respondents (72.9%) are unmarried, while 25.8% are married, and only 1.3% are divorced. In terms of education, most respondents have a bachelor's degree (50.8%), with a small portion holding master's degrees (5.4%) and doctoral degrees (0.4%), while the rest have education levels ranging from elementary school to diplomas. Regarding age, the majority (68.8%) fall into the "20 to 25 years old" age group, followed by the "26 to 30 years old" group (15.8%). Concerning monthly income, the majority (68.3%) fall into the

"< Rp 1 million" category, while 22.5% fall into the "> Rp 1 million to Rp 3 million" category.

Table 1. Demographic Profile of The Respondents

Criteria	Category	Code	Frequency	Per cent
Age	20 yrs to 25 yrs	1	165	68.8
	26 yrs to 30 yrs	2	38	15.8
	31 yrs to 35 yrs	3	26	10.8
	36 yrs to 40 yrs	4	7	2.9
	41 yrs to 45 yrs	5	1	0.4
	46 yrs to 50 yrs	6	3	1.3
Marital status	Singel	1	175	72,9
	Married	2	62	25,8
	Divorce	3	3	1,3
	Widow/widower	4	0	0
Occupation	Private employee	1	3	1,3
	State employee	2	15	6,3
	Company employee	3	5	2,1
	Lecturer/Teacher	4	12	5,0
	Military/police	5	0	0
	self-employed	6	19	7,9
	Entrepreneurship	7	4	1,7
	Farmer	8	3	1,3
	University student	9	132	55,0
	Other	10	47	19,6
Education level	Primary school	1	2	0,8
	Secondary school	2	1	0,4
	Senior high school	3	80	33,4
	Diploma	4	21	8,8
	Bachelor's	5	122	50,8
	Master's	6	13	5,4
	Doctoral	7	1	0,4
Monthly income	< IDR 1 million	1	164	68,3
	> IDR 1 million to IDR 3 million	2	54	22,5
	> IDR 3 millon to IDR 5 million	3	13	5,4
	> IDR 6 million to IDR 7 million	4	5	2,1
	> IDR 7 million	5	4	1,7

Source : Obtained from Primary Data Prosessed, 2023

Measurement Model Assessment

The assessment of the measurement model in SEM-PLS analysis involves the assessment of several key indicators, namely Loading Factor, Cronbach's alpha, Composite Reliability, Average Variance Extract (AVE), and Discriminant Validity. The findings of this measurement model assessment have been detailed in the following Table:

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Table 2. Validity and Reliability for Constructs

Construct	Indicators	Loading Factor	Cronbach's alpha	Composite reliability	AVE
Sustainable Operations in The Business Sector (SOBS)	SOBS1	0.764	0.826	0.885	0.658
	SOBS2	0.81			
	SOBS3	0.846			
	SOBS4	-			
	SOBS5	0.822			
Islamic Principle (IP)	IP1	0.778	0.865	0.903	0.650
	IP2	0.835			
	IP3	0.813			
	IP4	0.834			
	IP5	0.770			
Technological Innovation (TI)	TI1	0.818	0.864	0.902	0.648
	TI2	0.788			
	TI3	0.76			
	TI4	0.847			
	TI5	0.810			
Human Resources (HR)	HR1	0.830	0.891	0.920	0.697
	HR2	0.813			
	HR3	0.841			
	HR4	0.809			
	HR5	0.878			
Market and Competition (MaC)	MaC1	0.837	0.888	0.917	0.690
	MaC2	0.827			
	MaC3	0.831			
	MaC4	0.839			
	MaC5	0.818			
Environmental and Social Issues (EaSI)	EaSI1	0.791	0.895	0.923	0.706
	EaSI2	0.827			
	EaSI3	0.84			
	EaSI4	0.873			
	EaSI5	0.866			

In Table 2, it is evident that both Composite Reliability (CR) and loading factors consistently exceed the recommended threshold of 0.7, aligning with the guidelines suggested by (Joseph F. Hair et al., 2019). This analysis also reveals that the Average Variance Extract (AVE) values surpass the established standard of 0.5, also in line with the same recommendations. (Joseph F. Hair et al., 2019). These results instil confidence that the measurement model used in the research is built on a solid foundation and is reliable for addressing the research questions posed. Therefore, this model can be used with confidence in further analyses and serves as a solid basis for decision-making based on the research findings.

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Table 3. Discriminant Validity

Latent Variable	EaSI	HR	IP	MaC	SOBS	TI
EaSI						
HR	0.843					
IP	0.830	0.893				
MaC	0.893	0.909	0.865			
SOBS	0.708	0.756	0.786	0.683		
TI	0.905	0.947	0.863	0.930	0.787	

Next, Table 3 presents each latent construct's Average Variance Extract (AVE) values. All AVE values for these constructs surpass the threshold of 0.50, indicating the convergent validity strength of these constructs, in line with the guidelines proposed by (Joseph F. Hair et al., 2019). Furthermore, following the advice of (Fornell, C. and Larcker, 1981), these AVE values exceeding 0.50 ensure that over 50% of the variance in each factor is explained by the utilized indicators, thereby reinforcing the construct validity. To further test discriminant validity, the criteria involve comparing the square root of the AVE of each construct with the corresponding inter-construct correlation values. As observed in the bolded elements on the diagonal of Table 3, the square root of the AVE values for all variables exceeds the correlation values between constructs. This confirms that discriminant validity has been met, as recommended by (Hair et al. 2019)

In this study, the regression model assessment was carried out using SmartPLS version 4.0.9.5 to analyze the relationship as formulated in Figure 1. This study formulates a hypothesis, as presented in Figure 2 and the following table:

Table 4. Interrelationships Effect (Result and Decision)

Hypothesis	Relationship	OM	SM	SD	T statistics	P values	Decision
H1	TI → SOBS	0.306	0.317	0.099	3.108	0.002	Accepted
H2	HR → SOBS	0.196	0.187	0.093	2.112	0.035	Accepted
H3	MaC → SOBS	-0.151	-0.15	0.098	1.532	0.126	Rejected
H4	EaSI → SOBS	0.119	0.118	0.098	1.215	0.225	Rejected
H5	IP → SOBS	0.376	0.378	0.079	4.779	0.000	Accepted

The results of the analysis in Table 4 indicate that H1 (TI -> SOBS), H2 (HR -> SOBS), and H5 (IP -> SOBS) are accepted. This means that the relationships between Technological Innovation (TI), Human Resources (HR), and Islamic Principles (IP) with Sustainable Operations in The Business Sector (SOBS) are proven to be positive and significant. The significant T-statistic values (3.108, 2.112, and 4.779) and p-values smaller than 0.05 (0.002, 0.035, and 0.000) indicate a strong connection between these variables and SOBS. These findings are consistent with several related studies (Yuan and Zhang 2020), (Siddique, Haq, and Rahim 2022), (Banmairuroy, Kritjaroen, and Homsombat 2022), and (Wahyuningtyas, Disastra, and Rismayani 2023). However, H3 (MaC -> SOBS) and H4 (EaSI -> SOBS) are rejected. This means that there is no significant relationship between Market and Competition (MaC) and Environmental and Social Issues (EaSI) with Sustainable

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Operations in The Business Sector (SOBS). This is supported by T-statistic values that are below the significance threshold (1.532 and 1.215) and p-values higher than 0.05 (0.126 and 0.225). These findings are consistent with research conducted by (Borin et al., 2013), (Chuang & Huang, 2018) and (Kot et al., 2019).

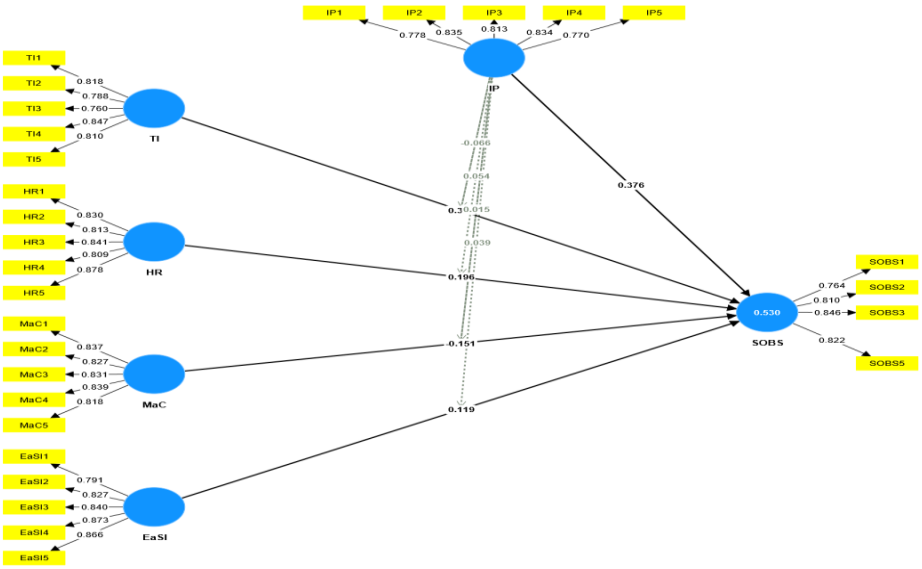

Figure 2. Smart-PLS Analysis Result

Table 5. Moderating Effect (Result and Decision)

Hypothesis	Relationship	OM	SM	SD	T statistics	P values	Decision
H5a	IPxHR → SOBS	0.054	0.06	0.081	0.669	0.504	Rejected
H5b	IPxMaC → SOBS	0.015	0.031	0.102	0.147	0.883	Rejected
H5c	IPxTI → SOBS	-0.066	-0.075	0.110	0.605	0.545	Rejected
H5d	IPxEaSI → SOBS	0.039	0.029	0.080	0.492	0.623	Rejected

Furthermore, Table 5 indicates that within the framework of this study, Islamic Principles as a moderating variable do not significantly impact the relationship between the variables under investigation and Sustainable Operations in The Business Sector (SOBS) among millennial Muslims. As a result, the Islamic Principles (IP) variable does not play a significant role in this context. This is evidenced by the high p-values (greater than 0.05) and low T-statistic values. However, The non-significant results regarding Sharia compliance in the context of this research should not be viewed as a setback but rather as an opportunity for deeper exploration.

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Table 6. R-Square and Adjusted R-Square Value

Variables	R-Square	Adjusted R-Square
Sustainable Operations in The Business Sector (SOBS)	0.53	0.511

Table 6 presents the values of R-Square and Adjusted R-Square, reflecting the extent to which the variables Technological Innovation (TI), Human Resources (HR), Market and Competition (MaC), Environmental and Social Issues (EaSI), and Islamic Principle (IP) collectively influence the variable Sustainable Operations in The Business Sector (SOBS), contributing approximately 53%. This indicates that the statistical model can explain around 53% of the variation in Sustainable Operations in The Business Sector (SOBS). After accounting for the model's complexity, with an Adjusted R-Square of approximately 0.511, roughly 51.1% of the variation in SOBS can still be accounted for. This demonstrates a good fit between the model and the observed data. Furthermore, the influence of the independent variables in the model can be categorized as "large" based on the significant R-squared values (Hair et al. 2014).

Next is the f^2 effect size of the various relationships studied, where all effect sizes are categorized as "Small." This indicates that the existing relationships have minimal impact on the dependent variable, namely Sustainable Business Operations (SOBS). Among the relationships studied, Islamic Principles (IP) has the highest effect size of 0.089, although it is still categorized as minor, indicating a slightly more decisive influence than the others. Human Resources (HR) and Technological Innovation (IT) also show small effect sizes of 0.018 and 0.043, respectively, indicating a positive but limited contribution to sustainable practices.

On the other hand, Environmental and Social Issues (EaSI) and Market Dynamics (MaC) have effect sizes of 0.008 and 0.011, reflecting minimal contributions to SOBS. Additionally, the interactions of IP with other variables, such as IP x TI and IP x HR, show petite effect sizes (0.002), indicating that Islamic Principles do not significantly enhance the impact of these variables on sustainable business operations. Finally, the relationships with an effect size of 0 (for SOBS and the interaction of IP x MaC) demonstrate that these variables have no impact on sustainable business operations in the context of this study. These findings highlight the need for further research to explore moderating factors or alternative variables that could enhance sustainable business practices within the framework of Islamic values.

DISCUSSION

The influence of X1 (Technological Innovation - TI) on Y (Sustainable Operations Business - SOBS) is significant, with a T statistic value of 3.108 and a P value of 0.002. This indicates that an increase in Technological Innovation positively contributes to sustainable operational practices in the business sector. These findings align with the view of (Vargas-Hernandez et al., 2023), who state that technological innovation plays a crucial role in the success of organizations, especially in addressing global challenges such as climate change and resource limitations. Additionally, Ginni Rometty, former CEO of IBM, emphasizes that technology can help companies understand and manage their business operations' social and environmental impacts (Entzenberg, 2020). Furthermore, (Jaehn, 2016) mentions that environmentally friendly technological innovations have a significant impact on organizational effectiveness.

The influence of X2 (Human Resources - HR) on Y (Sustainable Operations Business - SOBS) is significant, with a T statistic value of 2.112 and a P value of 0.035. This finding indicates that enhancements in Human Resources positively contribute to sustainable operational practices in the business sector. This aligns with (Rajput et al., 2023), who state that human resources play a central role in an organization's success. Effective human resource management can promote sustainability through innovation and environmental awareness (Khan & Liu, 2023). Additionally, Rahmat's research confirms that human resource management practices and corporate social responsibility have a substantial impact on company effectiveness (Sarwar & Mustafa, 2023)

The influence of X3 (Market Dynamics - MaC) on Y (Sustainable Operations Business - SOBS) is not significant, with a T statistic value of 1.532 and a P value of 0.126. This indicates that variations in Market Dynamics do not significantly affect sustainable operational practices in the business sector. This finding is consistent with the views of (Porter & Kramer, 2011) They argue that while market dynamics can shape competitive advantage, they do not necessarily translate into sustainable practices unless organizations actively engage in strategies prioritising sustainability. Furthermore, according to (Hart et al., 2003). The effectiveness of market dynamics in driving sustainability largely depends on aligning business objectives with sustainable development goals, suggesting that without this alignment, the impact of market variations remains limited.

The influence of X4 (Ethical and Social Issues - EaSI) on Y (Sustainable Operations Business - SOBS) is insignificant, with a T statistic value of 1.215 and a P value of 0.225. This indicates that variations in ethical and social issues do not substantially impact sustainable operational practices. Milton Friedman’s view supports this finding, stating that a company’s primary responsibility is to increase its profits, often sidelining social responsibility (Dunn & Burton, 2006). Additionally, (John, 1998) Research on the Triple Bottom Line suggests that while ethical considerations are important, they may not always lead to operational changes if economic incentives do not support them, implying that these issues are more likely to influence perceptions than actual business practices.

This study found that Islamic Principles (IP) significantly influence Sustainable Operations Business (SOBS), with a T statistic value of 4.779 and a P value of 0.000. These findings indicate that a higher adherence to Islamic principles positively impacts sustainable operational practices. This aligns with the views of Dr Muhammad Yunus, who asserts that businesses should serve humanity rather than merely seek profit, reflecting the ethical values in Islam (Utomo et al., 2021). This perspective is reinforced by Dr. Monzer Kahf, who states that Islamic finance supports social justice and sustainability (Wijaya et al., 2023). Therefore, commitment to Islamic values can significantly enhance sustainable business practices.

Next, Analysis of the moderating effect of Islamic Principles (IP) on various relationships with Sustainable Operations Business (SOBS) indicates that Islamic Principles do not significantly moderate the relationship between Human Resources, Market Dynamics, Technological Innovation, as well as Environmental and Social Issues with Sustainable Operations Business. Therefore, all hypotheses related to the moderating effect (H5a, H5b, H5c, and H5d) are rejected. This finding suggests that although Islamic Principles can directly influence sustainable operations, as stated in H5, they do not enhance the impact of other variables in this context. Supporting this finding, Dr. Ahmed El-Ashker argues that the application of Islamic values in business practices essentially serves as a framework rather than a tool to enhance external factors (Nugraheni et al., 2024). Similarly, Dr. Monzer Kahf notes that "Islamic principles shape ethical behavior in business, but do not always strengthen

the effects of other operational factors (Makarim & Hannase, 2024). This perspective reinforces the conclusion that, while important, Islamic Principles serve more as a foundation for sustainable practices rather than as a catalyst to moderate the influence of others in sustainable business operations.

The findings not only enhance the existing literature but also lay a solid foundation for further exploration of the role of Islamic values in fostering sustainable practices within the business sector. The complexity of this diverse concept, combined with variations in interpretation among respondents, may have influenced the outcomes. As such, these findings should be viewed as a stepping stone for future research. Moreover, the alignment of results between this study and prior research reinforces the conclusion that technological innovation, human resources, and Islamic principles significantly contribute to promoting sustainable operations in the culinary business sector among millennial Muslims. In contrast, the influence of market dynamics, competition, and environmental and social factors appears to be more limited or less clearly defined within this contextual framework.

This research has significant implications for understanding the role of Islamic Principles in promoting Sustainable Operations among Millennial Muslims in the business sector. First, it confirms the importance of a holistic approach that integrates Islamic values into sustainable business. Although the impact of Islamic Principles is limited in this study, its ethical values remain relevant as a guide in developing sustainable businesses. Furthermore, these findings encourage further research to investigate other factors influencing sustainable operations, including market dynamics, competition, and environmental and social issues. The focus on technological innovation and human resource management as key components in enhancing sustainable business practices highlights the importance of these aspects in efforts to improve operational sustainability. By combining these findings, this research provides valuable insights into the interaction of factors in sustainable business and offers scientific guidance for the development of more sustainable business practices.

CONCLUSION

This study aimed to investigate the influence of Technological Innovation (TI), the role of Human Resources (HR), the dynamics of Market and Competition (MaC), and Environmental and Social Issues (EaSI) on Sustainable Operations in the Business Sector (SOBS). Additionally, it explored how the role of Islamic Principles as a moderating variable could affect the relationship between Technological Innovation (TI), the role of Human Resources (HR), the dynamics of Market and Competition (MaC), and Environmental and Social Issues (EaSI) with Sustainable Operations in the Business Sector (SOBS) among Millennial Muslims. The results showed a positive and significant relationship between Technological Innovation (TI), Human Resources (HR), and Islamic Principles (IP) with Sustainable Operations in the Business Sector (SOBS). However, there was no significant relationship between the dynamics of Market and Competition (MaC), as well as Environmental and Social Issues (EaSI), with Sustainable Operations in the Business Sector (SOBS). Additionally, the role of Islamic Principles (IP) as a moderating variable did not significantly impact the relationship between the variables studied and Sustainable Operations in the Business Sector (SOBS) among Millennial Muslims.

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