

# The Mediation and Moderation Roles in the Influence of Digital Competence and Religious Values on the Sustainability of Sharia Economic Businesses

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## Abstract

*This study aims to investigate the impact of digital competence and religious values on the sustainability of Sharia economic businesses in the digital era. It examines innovation as a mediator and government support as a moderator. Primary data were collected through questionnaires distributed to 200 employees from Sharia banks in Aceh Province-Indonesia. Structural Equation Modeling (SEM) with Partial Least Squares (PLS) in SmartPLS software was employed for data analysis. The findings indicate that both digital competence and religious values positively influence innovation and the sustainability of Sharia economic businesses. Innovation and government support play crucial roles in enhancing the sustainability of these businesses. The indirect effects analysis reveals that digital competence and religious values positively affect the sustainability of Sharia economic businesses through innovation as a mediator. However, the moderating effect of government support on the relationship between innovation and business sustainability shows a small yet significant negative impact. This preliminary study shows promise but highlights the need for more research to understand how digital competence, religious values, innovation, and government support interact to enhance sustainability in Sharia economic businesses. The implications stress integrating digital technology and religious values to promote innovation and sustainable growth in Sharia-compliant enterprises. This pioneering empirical research explores how digital competence and religious values influence the sustainability of Sharia economic businesses in the digital era. It highlights the intricate interplay between innovation and government support crucial for achieving optimal business sustainability outcomes.*

**Keywords:** *Digital Competence, Religious Values, Innovation, Government Support, Sustainability.*

## Introduction

The digital era has significantly transformed business operations, including Sharia economic businesses. The COVID-19 pandemic accelerated the adoption of digital technologies, highlighting the importance of digital competence for business resilience and efficiency. Studies indicate that digitalization is crucial for national economic recovery, particularly for Sharia banks ([Andiansyah, Rini and Absah, 2024](#)). Additionally, innovations such as Sharia fintech can enhance the financial performance and sustainability of SMEs within the Sharia economic framework ([Menne et al., 2022](#)). Innovation plays a vital role in the relationship between digital competence, religious values, and business sustainability. Aligning business operations with Islamic principles is essential for maintaining credibility and trust ([Muryanto, 2022](#)). Government support also significantly shapes a conducive business environment for digital transformation and innovation ([Majidah, 2022](#)). By exploring the interaction between digital competence, innovation, religious values, and government support, this research can provide valuable insights for policy development and business strategies aimed at ensuring the long-term sustainability of Sharia economic enterprises.

Existing literature provides fragmented insights into sustainability, digital transformation, and Islamic finance, necessitating a comprehensive study that integrates these elements. [Espina-Romero et al., \(2024\)](#) emphasizes the need for detailed research on digital competencies for open innovation, while [Hasan et al., \(2024\)](#) highlights the role of social support, sustainability perceptions, and religious consciousness in shaping consumer behavior, relevant for understanding Sharia business sustainability. [Priyana et al., \(2024\)](#) examines the integration of digital technologies with Sharia principles, offering insights into the complexities and regulatory frameworks involved. Synthesizing these studies can develop a theoretical

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framework to investigate how digital competence, religious values, innovation, and government support collectively influence the sustainability of Sharia economic businesses, providing practical implications for their resilience in a digital landscape.

In exploring the influence of digital competence and religious values on the sustainability of Sharia economic businesses in the digital era, with innovation as a mediating variable and government support as a moderating variable, novelty can be achieved by integrating insights from diverse disciplines. Drawing on [Posen et al., \(2018\)](#) for cognitive and process perspectives, [Kotiloglu, Chen and Lechler, \(2021\)](#) for organizational responses to feedback, [Yu et al., \(2020\)](#) for trends in COVID-19 research, and [Brown-Johnson et al., \(2020\)](#) for rapid qualitative synthesis, a novel framework can be developed. This interdisciplinary approach aims to unravel the complex dynamics and provide fresh perspectives on enhancing the sustainability of Sharia economic enterprises in the digital landscape.

### *Review of the Literature and Hypothesis Development*

#### *Digital Competence and Innovation*

Digital competence is crucial in fostering innovation within organizations, as evidenced by several studies. [Khin and Ho, \(2019\)](#) found that digital orientation and capability positively influence digital innovation, mediating their impact on organizational performance. [Huu, \(2023\)](#) emphasized the role of employee digital competence in driving innovative work behavior, particularly in contexts of digital autonomy. Similarly, [Sary, Dudija and Moslem, \(2023\)](#) highlighted how digital competency and self-leadership contribute to innovative practices among teachers. [Cabaron, \(2023\)](#) and [Astuti and Setiawan, \(2023\)](#) underscored the significance of digital skills in educational innovation, demonstrating their impact on creating new teaching resources and fostering innovative work behavior among educators. Based on the literature review, both theoretical and practical, the following hypothesis is formulated:

*Hypothesis 1: Digital Competence has a positive and significant influence on Innovation.*

#### *Religious Values and Innovation*

Several studies have highlighted the impact of religious values on innovation. [Farmaki et al., \(2020\)](#) found that religious values enhance creativity and entrepreneurship in the hospitality industry, contributing to CSR and sustainability. [Punuh and Sirine, \(2024\)](#) showed that these values guide Indonesian social entrepreneurship, boosting trust and participation. [Nirwana et al., \(2021\)](#) emphasized the role of religious moderation in Islamic higher education, fostering innovation through literacy and interfaith education. [Said and Saad, \(2016\)](#) identified religious values as key determinants of philanthropic behavior, while [Cinnirella and Streb, \(2017\)](#) noted that religious tolerance influences innovation by shaping managerial decisions and stakeholder expectations. Based on a comprehensive review of literature, encompassing both theoretical insights and empirical findings, the following hypothesis is posited:

*Hypothesis 2: Religious Values positively influence Innovation.*

#### *Digital Competence and the Sustainability of Sharia Economic Businesses*

Research on the influence of digital competence on the sustainability of Sharia economic businesses in the digital era highlights the importance of digital transformation, innovation, and Sharia values. [Bican and Brem, \(2020\)](#) underscore the sustainability of digital business models and digital transformation, while [El Hilali, El Manouar and Janati Idrissi, \(2020\)](#) focus on customer experience and innovation in business model sustainability. [Mahyarni and Okfalisa, \(2024\)](#) develops a Sharia fintech framework using the Quadruple Helix model to enhance SMEs' digitalization, and [Ibrahim, Eprianti and Febriadi, \(2023\)](#) explores crowdfunding Sharia financing as an alternative business capital mechanism. [Li and Xu, \(2024\)](#) examines the impact of digital government policies on enterprise digital transformation and urban economic development. Drawing from a synthesis of theoretical frameworks and empirical evidence, the hypothesis proposed is:

*Hypothesis 3: Digital competence significantly enhances the sustainability of Sharia economic businesses.*

#### *Religious Values and the Sustainability of Sharia Economic Businesses*

Research on the influence of religious values on the sustainability of Sharia economic businesses in the digital era explores the integration of ethical principles, Islamic finance, and sustainable business practices. Studies like [Hajiheydari et al., \(2023\)](#) emphasize sustainable business model innovation and its impact on operational outcomes and performance. [Perera and Surangi, \(2021\)](#) highlight how Buddhist teachings influence entrepreneurial decisions, while [Utami et al., \(2020\)](#) discuss the digitalization of Zakat payment and its governance implications for sustainability. [Vo Thai, Hong-Hue and Tran, \(2024\)](#) focuses on digital capabilities in Vietnamese SMEs, linking them to innovation and sustainable performance. [Rolando, As'ad and Setiawati, \(2024\)](#) explores religious literacy's role in fostering ethical behavior among Generation Z. Based on a synthesis of theoretical insights and empirical evidence, the hypothesis formulated is:

*Hypothesis 4: Religious values significantly contribute to the sustainability of Sharia economic businesses.*

#### *Innovation on the Sustainability of Sharia Economic Businesses*

Research on the influence of innovation on the sustainability of Sharia-compliant economic businesses in the digital era emphasizes the critical role of technological advancements and business models in fostering long-term viability. Studies like [Prakasa, \(2022\)](#) highlight the impact of digital innovation on small business sustainability, emphasizing digital competence for continuity. [Hendriarto, \(2021\)](#) underscores digital transformation's role in driving sustainable business models and profitability. [Hendriarto, \(2021\)](#) explore innovation's role in sustainable digital transformation through policy and freedom. [Kaggwa et al., \(2023\)](#) discusses digital transformation's impact on economic development and sustainability. Based on a comprehensive review of literature and empirical evidence, the hypothesis formulated is:

*Hypothesis 5: Innovation significantly enhances the sustainability of Sharia economic businesses.*

#### *Government Support and Sharia Economic Businesses*

Government support is essential for Sharia economic businesses. Strategic recommendations include collaboration, expansion, IT utilization, and asset management ([Prasetyo, Effendi and Arsyanti, 2022](#)). Local government and community collaboration aids development ([Alam et al., 2022](#)), while stakeholder support ensures sustainability ([Arfah et al., 2020](#)). Empowering SMEs through Sharia banking supports SDGs ([Rohimah, 2023](#)), with Sharia fintech playing a significant role ([Trimulato, Nafis and Amalia, 2022](#)). Policies and Sharia venture capital are crucial for growth ([Fathonih, Anggadwita and Ibraimi, 2019](#)) and regulatory frameworks support sustainable practices ([Afif and Hosen, 2022](#)). Based on a thorough review of literature and empirical findings, the hypothesis formulated is:

*Hypothesis 6: Government support positively influences Sharia economic businesses.*

#### *The Role of Innovation as A Mediating Influence of Digital Competence on The Sustainability of Sharia Economic Businesses*

Research on the role of innovation as a mediator between digital competence and the sustainability of Sharia economic businesses underscores the importance of technological advancements and innovative practices in fostering sustainable business strategies. [Prakasa, \(2022\)](#) and the study "Enhancing Sustainable Business by SMEs' Digitalization" highlight how innovation mediates the impact of digital competence on business resilience and adaptability. [Ghosal and Proto, \(2022\)](#) and [Bednarčíková and Repiská, \(2021\)](#) examine how innovation addresses global challenges through digital transformation. [Judijanto and Judijanto and Imanirubiarko, \(2023\)](#) emphasize the mediating effect of innovative online business practices on economic independence, demonstrating the transformative potential of digital education and entrepreneurship. Based on theoretical frameworks and empirical insights, the hypothesis formulated is:

*Hypothesis 7: Innovation mediates the relationship between digital competence and the sustainability of Sharia economic businesses.*

#### *The Role of Innovation as A Mediating Influence of Religious Values on the Sustainability of Sharia-Compliant Businesses*

Research on the role of innovation as a mediating influence of religious values on the sustainability of Sharia-compliant businesses in the digital era explores the intricate relationship between ethical principles, technological advancements, and sustainable business practices. Studies such as [Zhou, Lu and Kumar Mangla, \(2024\)](#) and [Bähr and Fliaster, \(2023\)](#) emphasize how innovation mediates the impact of religious values on sustainability, fostering efficiency and ethical practices. [Haerunnisa and Sugitanata, \(2024\)](#) and [Majidah, \(2022\)](#) illustrate how digital innovation in Islamic banking and marketing aligns with Sharia principles, enhancing customer experiences and operational efficiency. [Mohua and Yusoff, \(2023\)](#) highlight the role of performance measurement systems in transforming resources for sustainable practices, showcasing the transformative potential of innovative approaches. Based on theoretical frameworks and empirical insights, the hypothesis formulated is:

*Hypothesis 8: Innovation mediates the relationship between religious values and the sustainability of Sharia-compliant businesses.*

#### *The Role of Government Support as A Moderating Influence on Innovation for The Sustainability of Sharia-Compliant Businesses*

Government support is crucial for fostering innovation and sustainability in Sharia-compliant businesses. Research by [Azmi, Non and Aziz, \(2020\)](#) indicates that government intervention can enhance the moral capacity of Sharia-compliant companies, influencing their ethical practices and sustainability. [Rita, Widi and Kristanto, \(2021\)](#) found that government support promotes product innovation and business performance in MSMEs, suggesting a direct impact on Sharia-compliant businesses as well. [Demirbaş, Hussain and Matlay, \(2011\)](#) highlighted the importance of a supportive business environment and progressive government policies in driving innovation and entrepreneurial growth. [Haidar, \(2024\)](#) emphasized the role of Sharia fintech in providing funding for MSMEs, underscoring the importance of innovation in Sharia-compliant financial services. Based on theoretical frameworks and empirical insights, the hypothesis formulated is:

*Hypothesis 9: Government support moderates the relationship between innovation and the sustainability of Sharia-compliant businesses.*

#### *Conceptual Framework*

Based on Figure 1, digital competence and religious values directly influence innovation, which then serves as a mediating variable to enhance the sustainability of Sharia economic businesses. Additionally, government support acts as a moderating variable, strengthening the impact of innovation on the sustainability of these businesses. Therefore, the sustainability of Sharia economic businesses is determined by a combination of digital competence, religious values, innovation, and government support.

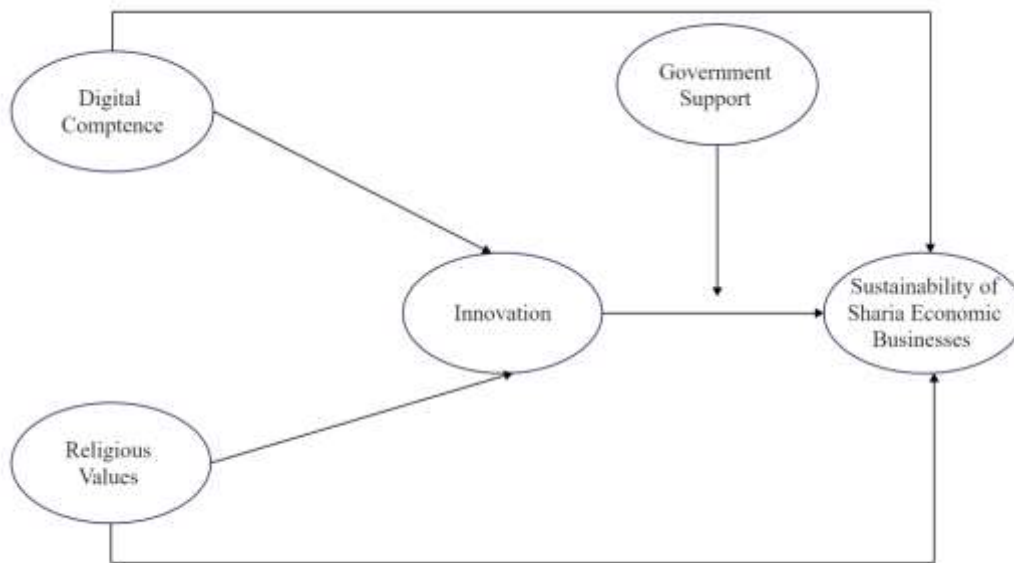


Figure 1. Conceptual Framework

## Methodology

This research will focus on the Province of Aceh, involving a diverse range of stakeholders including Sharia business actors, employees in Sharia companies, Sharia economic experts, government regulators, and religious communities. Utilizing a quantitative approach with primary data collected through structured questionnaires, the study aims to gather insights from 200 respondents selected randomly across these groups. Data analysis will employ Structural Equation Modeling (SEM) with Partial Least Squares (PLS) in SmartPLS software to explore the direct impacts of digital competence and religious values on Sharia economic business sustainability, mediated by innovation, and moderated by government support. This comprehensive analysis seeks to illuminate key factors influencing sustainability in Sharia economic enterprises amid the digital era.

### Measurement

To measure the variable of Digital Competence, indicators developed by the European [Vuorikari et al., \(2016\)](#) are utilized, encompassing information and data literacy, digital communication and collaboration, digital content creation, digital security, and digital problem-solving. The variable of Religious Values is assessed using indicators developed by [\(Kamil, Ali Hussain and Sulaiman, 2011\)](#), which include faith (belief), righteous deeds, obedience, and morals and ethics. Innovation indicators are derived from the [Gault, \(2023\)](#), covering product innovation, process innovation, marketing innovation, and organizational innovation. Government Support is measured using indicators developed by [Rusyhdiana, \(2018\)](#) including supportive policies and regulations, financial incentives, capacity building through training and development, infrastructure and technology, and market promotion and facilitation. The variable of Sharia Economic Business Sustainability is gauged using indicators developed by [Ali et al., \(2017\)](#) such as Sharia compliance, financial performance, social contribution, environmental protection, and governance and ethics.

## Results

### Respondent Characteristics

Respondent characteristics of 200 Sharia bank employees (Table 1) indicate a male majority (55%) compared to females (45%). The largest age group is 26-35 years (40%), followed by 36-45 years (30%). Educationally, most hold a Bachelor's degree (47.5%), followed by Diploma (25%), Master's degree (15%),

High School education (10%), and Doctorate (2.5%). Regarding work experience, 40% have 6-10 years, 25% have 1-5 years, 20% have 11-15 years, 10% have over 15 years, and 5% have less than 1 year. The majority work at Bank Syariah Indonesia (60%), with the remainder at Bank Aceh Syariah (40%).

**Table 1.** Respondent Characteristics

Characteristic	Category	Number of Respondents	Percentage (%)
<b>Gender</b>	Male	110	55.0%
	Female	90	45.0%
<b>Age</b>	18-25 years	30	15.0%
	26-35 years	80	40.0%
	36-45 years	60	30.0%
	46-55 years	20	10.0%
	>55 years	10	5.0%
<b>Education</b>	High School	20	10.0%
	Diploma	50	25.0%
	Bachelor's Degree	95	47.5%
	Master's Degree	30	15.0%
	Doctorate	5	2.5%
<b>Years of Service</b>	<1 year	10	5.0%
	1-5 years	50	25.0%
	6-10 years	80	40.0%
	11-15 years	40	20.0%
	>15 years	20	10.0%
<b>Workplace</b>	Bank Syariah Indonesia	120	60.0%
	Bank Aceh Syariah	80	40.0%

### *Statistics Descriptive*

Based on Table 2, the descriptive statistics indicate generally high mean scores above 3.4 across all items, with moderate variability in responses (standard deviations range from approximately 0.69 to 1.04). Items such as DC2 (Digital Competence), GS1 (Government Support), and IV2 (Innovation) show particularly strong mean scores above 4.3, reflecting positive feedback in these areas. RV (Religious Values) items also receive positive responses with mean scores around 4, indicating strong alignment with religious principles. SSE (Sharia Economic Business Sustainability) items, especially SSE3 and SSE5, demonstrate high mean scores above 4.2, highlighting positive perceptions of sustainability practices in Sharia-compliant businesses.

**Table 2.** Statistics Descriptive

Item	Min	Max	Mean	Std. Deviation	Item	Min	Max	Mean	Std. Deviation
DC1	1	5	4,07	.83582	GS1	1	5	4,245	.84173
DC2	1	5	4,33	.90842	GS2	1	5	4,095	.83634
DC3	1	5	4,02	.84449	GS3	1	5	4,19	.82297
DC4	1	5	4,245	.93237	GS4	1	5	4,175	.81096
DC5	1	5	4,015	.87096	GS5	1	5	4,09	.83990
DC6	1	5	4,1	.89105	GS6	1	5	4,14	.88562
DC7	1	5	4,135	.86051	GS7	1	5	4,105	.89329
DC8	1	5	4,385	.91155	GS8	1	5	3,83	100.806
DC9	1	5	4,335	.89261	GS9	1	5	3,745	.96156
DC10	1	5	4,255	.89666	GS10	1	5	3,88	.92731
RV1	1	5	4,09	.72424	IV1	1	5	4,375	.73284
RV2	1	5	3,865	.86633	IV2	1	5	4,46	.72874
RV3	1	5	4,145	.79822	IV3	1	5	4,145	.82302
RV4	1	5	4,14	.77680	IV4	1	5	4,395	.72913
RV5	1	5	4	.84473	IV5	1	5	4,175	.73284
RV6	1	5	3,99	.73662	IV6	1	5	4,44	.72735
RV7	1	5	3,91	.81561	IV7	1	5	4,485	.72968
RV8	1	5	3,465	104.606	IV8	1	5	4,5	.72292
SSE1	1	5	4,04	.73560	SSE6	1	5	4,22	.70290
SSE2	1	5	4,275	.71550	SSE7	1	5	4,08	.82279
SSE3	1	5	4,3	.71593	SSE8	1	5	4,07	.83582
SSE4	1	5	3,975	.82935	SSE9	1	5	4,195	.72775
SSE5	1	5	4,225	.72595	SSE10	1	5	4,235	.69440

*Measurement Model (Outer Model)*

The measurement of indicators (Outer Model) involves Convergent Validity, Construct Reliability, Average Variance Extracted (AVE), Discriminant Validity, and model unidimensionality.

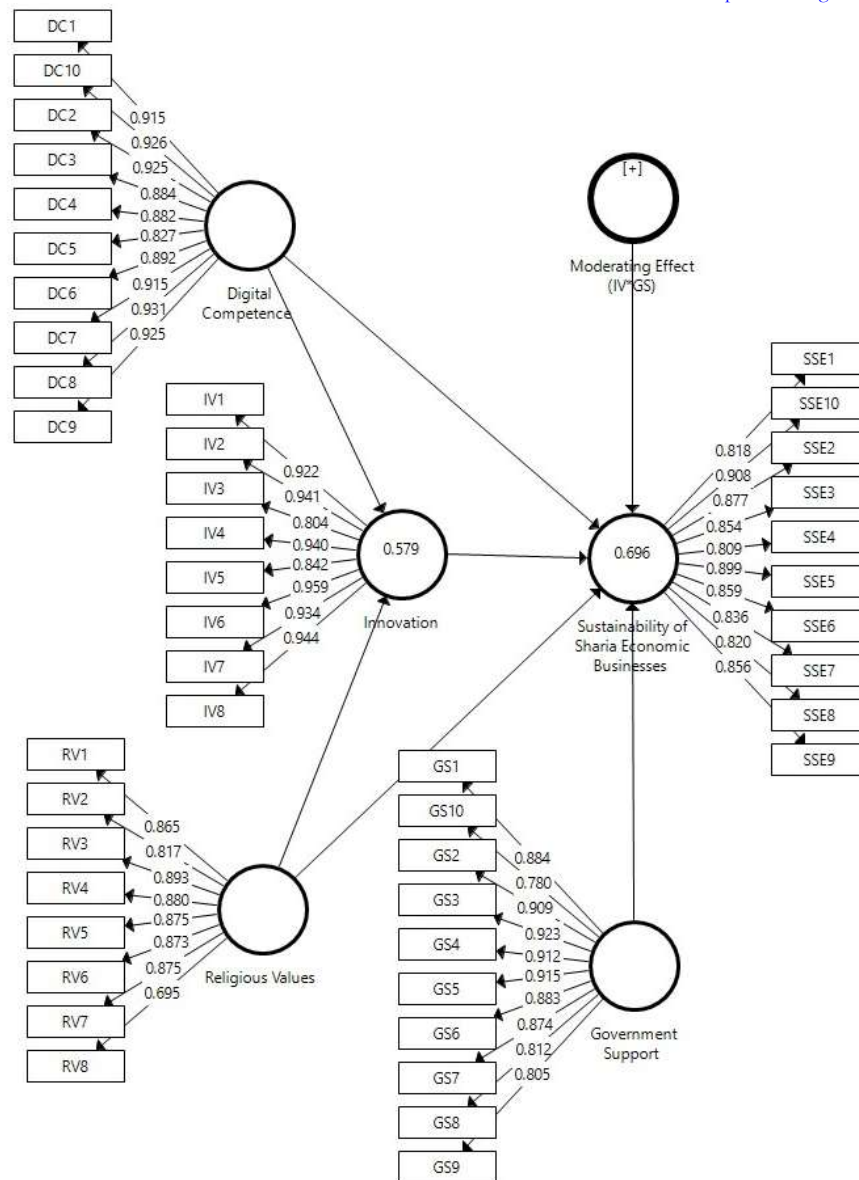


Figure 2. Measurement Model (Outer Model)

*Convergent Validity*

Based on Table 3, all indicators show strong convergent validity with outer loadings exceeding the recommended threshold of 0.70, except for Religious Values (RV8), which falls slightly below at 0.710. This suggests that the measures for Digital Competence, Government Support, Innovation, and most of Religious Values are robust indicators of their respective variables. RV8 may need further evaluation or consideration for refinement in future analyses to strengthen its validity.



**Table 3.** Convergent Validity

Digital Competence		Government Support		Innovation		Religious Values		Government Support	
Item	Outer Loading	Item	Outer Loading	Item	Outer Loading	Item	Outer Loading	Item	Outer Loading
DC1	0,915	GS1	0,884	IV1	0,922	RV1	0,865	SSE1	0,818
DC2	0,925	GS2	0,909	IV2	0,941	RV2	0,817	SSE2	0,877
DC3	0,884	GS3	0,923	IV3	0,804	RV3	0,893	SSE3	0,854
DC4	0,882	GS4	0,912	IV4	0,940	RV4	0,880	SSE4	0,809
DC5	0,827	GS5	0,915	IV5	0,842	RV5	0,875	SSE5	0,899
DC6	0,892	GS6	0,883	IV6	0,959	RV6	0,873	SSE6	0,859
DC7	0,915	GS7	0,874	IV7	0,934	RV7	0,875	SSE7	0,836
DC8	0,931	GS8	0,812	IV8	0,944	RV8	0,710	SSE8	0,820
DC9	0,925	GS9	0,805					SSE9	0,856
DC10	0,926	GS10	0,780					SSE10	0,908

*Construct Reliability*

Based on Table 4, all constructs, including Digital Competence, Government Support, Innovation, Religious Values, and Sustainability of Sharia Economic Businesses, demonstrate strong reliability and validity. Each construct shows high Cronbach's Alpha, rho\_A, and Composite Reliability values above 0.70, indicating excellent internal consistency. Additionally, their Average Variance Extracted (AVE) values exceed the minimum threshold of 0.50, confirming adequate discriminant validity. The Moderating Effect (IV\*GS) stands out with perfect reliability and validity, as all metrics are at 1.000, highlighting flawless measurement reliability and distinctiveness across all constructs in the study.

**Table 4.** Construct Reliability

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digital Competence	0,975	0,976	0,978	0,815
Government Support	0,964	0,968	0,969	0,759
Innovation	0,971	0,971	0,975	0,832
Moderating Effect (IV*GS)	1,000	1,000	1,000	1,000
Religious Values	0,944	0,951	0,954	0,721
Sustainability of Sharia Economic Businesses	0,959	0,962	0,964	0,730

*Discriminant Validity*

Based on the table 5 provided for Discriminant Validity: The square root of AVE for each construct is greater than the correlations between latent variables, confirming adequate discriminant validity among the constructs. This indicates that each construct is sufficiently distinct from the others in the study, supporting their unique measurement as separate latent variables.

**Table 5.** Discriminant Validity

Constructs	Digital Competence	Government Support	Innovation	Religious Values	Sustainability of Sharia Economic Businesses
Digital Competence	<b>0,903</b>				
Government Support	0,523	<b>0,871</b>			
Innovation	0,608	0,638	<b>0,912</b>		
Moderating Effect (IV*GS)	-0,526	-0,500	-0,677		
Religious Values	0,499	0,655	0,700	<b>0,849</b>	
Sustainability of Sharia Economic Businesses	0,631	0,692	0,745	0,699	<b>0,854</b>

*Model Unidimensionality*

Based on Table 4, all constructs (Digital Competence, Government Support, Innovation, Religious Values, and Sustainability of Sharia Economic Businesses) demonstrate strong reliability with Cronbach's Alpha and Composite Reliability values exceeding 0.70. The perfect reliability of the Moderating Effect (IV\*GS) with a value of 1.000 across all metrics affirms the soundness of the measurement model. These results indicate that the items consistently measure their intended latent variables, ensuring validity for analyses in Sharia economic business contexts.

*Structural Model (Inner Model)*

The Inner Model in PLS-SEM is evaluated through key criteria including R<sup>2</sup> (Coefficient of Determination), Path Coefficients, f<sup>2</sup> (Effect Size), Q<sup>2</sup> (Predictive Relevance), and Model Fit. These metrics collectively assess the model's explanatory power, relationship strengths, predictive accuracy, and overall structural validity. The estimation results of the structural model (inner model) are shown in Figure 3.

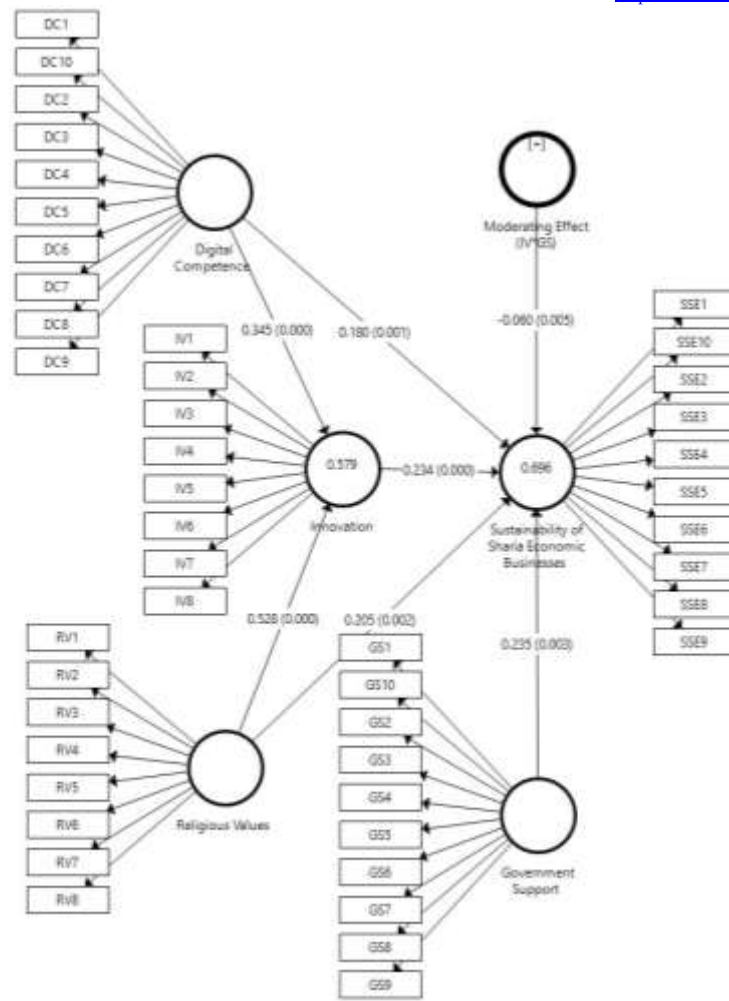


Figure 3. Structural Model (Inner Model)

Path Coefficients

Table 6. Path Coefficients

Direct Effects	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Digital Competence -> Innovation	0,345	5,487	0,000
Digital Competence -> Sustainability of Sharia Economic Businesses	0,180	3,256	0,001
Government Support -> Sustainability of Sharia Economic Businesses	0,235	2,989	0,003
Innovation -> Sustainability of Sharia Economic Businesses	0,234	3,593	0,000
Moderating Effect (IV*GS) -> Sustainability of Sharia Economic Businesses	-0,060	2,847	0,005
Religious Values -> Innovation	0,528	9,050	0,000
Religious Values -> Sustainability of Sharia Economic Businesses	0,205	3,104	0,002
Indirect Effects	Original Sample (O)	T Statistics ( O/STDEV )	P Values

Digital Competence -> Innovation -> Sustainability of Sharia Economic Businesses	0,081	3,021	0,003
Religious Values -> Innovation -> Sustainability of Sharia Economic Businesses	0,124	3,479	0,001
<b>Total Effects</b>	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Digital Competence -> Innovation	0,345	5,487	0,000
Digital Competence -> Sustainability of Sharia Economic Businesses	0,260	4,417	0,000
Government Support -> Sustainability of Sharia Economic Businesses	0,235	2,989	0,003
Innovation -> Sustainability of Sharia Economic Businesses	0,234	3,593	0,000
Moderating Effect (IV*GS) -> Sustainability of Sharia Economic Businesses	-0,060	2,847	0,005
Religious Values -> Innovation	0,528	9,050	0,000
Religious Values -> Sustainability of Sharia Economic Businesses	0,329	4,825	0,000

Table 6 shows significant direct effects: Digital Competence enhances Innovation ( $\beta = 0.345$ ,  $p < 0.001$ ) and Sustainability of Sharia Economic Businesses ( $\beta = 0.180$ ,  $p = 0.001$ ). Government Support also boosts sustainability ( $\beta = 0.235$ ,  $p = 0.003$ ), and Innovation contributes to it ( $\beta = 0.234$ ,  $p < 0.001$ ). The Moderating Effect of Innovation and Government Support has a negative impact ( $\beta = -0.060$ ,  $p = 0.005$ ). Religious Values positively influence Innovation ( $\beta = 0.528$ ,  $p < 0.001$ ) and sustainability ( $\beta = 0.205$ ,  $p = 0.002$ ). Indirect effects show Digital Competence (0.081,  $p = 0.003$ ) and Religious Values (0.124,  $p = 0.001$ ) impact sustainability through Innovation. Total effects confirm these findings, highlighting the crucial roles of Digital Competence, Government Support, Innovation, and Religious Values in fostering sustainability in Sharia-compliant businesses.

#### *R<sup>2</sup> (Coefficient of Determination)*

Table 7 shows that the R Square value for Innovation is 0.579, and for the Sustainability of Sharia Economic Businesses, it is 0.696, indicating that the model explains 57.9% and 69.6% of the variance in these constructs, respectively. The adjusted R Square values are 0.575 for Innovation and 0.688 for the Sustainability of Sharia Economic Businesses, confirming the robustness of the model. The high T Statistics and P Values of 0.000 for both constructs signify that the results are statistically significant, demonstrating the strong predictive power of the model.

**Table 7.** R Square and R Square Adjusted

<b>R Square</b>	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Innovation	0,579	6,620	0,000
Sustainability of Sharia Economic Businesses	0,696	9,249	0,000
<b>R Square Adjusted</b>	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Innovation	0,575	6,505	0,000
Sustainability of Sharia Economic Businesses	0,688	8,913	0,000

*f*<sup>2</sup> (Effect Size)

Table 8 shows that Digital Competence significantly affects Innovation ( $f^2 = 0.212$ ,  $p = 0.019$ ) but not directly business sustainability ( $f^2 = 0.062$ ,  $p = 0.126$ ). Government Support and Innovation themselves do not directly impact business sustainability ( $f^2 = 0.089$ ,  $p = 0.147$ ;  $f^2 = 0.061$ ,  $p = 0.116$ , respectively). The moderating effect of Government Support on the relationship between Innovation and business sustainability is not significant ( $f^2 = 0.043$ ,  $p = 0.058$ ). Religious Values significantly influence Innovation ( $f^2 = 0.498$ ,  $p = 0.001$ ) but not directly business sustainability ( $f^2 = 0.060$ ,  $p = 0.139$ ). These findings emphasize the critical roles of Digital Competence and Religious Values in driving innovation, crucial for the sustainability of Sharia Economic Businesses.

**Table 8.** Effect Size

f Square	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Digital Competence -> Innovation	0,212	2,343	0,019
Digital Competence -> Sustainability of Sharia Economic Businesses	0,062	1,532	0,126
Government Support -> Sustainability of Sharia Economic Businesses	0,089	1,452	0,147
Innovation -> Sustainability of Sharia Economic Businesses	0,061	1,575	0,116
Moderating Effect (IV*GS) -> Sustainability of Sharia Economic Businesses	0,043	1,903	0,058
Religious Values -> Innovation	0,498	3,227	0,001
Religious Values -> Sustainability of Sharia Economic Businesses	0,060	1,482	0,139

*Q*<sup>2</sup> (Predictive Relevance)

Table 9 demonstrates the predictive relevance ( $Q^2$ ) of the constructs Innovation and Sustainability of Sharia Economic Businesses. The  $Q^2$  values for Innovation (0.472) and Sustainability of Sharia Economic Businesses (0.496) are both substantially above zero, indicating that the model has good predictive relevance for these constructs. The SSO and SSE values for Digital Competence, Government Support, the Moderating Effect (IV\*GS), and Religious Values are equal, suggesting these constructs do not contribute to the predictive relevance in this model. Overall, the model effectively predicts Innovation and the Sustainability of Sharia Economic Businesses.

**Table 9.**  $Q^2$  (Predictive Relevance)

Construct	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Digital Competence	1990,000	1990,000	
Government Support	1990,000	1990,000	
Innovation	1592,000	840,018	0,472
Moderating Effect (IV*GS)	199,000	199,000	
Religious Values	1592,000	1592,000	
Sustainability of Sharia Economic Businesses	1990,000	1002,793	0,496

*Model Fit*

From Table 10, it is evident that the saturated model outperforms the estimated model across several fit indices. The saturated model shows a lower SRMR (0.059 vs. 0.072), indicating better overall fit. Additionally, it exhibits lower values for d\_ULS (3.762 vs. 5.544) and d\_G (3.210 vs. 3.491), suggesting closer proximity to the observed data compared to the estimated model. Despite a slightly higher Chi-Square for the saturated model (2999.549 vs. 3049.070), which is less meaningful given large sample sizes, the NFI is marginally better for the saturated model (0.775 vs. 0.771), indicating stronger explanatory power of observed relationships. In conclusion, the saturated model demonstrates superior fit according to these criteria, suggesting it provides a more accurate representation of the data compared to the estimated model.

**Table 10.** Model Fit

Criteria	Saturated Model	Estimated Model
SRMR	0,059	0,072
d_ULS	3,762	5,544
d_G	3,210	3,491
Chi-Square	2999,549	3049,070
NFI	0,775	0,771

**Discussion**

Digital competence significantly enhances innovation, indicating that higher digital skills among employees boost innovation capacity. This aligns with research by [Khin and Ho, \(2019\)](#) and [Huu, \(2023\)](#), suggesting organizations should invest in digital training to foster innovation. Religious values also positively influence innovation, fostering a conducive environment for creativity, as supported by studies by [Farmaki et al., \(2020\)](#) and [Punuh and Sirine, \(2024\)](#). Organizations should integrate ethical principles to boost innovation. Digital competence positively impacts the sustainability of Sharia economic businesses, emphasizing the role of digital skills in promoting sustainability within Sharia frameworks, as shown by [Bican and Brem, \(2020\)](#) and [Mahyarni and Okfalisa, \(2024\)](#). Religious values significantly influence the sustainability of Sharia economic businesses, with studies by [Hajiheydari et al., \(2023\)](#) and [Utami et al., \(2020\)](#) highlighting the integration of ethical principles in promoting sustainable practices in Sharia contexts. Innovation drives competitiveness and sustainability in Sharia-compliant businesses, as noted by [Prakasa, \(2022\)](#) and [Hendriarto, \(2021\)](#). Government support also enhances sustainability, with studies by [\(Prasetyo, Effendi and Arsyanti, 2022\)](#) and [\(Trimulato, Nafis and Amalia, 2022\)](#) highlighting the importance of regulatory support. Digital competence impacts sustainability through innovation, with [Prakasa, \(2022\)](#) emphasizing innovation as a mediator between digital skills and sustainable business outcomes. Religious values also influence sustainability through innovation, with studies by [Zhou, Lu and Kumar Mangla, \(2024\)](#) and [Haerunnisa and Sugitanata, \(2024\)](#) showing that innovation mediates the impact of ethical principles on sustainability. The moderating effect of innovation and government support on sustainability suggests the need to balance internal innovation efforts with external policies for optimal sustainability in Sharia businesses, as indicated by [Azmi, Non and Aziz, \(2020\)](#) and [Haidar, \(2024\)](#).

*Implication of this Study**Theoretical Implication*

The findings highlight several key theoretical implications. Firstly, the significant direct effects observed—such as Digital Competence and Religious Values positively influencing Innovation and subsequently enhancing the Sustainability of Sharia Economic Businesses—underscore the importance of these factors in organizational theory. These results align with existing literature emphasizing the pivotal role of digital skills and ethical values in fostering innovative environments and sustainable business practices. Moreover, the mediation role of Innovation further elucidates how these constructs interact, suggesting a pathway

through which Digital Competence and Religious Values translate into sustainable outcomes. The moderating effect of IV\*GS also contributes theoretically by revealing the nuanced dynamics between internal innovation efforts and external governmental support, showcasing how their combined influence can impact sustainability outcomes in Sharia-compliant contexts.

### *Practical Implication*

Practically, these findings offer actionable insights for Sharia-compliant businesses aiming to enhance sustainability. Businesses should invest in digital competence development and foster a corporate culture that upholds religious values to create an innovative and sustainable ecosystem. The moderating effect of government support highlights the importance of strategic collaboration with governmental entities. Businesses should leverage supportive policies and incentives while aligning their innovation strategies with regulatory frameworks. Overall, integrating digital skills, ethical principles, and governmental partnerships is crucial for achieving long-term sustainability in Sharia-compliant economic environments.

### *Limitation of This Study*

This study has several limitations. It focuses on the Province of Aceh, potentially limiting generalizability. The use of structured questionnaires may miss qualitative insights, and the cross-sectional design restricts the ability to establish causal relationships over time. Additionally, self-reported data may introduce response biases. Future research should expand the geographic scope, use mixed-method approaches, adopt longitudinal designs, and validate findings with objective performance metrics to enhance robustness.

## **Conclusion**

This study examines how digital competence and religious values impact the sustainability of Sharia economic businesses in the digital era, with innovation as a mediator and government support as a moderator. Findings show that digital competence and religious values are crucial for fostering innovation and sustainability. Innovation is a key mechanism through which these factors influence sustainability. Practically, organizations should develop digital skills and uphold ethical standards to enhance innovation and long-term viability. Government support is vital in aligning internal innovation with regulatory frameworks. These insights help Sharia economic businesses leverage digital advancements and ethical values for sustainable growth.

## **Credit Authorship Contribution Statement**

We acknowledge Prof. Dr. Hermant Fithra for his support as the Rector of Malikussaleh University (Unimal), Jullimursyida, Ph.D., for her role as Dean of the Faculty of Economics and Business at Unimal, and Dr. Ir. Mawardati for her guidance as the Head of the Community Service Institute at Unimal, for their financial support, guidance, and motivation. We also thank all those involved in supporting this research and our colleagues at Unimal.

## **Declaration of Competing Interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## **Data Availability**

Data will be made available on request.

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