

Qana'ah as the Spirit of Islamic Economics in Realizing Sustainable Agricultural Practices in Dua Boccoe District

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ABSTRACT

This research is motivated by the need for a spiritual approach to addressing the ecological crisis caused by chemical-based agriculture. The Islamic value of *qana'ah*, reflecting simplicity and sufficiency, is believed to be able to drive behavioral changes in farmers toward sustainable organic farming practices. The purpose of this study is to analyze the mediating role of *qana'ah* in the relationship between social norms and access to information, as influenced by technological innovation, on organic farming practices. The study used a quantitative approach using the SEM-PLS technique with 155 farmers in Dua Boccoe District, Bone Regency. The results indicate that *qana'ah* significantly mediates the influence of social norms and access to information on organic farming practices. Furthermore, technological innovation has an indirect effect on farming practices through improving social norms and access to information. In conclusion, *qana'ah* has proven to be a strategic value that integrates spiritual, social, and informational aspects in supporting ecological transformation in the agricultural sector. This study recommends the integration of *qana'ah* values into community-based sustainable agricultural education and policies.

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1. Introduction

In response to the growing challenges of environmental degradation caused by conventional, chemically intensive agricultural practices, organic farming has emerged as a more environmentally friendly and sustainable alternative. Nevertheless, the adoption of organic farming among rural farmers remains hindered by several barriers, including limited access to information, prevailing social norms, and an economic orientation that tends to prioritize immediate profits. Within this context, Islamic spiritual values such as *qana'ah* which denotes contentment, gratitude, and the rejection of greed hold significant potential as an ethical foundation for promoting sustainable agricultural practices. Unfortunately, the role of *qana'ah* in the context of organic farming remains underexplored in scientific literature, despite observable practices that align with the principles of environmental sustainability and ecological balance.

Farmers who embody the value of *qana'ah* tend to adopt more prudent and responsible agricultural behaviors. They are more likely to use organic fertilizers and

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natural compost rather than synthetic inputs that may degrade soil fertility over time (Zendrato et al., 2024). Their intentional avoidance of excessive chemical use not only preserves ecological integrity but also protects consumer health (Weningtyas & Widuri, 2022). Moreover, their efficient resource management through crop rotation and water conservation techniques demonstrates a commitment to maintaining soil health and ecological resilience for future generations (Saimona et al., 2024). These farmers prioritize long-term well-being and environmental preservation over short-term economic gains (Nurida & Sitorus, 2024). Such practices illustrate that *qana'ah* is not merely a personal moral value but also functions as a strategic approach to sustainability in organic agriculture.

Theoretically, this study is grounded in two main frameworks: the Theory of Sustainable Consumer Behavior and the Green Economy Theory. The former explains how individual values, including spirituality, influence environmentally conscious consumption and production behaviors. Within this framework, *qana'ah* fosters anti-consumerist attitudes and promotes appreciation for sustainable agricultural processes and outcomes (Prayitno et al., 2019). The Green Economy Theory, on the other hand, emphasizes the balance between economic growth and environmental stewardship, with *qana'ah* serving as an ethical principle guiding long-term, sustainability-oriented agricultural decisions (Laksmi & Arjawa, 2023).

Although previous studies have examined *qana'ah* in various contexts including household economics (Ahmetya et al., 2023), entrepreneurship (Wahyuni et al., 2022), and psychological well-being (Romli, 2024) research specifically investigating the role of *qana'ah* in organic farming practices remains limited. This indicates a significant gap in the literature, particularly concerning the integration of spiritual values into agricultural practices. Given that rural farming communities are often closely connected to religious and cultural traditions, this gap highlights a missed opportunity to utilize spiritually grounded ethical frameworks for ecological sustainability.

To address this research gap, the present study aims to explore how *qana'ah* may serve as a mediating variable in the relationship between social norms and access to information in shaping organic farming practices among rural farmers. Social norms reflect the collective values of rural communities, influencing farmers' perspectives on sustainable agriculture, while access to information serves as a critical enabler for understanding the techniques and benefits of organic farming. However, in the absence of spiritual guidance such as *qana'ah*, the advancement of technology and knowledge may inadvertently lead to resource exploitation. Therefore, through an integrative approach that connects social values, information access, and spirituality, this study seeks to offer new insights into how *qana'ah* contributes to the development of responsible, ethical, and sustainable agricultural practices.

2. Literature Review

2.1. *Qana'ah* and Organic Farming Practices

Organic farming is positioned as a key strategy for achieving sustainability goals, and policy frameworks that promote organic agriculture often leverage social norms, legal requirements, and informational campaigns to encourage adoption. Raising consumer awareness and integrating food literacy into education are recommended to foster demand for organic products, which aligns with qana'ah principles of sufficiency and environmental stewardship, while the organic movement also emphasizes collaboration and social movement aspects, further reinforcing the role of collective norms (Eyhorn et al., 2019). *Qana'ah* means feeling content, not being greedy, and always being grateful for the sustenance one receives, and this attitude forms a moral foundation that is in line with the principles of organic farming, namely avoiding the exploitation of natural resources, reducing dependence on chemicals, and maintaining ecosystem balance (Andriani & Mz, 2019; Rahmawati et al., 2022). In organic farming practices, the value of qana'ah encourages farmers to manage their land wisely, avoid excessive exploitation, and use resources efficiently without relying on synthetic chemicals that damage the ecosystem (Ghufron & Ishomuddin, 2021).

From an interdisciplinary approach, the Theory of Sustainable Consumer Behavior is grounded in the foundational contributions of several key scholars, including Ajzen (1991) through the Theory of Planned Behavior, Stern (2000) with the Value-Belief-Norm Theory, and Schwartz (1977) through the Norm Activation Theory. Moreover, the understanding of sustainable consumption behavior is further strengthened by Shove (2010) through the Social Practice Theory, which views behavior as the result of interactions between social practices and habitual actions. This conceptual framework is enriched by various models of green consumer behavior developed by Peattie (2010), Ottman (2017), and Biswas & Roy (2015), which highlight the dynamics of green marketing, consumer preferences, and the factors influencing decision-making in the consumption of environmentally friendly products. In this context, qana'ah can be understood as a value-based factor that encourages environmentally responsible production and consumption behaviors. Farmers who uphold qana'ah tend to reject excessive use of chemical fertilizers, value soil fertility, and show greater patience in accepting the results of organic agriculture, which naturally requires a longer process. From the perspective of Green Economic Theory, organic practices driven by qana'ah reflect resource efficiency, pollution reduction, and the enhancement of social welfare. Thus, qana'ah is not only a spiritual concept but also a practical ethical principle that strengthens agricultural sustainability (Anwar, 2020).

H₁: *Qana'ah* Has a Significant Influence on Organic Farming Practices

2.2. Social Norms, Acces to Information and *Qana'ah*

Social norms and access to information complement each other in shaping *qana'ah*. Social norms emphasize simplicity, togetherness, and collective

responsibility. When communities encourage their citizens not to live extravagantly, the value of *qana'ah* is more easily instilled (Ghufron & Ishomuddin, 2021). On the other hand, access to information through religious literacy, lectures, and digital technology broadens people's understanding of the importance of a frugal, grateful, and sustainable lifestyle (Rahmawati et al., 2022).

These two factors work together: social norms create moral pressure, while access to information provides cognitive justification. As a result, *qana'ah* is not only a tradition passed down from generation to generation, but also a rational attitude that is understood in a modern context. With strong social norms and information, people do not easily fall into consumptive patterns, but choose to live modestly in accordance with the teachings of *qana'ah* (Fitrianta & Hardew, 2024).

H₂: Social norms and access to information have a significant influence on *qana'ah*

2.3. Social Norm and *Qana'ah*

Social norms play a critical role in the adoption of sustainable and organic farming practices. Farmers are influenced by the behaviors and opinions of their peers; when a significant number of neighboring farmers adopt sustainable practices, others are more likely to follow, perceiving this as the local norm. This effect is especially strong in collectivist cultures, where conformity to group behavior is valued. Social comparison and conditional cooperation (willingness to act if others do) further reinforce these behaviors, making social norms a powerful driver for the spread of *qana'ah*-like attitudes in farming communities (Dessart et al., 2019). Social norms are unwritten rules that guide people's behavior. In an environment that values simplicity, social norms can reinforce *qana'ah* by suppressing consumptive behavior. Individuals who are raised in simple communities will find it easier to internalize *qana'ah* as their daily ethics (Andriani & Mz, 2019). Research in Islamic boarding schools shows that the Kosmara (Kos Makan Santri) program instills *qana'ah* and has succeeded in reducing the consumptive behavior of students, while strengthening the economic independence of Islamic boarding schools (Ghufron & Ishomuddin, 2021). This proves that social norms play a role as the foundation for the growth of *qana'ah*. Conversely, *qana'ah* also strengthens social norms by fostering solidarity and social harmony (Rahmawati et al., 2022).

H₃: Social norms have a significant influence on *qana'ah*

2.4. Access to Information and *Qana'ah*

Access to information through social learning, information sharing, and media significantly affects the adoption of sustainable behaviors. Farmers often rely on information from peers, extension services, and media campaigns to understand the benefits and risks of new practices. Informational campaigns and educational programs can raise awareness and help align farmer perceptions with the realities of sustainable agriculture, supporting the internalization of *qana'ah* values (Yamin et al., 2019). Access to information plays an important role in strengthening *qana'ah*. Through various sources of information, such as books, lectures, literature, and digital media, individuals gain an understanding that *qana'ah* is not a passive attitude, but rather a path to a balanced life (Hariyadi et al., 2021). Research shows that access to

information can reduce consumptive behavior. Anggara Fitrianta & Kutub Hardew (2024), found a negative relationship between *qana'ah* and the consumptive behavior of students living away from home ($r = -0.423$), meaning that the higher the *qana'ah*, the lower the level of consumptive behavior. Other studies confirm that spiritual understanding based on the Qur'an can increase psychological resilience and strengthen gratitude (Hariyadi et al., 2021).

H₄: Access to information has a significant influence on *qana'ah*

2.5. Technological Innovation and Social Norms

Technological innovation has a dual impact on social norms. On the one hand, digital technology accelerates the spread of positive values such as healthy lifestyles and sustainability. Social campaigns through online media can change people's mindsets, shape new norms, and raise ecological awareness. However, technology can also reinforce a culture of consumerism if not managed properly (Ghufron & Ishomuddin, 2021). Thus, the influence of technological innovation on social norms is highly dependent on information curation and the quality of community leadership. When directed towards education and sustainability, technology can reinforce social norms that support *qana'ah*.

H₅: Technological innovation has a significant influence on social norms

2.6. Technological Innovation and Acces to Information

Technological innovation, including new farming techniques and digital information channels, can facilitate the adoption of *qanaah*-aligned behaviors by making sustainable practices more accessible and efficient. While direct discussion of *qanaah* in technological contexts is limited, research suggests that innovations in information dissemination and farming technology can support behavioral change and the spread of sustainable norms (Yamin et al., 2019). The relationship between technological innovation and access to information is very close. Technology expands the scope of information, increases the speed of dissemination, and enables people to access practical and spiritual knowledge. For example, farmers can learn organic farming techniques through digital applications or social media (Qona'ah et al., 2025). In the framework of innovation diffusion, technology is the main channel for disseminating information that drives behavioral change. With technology, communities can more easily understand environmentally friendly practices, strengthen awareness, and ultimately form an attitude of *qana'ah*.

H₆: Technological innovation has a significant influence on access to information

2.7. Social Norms and Acces to Information as Mediators

Social norms and access to information act as mediators in the relationship between technological innovation and *qana'ah*. Technology does not automatically foster *qana'ah*, but through the dissemination of appropriate information and the

reinforcement of norms, the value of *qana'ah* can be internalized (Rahmawati et al., 2022). For example, Islamic boarding schools that utilize technology to educate students about simplicity are able to strengthen social norms and foster *qana'ah*. Thus, social norms and information become a bridge between technological progress and the formation of spiritual ethics

H₇: Social norms and access to information serve as mediating variables in the relationship between technological innovation and *qana'ah*

2.8. *Qana'ah* as Mediators

Qana'ah functions as a mediator between social norms/access to information and organic farming practices. Social norms and information shape a simple lifestyle, then *qana'ah* translates this into real behavior, such as avoiding chemical fertilizers and preferring organic fertilizers. Research shows that *qana'ah* is positively related to life satisfaction and is able to suppress consumptive behavior (Fitrianta & Hardew, 2024). Thus, *qana'ah* is not only an independent factor but also an intervening variable that strengthens the external influence on sustainable behavior.

H₈: *Qana'ah* serves as a mediating variable in the relationship between social norms and organic farming practices; and access to information and organic farming practices.

2.9. Conceptual Framework

The conceptual framework of this study examines how social norms, access to information, and technological innovation influence *qana'ah*, which in turn affects the improvement of organic farming practices (OFP). In the context of Islamic economics and rural community development, *qana'ah* reflecting contentment, moderation, and gratitude serves as an ethical foundation that guides farmers toward responsible, sustainable, and environmentally friendly agricultural behavior. Thus, organic farming practices are not only driven by technological and informational factors but are also shaped by spiritual and social dimensions embedded in *qana'ah*.

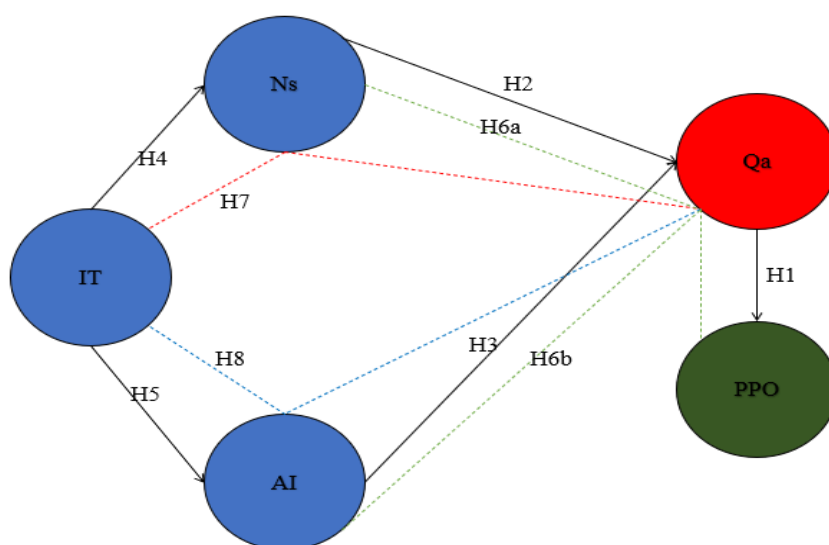


Figure 1. Diagram Variable

3. Research Method

The research method was designed using an integrative approach that combines quantitative methodology with an Islamic economic perspective. The quantitative dimension was employed through the distribution of structured questionnaires to analyze the relationships among research variables by applying Partial Least Squares–Structural Equation Modeling (PLS-SEM) using SmartPLS software. This approach allows the study to examine causal relationships between independent and dependent variables, as well as the mediating role of intervening variables. In parallel, the Islamic economic perspective was applied to conceptually investigate the role of *qana'ah* in organic farming practices, particularly in relation to spirituality, environmental sustainability, and the principle of balance embedded in Islamic teachings. By integrating these two perspectives, the research does not merely focus on empirical testing but also aligns the findings with normative principles derived from Islamic values, thereby providing a more comprehensive understanding.

The population of this study consisted of farmers in the Dua Boccoe District who had adopted or were potentially adopting organic farming practices. The population was categorized as infinite because the exact number could not be precisely determined. To obtain a representative sample, this study applied the Observation to Parameter (N:p) ratio, as recommended in PLS-SEM analysis. With 15 parameters and a minimum ratio of 10:1, the required sample size was at least 150 respondents (Badan Pusat Statistik Kabupaten Bone, 2024). The sample was selected using a stratified cluster sampling technique based on geographic area, covering five villages: Melle, Cabbeng, Pattiro, Laccori, and Tempe. Therefore, each village had a minimum of 30 respondents. The selection of these villages was justified by data

availability, social diversity, and economic contexts that were considered to reflect the characteristics of the population.

Data collection was conducted using structured questionnaires with a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” The research instrument was developed based on the operationalization framework of variables, which included social norms, access to information, technological innovation, *qana'ah*, and organic farming practices. The development of the questionnaire followed several stages: variable identification, indicator determination, scale selection, and formulation of questionnaire items, as suggested by Sugiyono (2019). This is further illustrated in the table below:

Table 1. Variable Measurement Table

No.	Variable	Indicator	Symbol	Scale
1	Social Norms (NS)	1. Compliance with organic practices 2. Compliance with regulations 3. Collective participation	NS1 NS2 NS3	Likert
2	Information Access (IA)	4. Availability of information 5. Ability to access information 6. Utilization of information	IA1 IA2 IA3	Likert
3	Technological Innovation (TI)	7. Technology adoption 8. Technology utilization 9. Technology development	TI1 TI2 TI3	Likert
4	Organic Farming Practices (OFP)	10. Use of natural materials 11. Environmental conservation 12. Certification and marketing of organic products	OFP1 OFP2 OFP3	Likert
5	Qana'ah (Qa)	13. Feeling sufficient 14. Moderation 15. Gratitude	Qa1 Qa2 Qa3	Likert

Source: Compiled and processed from various sources, 2025

In addition to primary data obtained from the questionnaires, the study also utilized secondary data such as official statistics, policy documents, and relevant academic literature (Badan Pusat Statistik Kabupaten Bone, 2024). To ensure the quality of the instrument, validity and reliability were assessed using construct validity tests, outer loadings, Average Variance Extracted (AVE), and reliability tests through Cronbach's Alpha and Composite Reliability.

Data analysis proceeded in several stages. First, data were tabulated and organized using Microsoft Excel. Subsequently, the measurement model (outer model) was tested to evaluate construct validity and reliability. This was followed by testing the structural model (inner model) to assess the research hypotheses. Bootstrapping in PLS-SEM was employed to estimate both direct and indirect effects and to evaluate the mediating role of *qana'ah*. Model evaluation considered the R-Square values to measure predictive power, the f-square to assess effect size, and

Goodness-of-Fit criteria such as SRMR, NFI, and Chi-square. Interpretation of the results was based on the significance of path coefficients, with thresholds of $p \leq 0.05$ and t -statistics ≥ 1.96 (Hair et al., 2019)

4. Result

4.1. Responden Characteristics

This study aims to determine the role of *qana'ah* mediation in organic farming practices in rural communities. *Qana'ah*, which reflects an attitude of acceptance and contentment, is believed to have an influence in encouraging sustainable agricultural behavior. The study was conducted in Dua Boccoe District, involving 155 respondents from the farming community. The characteristics of the respondents observed included gender, age, education level, and income level.

This data provides an overview of the respondents' socioeconomic conditions and serves as the basis for analyzing the role of *qana'ah* in mediating organic farming practices. The complete details are presented in Table 1 below.

Table 2. Characteristics of Respondents

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	113	72,9
	Female	42	27,1
Age	20-30 years	49	31,6
	31-40 years	34	21,9
	41-50 years	55	35,5
	51-60 years	17	11
Education Level	Primary School	42	27,1
	Junior High	25	16,1
	Senior High	66	42,6
	Bachelor's Degree	19	12,3
	Others	3	1,9
Monthly Income	Below 1 million IDR	26	16,8
	1-2 million IDR	33	21,3
	2-3 million IDR	21	13,5
	Above 3 million IDR	17	11
	Uncertain/Others	58	37,4

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025

The characteristics of the respondents in this study indicate that there were 155 respondents, consisting of 72.9% men and 27.1% women. Based on age groups, the majority of respondents were in the 41-50 age range (35.5%), followed by the 20-30 age group (31.6%), 31-40 age group (21.9%), and 51-60 age group (11%). In terms of education, the majority of respondents were high school/vocational school graduates (42.6%), followed by elementary school/Islamic elementary school graduates (27.1%), junior high school/Islamic junior high school graduates (16.1%), university graduates (12.3%), and other levels (1.9%). In terms of monthly income, 16.8% of respondents had an income below 1 million rupiah, 21.3% were in the 1-2 million range, 13.5% between 2-3 million, 11% above 3 million, and 37.4% did not have a fixed income.

Overall, this data reflects that the majority of respondents come from lower-middle socioeconomic backgrounds with relatively limited education and income levels

4.2. Measurement Model Testing

Measurement Model Testing is used to express the relationship between latent variables (endogenous and exogenous) and their indicators, or it can also be said that the Measurement Model defines how each indicator is related to its latent variable. The test results are presented as shown in Figure 1.

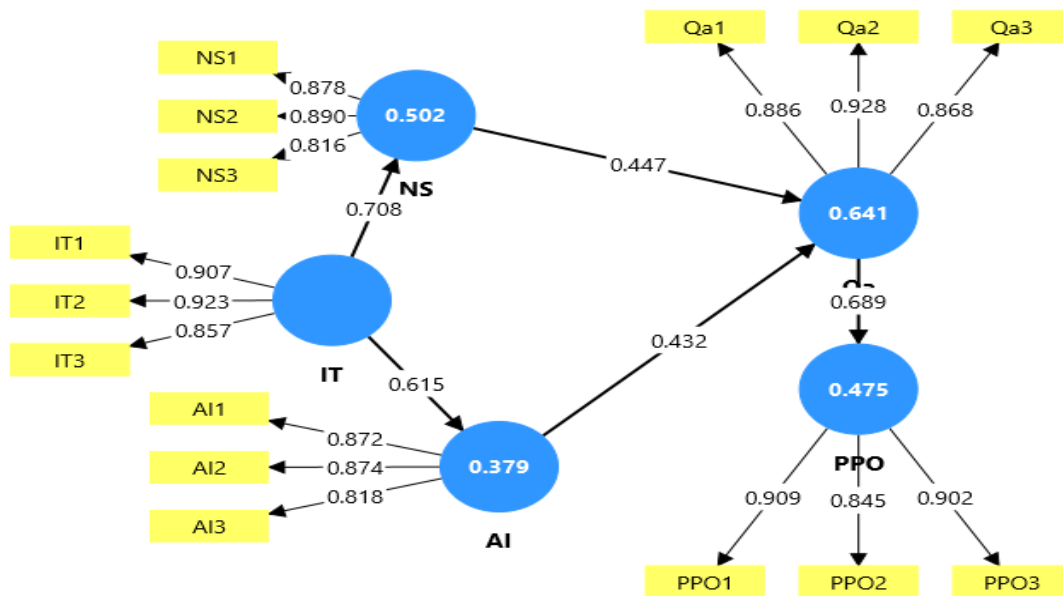


Figure 1. Measurement Model Test Results

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025

The explanation of the measurement model test results as presented in Figure 1 can be described as follows:

4.3. Validity and Reliability Testing

This testing was conducted through factor loading testing, Composite Reliability, Average Variance Extracted (AVE), and Cronbach's Alpha. Factor loadings exceeding 0.5 are considered good values, Composite Reliability is used to assess consistency between items in a construct, and values above 0.7 indicate good reliability. AVE is used to determine how much of the variance in the indicators can be explained by the construct, with values above 0.5 considered sufficiently high. Meanwhile, Cronbach's Alpha is used to measure the consistency of each item within the construct, and values above 0.6 are considered adequate.

Table 3. Validity and Reliability Test

Construct	Loading Factor	CA	CR	AVE	Remarks
Social Norm	> 0.50	0.816	0.830	0.743	Valid & Reliable
Information Access	> 0.50	0.877	0.816	0.731	Valid & Reliable
Technological Innovation	> 0.50	0.827	0.877	0.803	Valid & Reliable
<i>Qana'ah</i>	> 0.50	0.864	0.883	0.800	Valid & Reliable
Organic Farming Practice	> 0.50	0.875	0.881	0.785	Valid & Reliable

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025.

The research instrument was tested using Confirmatory Factor Analysis (CFA) with SmartPLS in Table 2. The results showed that all indicators had a loading value > 0.5, Cronbach's alpha > 0.6, composite reliability > 0.7, and AVE > 0.5, so the instrument was declared valid and reliable.

4.4. Structural Model Testing

Structural model testing is conducted to determine the direct and indirect relationships between endogenous latent variables and exogenous latent variables used, and the results are used as the basis for presenting the research findings. The results of structural model testing can be presented as shown in Figure 2.

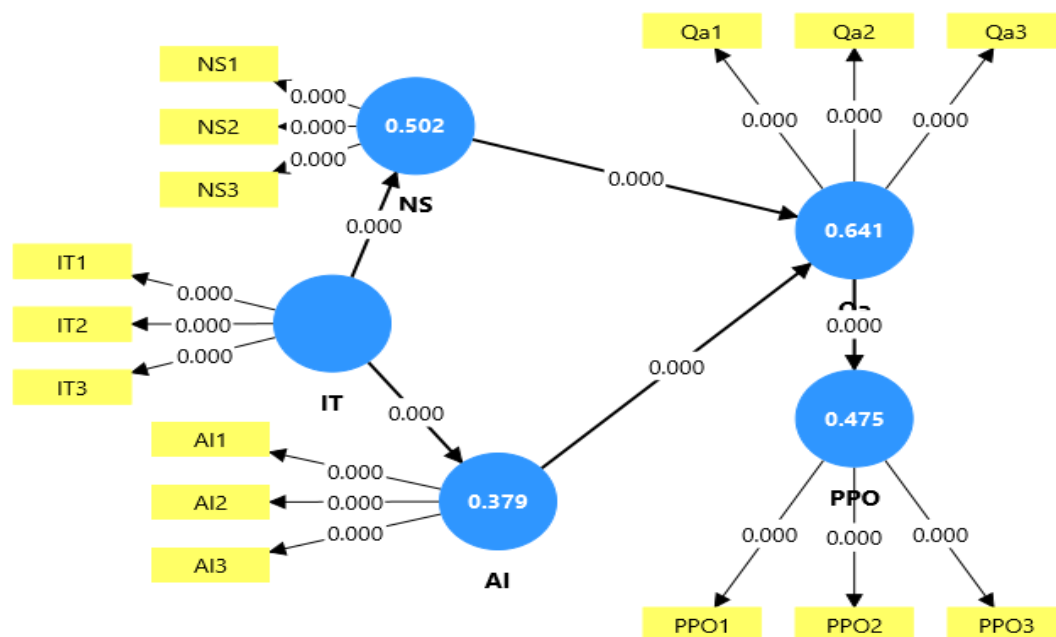


Figure 2. Structural Model Testing Results

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025

The results of the Structural Model testing using Smart-PLS4 software, as presented in Figure 2, can be summarized as follows:

4.5. Results of Direct and Indirect Effect Tests

The results of the effect test using the SEM-PLS model show that all exogenous variables have a significant effect on endogenous variables, both directly and indirectly. *Qana'ah* is proven to act as a mediator in the relationship between social norms and access to information on organic farming practices.

Table 4. Path Coefficient Direct Effect

Variable Relationship	t-value	p-value	Remarks
Social Norm → <i>Qana'ah</i>	5.223	0.000	Significant
Information Access → <i>Qana'ah</i>	5.821	0.000	Significant
Technological Innovation → Social Norm	9.402	0.000	Significant
Technological Innovation → Information Access	6.228	0.000	Significant
<i>Qana'ah</i> → Organic Farming Practice	11.073	0.000	Significant

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025

Based on Table 4, the direct relationship between variables is statistically significant. These findings indicate that *qana'ah* has a direct influence on organic farming practices. This means that the higher the level of *qana'ah*, as reflected in attitudes of acceptance, gratitude, and simple living, the greater the tendency for farmers to practice sustainable organic farming. Additionally, social norms, access to information, and technological innovation have also been proven to significantly influence farmers' levels of *qana'ah*. This means that a supportive social environment, ease of accessing information, and the use of appropriate technology all contribute to strengthening farmers' attitudes of *qana'ah*. Not only that, technological innovation also has a direct influence on social norms and access to information, which shows that technological advances not only have an impact on technical aspects, but also encourage the formation of social culture and improve the quality of information.

Table 5. Path Coefficient Indirect Effect

Variable Relationship	t-value	p-value	Remarks
Social Norm → Organic Farming Practice	4.442	0.000	Significant (via <i>Qana'ah</i>)
Information Access → Organic Farming Practice	4.842	0.000	Significant (via <i>Qana'ah</i>)
Technological Innovation → <i>Qana'ah</i>	3.936	0.000	Significant (via Social Norm)
Technological Innovation → <i>Qana'ah</i>	4.375	0.000	Significant (via Information Access)

Source: Primary data (questionnaire) processed using Smart PLS 4, 2025

Based on Table 5, the indirect pathway, the results of the study indicate that social norms and access to information influence organic farming practices through the mediating role of *qana'ah*. In other words, although neither has a direct influence on organic farming practices, both contribute significantly to shaping the attitude of *qana'ah*, which ultimately encourages the adoption of organic farming practices. Furthermore, technological innovation also indirectly influences *qana'ah* through two mediating channels, namely social norms and access to information. These findings confirm that the strengthening of the attitude of *qana'ah* is influenced by the interrelationship between social and technological factors.

5. Discussion

5.1. Technological Innovation and Acces to Information

The results of this study indicate that technological innovation has a significant influence on improving information access among farmers. Within the framework of the Theory of Sustainable Consumer Behavior, technology is viewed as an external factor that drives behavioral change through the ease of obtaining information and raising awareness of environmental issues (Daly & Farley, 2011). Digital technologies such as social media, agricultural applications, and online education platforms have shortened the distance between knowledge and field practice, especially in the context of organic farming. Farmers who previously had limited access to information can now learn about environmentally friendly farming techniques, planting systems without synthetic pesticides, and even Islamic spirituality concepts that are integrated with environmental sustainability.

In the context of this study, technological innovation has a significant influence on improving access to information among farmers because farmers in the study area tend to still rely on informal and local networks to access information, such as extension workers, religious leaders, and fellow farmers. When technology is introduced and integrated into their social interaction patterns, it strengthens previously limited sources of information. Access to digital media bridges the information gap between rural areas and innovation hubs, and since the information received is often linked to religious values or local wisdom, its acceptance is higher. Therefore, contextual and culturally relevant technological innovations are key factors in explaining why access to information has increased significantly in response to technological advancements in the field.

This finding is reinforced by research conducted by Sugihono et al., (2024), which shows that the use of digital technology increases farmers' information capacity and accelerates data-driven decision-making and ecological values. Technological innovation in this context not only serves as a means of production but also as a tool for communication and education that can transform farmers' thinking from merely pursuing maximum yields to becoming agents of social change who consider long-term impacts.

5.2. The Impact of Technological Innovation on Social Norms

The impact of technological innovation on social norms in this study shows that digital technology plays an active role in shaping and strengthening social values that support sustainability among farmers. Within the framework of Green Economics Theory, digital transformation not only contributes to economic efficiency but also to the formation of a more environmentally conscious social culture. Technological innovations, such as the use of agricultural applications, social media, and online educational platforms, enable rapid and widespread information exchange, which in turn creates collective awareness of the importance of environmentally friendly and ethical agricultural practices (Thøgersen, 2005). When information about organic farming, soil conservation, and spiritual values is disseminated simultaneously,

technology also becomes an agent in shaping new social norms within agricultural communities.

In the context of this study, technological innovation has a significant influence on improving social norms among farmers because the farming community in the study area still upholds the values of collectivity and social cohesion. When technology serves as a channel for disseminating values, its influence becomes even stronger because the messages conveyed through technology are often associated with local values, religion, and community spirit. Information technology expands social interaction spaces, strengthens collective discourse, and facilitates the formation of new norms relevant to modern challenges such as climate change and environmental degradation. Therefore, the success of technological innovations in influencing social norms is not only due to their technological sophistication but also their ability to adapt to existing social structures and reinforce values of sustainability that have long been culturally and spiritually upheld.

This finding is in line with Bajac et al. (2023), research, which emphasizes that the use of information technology not only serves as an educational tool but also as a unifier of perceptions and social beliefs regarding sustainable agricultural practices. In other words, technological innovation expands the space for social dialogue, brings together various perspectives, and builds collective consensus on the values of sustainability, simplicity, and ecological responsibility. This process creates new social norms – norms that are not only rooted in tradition but also enriched by scientific and spiritual information widely disseminated through technology. This indicates that cultural shifts do not originate solely from external pressures but also from the internalization of information through repetitive and structured processes mediated by technology.

5.3. The Influence of Information Acces on *Qana'ah*

The influence of information access on *qana'ah* shows a strong relationship between the ease of obtaining information and the formation of spiritual attitudes such as contentment, simplicity, and gratitude. Within the framework of the Theory of Sustainable Consumer Behavior, information is a fundamental element that facilitates the cognitive process within individuals before making consumption decisions. When the information received includes ethical, sustainable, and spiritual dimensions, it triggers an internalization of values that encourages individuals to avoid excessive consumption and instead opt for a more modest lifestyle (Daly & Farley, 2011). Access to quality information enables farmers to understand that excessive consumption and production practices not only impact environmental sustainability but also disrupt inner and social balance.

In the context of this study, access to information has a significant influence on increasing *qana'ah* among farmers because farmers in the study area have begun to connect with new sources of information through technological developments and extension networks. In this situation, information containing *qana'ah* values is more easily accepted because it is applicable, contextual, and reinforced by religious narratives that are deeply rooted in their lives. Values such as “enough with what is

halal” or “be grateful for what you have” become more alive when conveyed in the form of actual information and linked to modern agricultural challenges. Therefore, the influence of access to information on *qana'ah* is not only theoretical but also very real in shaping farmers' ecological and spiritual awareness, which is reflected in their agricultural practices.

This finding is reinforced by research conducted by Al Sheikh & Al Serhan (2022), which explains that information obtained through digital media can increase public environmental awareness and facilitate the formation of *qana'ah* values. When farmers receive information about the dangers of pesticide use, the negative impacts of conventional agriculture, and Islamic values that support a frugal and balanced lifestyle, they are more likely to adopt the attitude of *qana'ah* as a foundation for farming. In other words, access to information rich in values not only influences knowledge but also shapes inner orientation and spiritual awareness of the surrounding world. This creates harmony between religious moral demands and ecological responsibilities in daily life practices.

5.4. The Influence of Social Norms on *Qana'ah*

The influence of social norms on *qana'ah* shows that the social environment plays an important role in shaping spiritual values, especially in the context of agrarian societies. In such societies, social norms not only regulate interpersonal relationships, but also shape perspectives on resources, lifestyles, and ecological responsibilities. From the perspective of Green Economics Theory, social values are considered the primary drivers that can steer economic behavior toward sustainability (Thøgersen, 2005). Social norms emphasizing simplicity, solidarity, and concern for the environment will encourage the development of a mindset of *qana'ah* feeling content, grateful, and avoiding excess which forms the foundation for ethical consumption and production behavior.

In the context of this study, access to information has a significant influence on increasing *qana'ah* among farmers because the farming community in the study area has a cohesive social structure based on strong religious values. In such communities, an individual's behavior is subject to continuous social judgment, so that collectively accepted norms have a major influence on individual value orientations. When these norms support a simple and grateful lifestyle, the value of *qana'ah* becomes easier to internalize in daily life. Thus, the influence of social norms on *qana'ah* is not merely normative but functions as a mechanism for shaping character and fostering sustained spiritual awareness in the daily practices of agrarian communities.

The results of this study are in line with research conducted by Khamzina et al. (2021), reinforcing that social norms in farming communities have the power to shape mindsets and spiritual attitudes such as *qana'ah*. In these communities, the practice of living frugally and avoiding excess is not only based on individual choice but also due to social pressure to maintain harmony with the environment and fellow community members. Social norms act as a control system encouraging the community to avoid being greedy toward natural resources and promoting local wisdom values aligned

with sustainability principles. Therefore, *qana'ah* is not merely a reflection of personal faith but also the result of social interaction that emphasizes the importance of ethics and ecological responsibility.

5.5. The Influence of *Qana'ah* on Organic Farming Practices

The influence of *qana'ah* on organic farming practices shows that spiritual values play an important role in shaping farmers' ecological behavior. Within the framework of the Theory of Sustainable Consumer Behavior, *qana'ah* functions as an internal motivator guiding individuals to avoid consumptive behavior, prevent resource waste, and uphold simplicity in production and consumption (Daly & Farley, 2011). The attitude of *qana'ah* encourages farmers to make wiser and more environmentally responsible decisions, including choosing organic farming systems that do not damage soil, water, and biodiversity. Thus, *qana'ah* is not only a personal value but also the foundation of ecological ethics in sustainable farming practices.

These findings are reinforced by the findings of Rahmawati et al. (2022), who confirm that farmers who have a *qana'ah* attitude tend to show high commitment to the application of organic farming principles. In their view, farming is not merely an economic activity, but also a form of devotion to Allah SWT and social responsibility to the community and the surrounding environment. Farmers with *qana'ah* do not merely pursue maximum results but value natural, fair, and blessed processes. Organic farming practices in this context are not chosen solely for profit, but because they are believed to be more in line with Islamic teachings on balance (*mīzān*), purity (*ṭahārah*), and the preservation of the earth (*'imārat al-ard*). Therefore, the value of *qana'ah* becomes a spiritual foundation that internalizes ecological awareness in the lives of farmers.

In the context of this study, *qana'ah* has a significant influence in promoting organic farming practices among farmers due to the religious nature of farming communities and their strong attachment to Islamic values. The attitude of *qana'ah* is not only passed down theologically through religious teachings and preaching, but also formed through life experiences that emphasize gratitude for halal and sufficient results. In this context, organic farming is understood as a form of agriculture that aligns with the natural order of the environment and human nature. Farmers with the value of *qana'ah* feel more at ease practicing organic farming, as it does not involve excessive exploitation of nature and can provide broad benefits for consumers and ecosystems. Therefore, the relationship between *qana'ah* and organic farming practices is mutually reinforcing, demonstrating that ecological transformation in agriculture cannot be separated from profound spiritual value transformation.

5.6. Social Norms on Organic Farming Practices through the Role of *Qana'ah*

The indirect influence of social norms on organic farming practices through *qana'ah* indicates the existence of a mechanism for internalizing values that is influenced by social pressure and the collective environment. From the perspective of the Theory of Sustainable Consumer Behavior, social norms are one of the important external determinants that shape individuals' value orientations and behavioral preferences (Daly & Farley, 2011). Norms that develop within farming communities,

particularly those emphasizing simplicity, mutual sharing, and concern for environmental sustainability, actively shape perceptions of sufficiency and ecological responsibility. Such norms foster a mindset of *qana'ah*, which ultimately influences how farmers manage natural resources in a more prudent and balanced manner.

Qana'ah serves as a bridge between social norms and organic farming practices. When someone lives in a social environment that supports religious values and sustainability, the value of *qana'ah* will be more easily internalized as part of the belief system and farming ethics. This attitude of *qana'ah* is then reflected in concrete actions, such as avoiding exploitative agricultural practices and shifting toward more environmentally friendly organic farming. These findings are in line with the research of Janker (2020), which shows that religious values and social norms together shape an ethical farming culture. Thus, social norms not only function as collective rules, but also as moral agents that guide individuals' choices towards forms of agriculture that are more ecologically and spiritually sustainable.

In the context of this study, social norms have a significant influence on organic farming practices through *qana'ah* among farmers because the social structure among farmers is still very close-knit and cohesive, so that social norms have the power to shape collective behavior. In such societies, individuals tend to adjust their behavior to socially and religiously respected values. Moreover, when the value of *qana'ah* is viewed as part of both personal and social piety, the pressure of social norms becomes more effective in fostering ecological awareness. Therefore, the pathway of social norms through *qana'ah* explains that the transition toward organic farming is not sufficient with a technical approach alone but requires a shift in the value system supported by a social structure conducive to sustainability ethics.

5.7. Acces to Information on Organic Farming Practices through the Role of *Qana'ah*

The indirect influence of access to information on organic farming practices through *qana'ah* shows that information disseminated among farmers not only increases technical knowledge, but also shapes value orientations and spiritual awareness. Within the framework of Green Economics Theory, information is regarded as a strategic tool capable of transforming consumption and production cultures toward greater sustainability (Thøgersen, 2005). When farmers gain information about the benefits of organic farming, the negative impacts of chemical substances, and the importance of maintaining ecological balance, they are motivated to incorporate spiritual values such as *qana'ah* into their farming activities. Information disseminated through extension services, digital media, or local social networks also shapes a new perspective that organic farming is both an ecological responsibility and a form of social worship.

The value of *qana'ah* in this context becomes an important mediator that internalizes messages of sustainability into individual consciousness. Information that incorporates spiritual and sustainability dimensions enables farmers to not only understand the ecological risks of conventional agricultural practices but also recognize the importance of feeling content, avoiding greed, and living in harmony

with nature. As explained by Malla et al. (2023), information received by an individual becomes moral energy when absorbed within the context of values they believe in, and this is what drives attitudinal change toward ecological behavior. *Qana'ah* as an internal value becomes the foundation for farmers to make ethical farming decisions, considering the blessings and balance of nature, not merely short-term economic gains.

In the context of this study, access to information has a significant influence on organic farming practices through *qana'ah* among farmers due to the increasingly open information literacy patterns of farmers thanks to advances in communication technology and the expanding extension network. The information provided is no longer purely technical, but is also integrated with religious and local values, making it more acceptable and internalized by farmers. In a religious community with cultural ties to Sufi values such as *qana'ah*, information packaged in spiritual language has proven more effective in fostering ecological awareness. Therefore, enlightening information that aligns with cultural and religious values is key to explaining how *qana'ah* mediates the relationship between information and farmers' decisions to transition to organic farming.

5.8. Technological Innovation on *Qana'ah* through Social Norms

The indirect influence of technological innovation on *qana'ah* through social norms reflects how digital technology can be a catalyst for value change in agrarian societies. From the perspective of the Theory of Sustainable Consumer Behavior, technology is not merely an instrument of production and communication but also a means of disseminating values that shape consumption behavior and lifestyle (Daly & Farley, 2011). When technology is strategically used to reinforce social norms that promote simplicity, ecological concern, and collective ethics, a social ecosystem emerges that supports the internalization of the value of *qana'ah*. In other words, technological transformation has dual potential: besides bringing technical efficiency, it also transforms social norms toward a more spiritual and sustainable direction.

These results are reinforced by the findings of damo & Willis (2022), who state that information technology has a major impact on strengthening social norms based on sustainability values. In this context, social media, educational videos, and online platforms are used not only to convey technical information but also to build a collective social narrative that emphasizes the importance of living simply and being responsible for the environment. When developing social norms explicitly or implicitly express the value of *qana'ah*, individuals in the community will be encouraged to conform to these norms in order to maintain social harmony. Therefore, technology becomes an agent of social change that shapes spiritual and ecological attitudes through social norms.

In the context of this study, technological innovation has a significant influence on *qana'ah* through social norms among farmers because farming communities still uphold the values of collectivity, social cohesion, and compliance with community norms. When technology is introduced and adopted in forms that are easily understood and aligned with local culture, such as digital da'wah, Islamic educational

videos, or agricultural community media, such content influences collective perceptions of an ideal way of life. In such situations, social norms evolve not as a passive response to change but as a result of collective learning processes facilitated by technological media. This is why the influence of technological innovation on *qana'ah* does not occur directly but through social norms, which serve as the gateway for the internalization of spiritual values into farmers' daily behaviors.

5.9. Technological Innovation on *Qana'ah* through Acces to Information

The indirect influence of technological innovation on *qana'ah* through access to information shows that digital technology plays a vital role in expanding the reach of knowledge relevant to spiritual values and sustainability. Within the framework of Green Economics Theory, technology is not only positioned as a tool for productivity but also as an educational medium enabling the transformation of consumption culture into one that is more environmentally friendly and ethical (Thøgersen, 2005). Through social media, digital agricultural platforms, and online extension applications, technological innovations provide various information about sustainable agricultural practices, the risks of chemical use, and the importance of living in harmony with nature. Access to such information opens space for the formation of spiritual awareness, such as *qana'ah*, as farmers increasingly understand the meaning of sufficiency, gratitude, and ecological justice in the context of farming.

These findings are reinforced by the study conducted by Abu-Rayash & Sabbah (2023), which asserts that ecological and spiritual values are significantly shaped by the information individuals receive and comprehend. Accurate, relevant, and context-specific information on sustainability can inspire individuals to lead simpler lives and avoid consumptive behaviors both of which are central to the concept of *qana'ah*. In this regard, technology serves as a bridge between knowledge and personal values. The higher the quality and accessibility of information facilitated by technology, the greater the opportunity for communities particularly farmers to cultivate mindsets and spiritual attitudes aligned with the principles of sustainability.

In the context of this study, the significant influence of technological innovation on *qana'ah* through information access among farmers is attributable to the increasing connectivity of farmers in the research area to information technology both through personal devices and community forums. They utilize educational videos, digital religious content, and online discussions to deepen their understanding of organic farming issues and Islamic environmental values. In a religiously inclined environment, information conveyed with a spiritual and contextual approach tends to be more readily accepted and internalized. Therefore, the pathway of influence from technological innovation through information access to *qana'ah* suggests that spiritual behavioral transformation does not always stem from direct religious preaching but can also emerge from digital content that evokes ethical and religious awareness in the everyday lives of farmers.

6. Conclusion

This study concludes that the value of *qana'ah* plays a central role in realizing organic farming behavior among farmers. The simple lifestyle, sense of sufficiency, and gratitude inherent in *qana'ah* have proven to be a strong internal motivation for farmers to adopt environmentally friendly farming practices. This value not only directly influences behavior but also serves as an important link between social norms and access to information regarding sustainable agricultural choices. Social norms have been shown to reinforce the development of *qana'ah* among farmers. Community support and a social environment that emphasizes collective simplicity contribute to the formation of a more ecologically oriented spiritual mindset. On the other hand, accurate and relevant information increases farmers' awareness and understanding of the importance of sustainability, which ultimately strengthens the internalization of the value of *qana'ah*.

Technological innovation does not directly influence organic farming practices, but it has a significant indirect impact through the formation of social norms and increased access to information. This shows that technology is not only a mechanical instrument, but also an agent of transformation of values and social structures. Overall, *qana'ah* has proven to be a strategic element that integrates spiritual, social, and informational aspects in the process of change towards sustainable agriculture. The success of agricultural practice transformation does not only depend on technical and economic aspects, but also on the moral values deeply rooted in society.

Therefore, agricultural education and extension services need to incorporate the value of *qana'ah* as part of the training material. This value can increase farmers' motivation to continue implementing environmentally friendly agricultural practices. Training programs should be designed jointly by extension workers, religious leaders, and local educators. In addition, the role of the community is also important in shaping social norms that encourage local consumption, ethical agriculture, and reduction of environmental impact. Community-based joint activities can strengthen environmental solidarity at the village level. Access to digital technology-based information needs to be expanded and adapted to farmers' literacy levels. Social media, local radio, and simple applications based on local languages can be used to convey important messages about organic farming and the value of *qana'ah*. On the other hand, the development of appropriate technology must support social and spiritual change among farmers. Simple yet effective technology will make it easier for farmers to adopt sustainable agriculture in line with their cultural values.

7. References

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