

Muru'ah as a Mediator of Product Innovation among Local Snack MSMEs

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Abstract

This study examines the mediating role of muru'ah in the relationship between social networks, trust, external collaboration, and product innovation among local snack MSMEs in Bone Regency. Grounded in Social Capital Theory and Open Innovation Theory, the study employs a quantitative explanatory approach and analyzes data from 153 entrepreneurs using PLS-SEM. The results show that social networks and trust positively influence external collaboration, while social networks, trust, external collaboration, and muru'ah significantly contribute to product innovation. The findings further indicate that muru'ah plays a significant mediating role in linking social capital dimensions and product innovation. These findings highlight the importance of integrating ethical values and relational resources to strengthen innovation outcomes among MSMEs. The study contributes to the literature by extending the application of Islamic ethical values within innovation and entrepreneurship research.

Keywords: External Collaboration, Muru'ah, Social Networks, Product Innovation, Trust

INTRODUCTION

Muru'ah encourages local snack entrepreneurs to engage in purposeful innovation through product quality enhancement, cultural value preservation, and service improvement anchored in business honor and ethical integrity (I. Ismail et al., 2025). This ethical impetus is reflected in their commitment to ensuring authentic taste, hygiene, food safety, and the use of high-quality local ingredients to protect business reputation (Hidayati et al., 2024). Entrepreneurs also introduce culturally embedded innovations by modernizing traditional recipes while retaining local identity, thereby positioning their products as both market-oriented goods and expressions of cultural heritage (I. Ismail et al., 2025). Complementary service and branding innovations such as eco-friendly packaging, authentic brand narratives, and transparent communication further reinforce consumer trust. Overall, these practices illustrate that muru'ah operates not merely as a moral trait but as an ethical foundation that supports dignified, competitive, and sustainable business growth (Riani et al., 2025).

Research on the role of muru'ah in fostering product innovation among local snack-food entrepreneurs remains limited, despite extensive discussions of this value in business ethics, socio-cultural studies, and Islamic law. In business ethics, prior works emphasize that muru'ah reflecting honesty, fairness, responsibility, and ethical awareness provides a crucial foundation for ethical decision-making, competitiveness, and the long-term sustainability of small and micro enterprises (Mat Zin & Engku Hassan Ashari, 2020; Soumena, 2024). Within socio-cultural studies, muru'ah is described as a moral and dignifying value shaping harmonious social relations, cultural expression, and character formation across communal and institutional settings (Ulfa & Nawawi, 2022). In Islamic legal scholarship, muru'ah functions as a principle

that safeguards public welfare, informs moral evaluation and legal reasoning, and reinforces norms of proper conduct and accountability (Sohail et al., 2025).

Despite the breadth of these discussions, studies that explicitly connect *murū'ah* to product innovation in the local snack-food sector remain scarce. In fact, *murū'ah* as a reflection of ethical integrity, dignity, and proper conduct holds strategic potential in shaping innovation processes that prioritize halal raw materials, transparent and honest production practices, and product presentation that reflects courtesy and moral propriety (Alsmadi & Al Omoush, 2025). The limited empirical exploration of how this ethical value influences entrepreneurs to adopt improved production methods, develop creative product variations, or integrate Islamic ethical norms into innovation processes results in an incomplete understanding of the moral drivers behind innovative behavior within this industry (Rahmah et al., 2019). Therefore, further research is urgently needed not only to fill this gap but also to strengthen the role of Islamic ethical values as motivational foundations for enhancing innovation capacity, consumer trust, and the sustainability of local halal-based snack-food enterprises (Ashraf, 2019; I. Ismail et al., 2025).

In examining the mediating role of *murū'ah* in fostering product innovation, this study draws on two theoretical foundations: Social Capital Theory and Open Innovation Theory. Social Capital Theory underscores the role of trust, norms, and social networks in forming productive relationships within business ecosystems (Do et al., 2025; Vu et al., 2023), while Open Innovation Theory emphasizes boundary-spanning collaboration and knowledge exchange as drivers of adaptive and market-responsive innovation (Aleksić et al., 2022; Annamalah et al., 2025). Within this framework, *murū'ah* as a form of moral integrity acts as a mediating mechanism that strengthens social networks, cultivates trust, and facilitates collaborative processes, ultimately generating sustainable, ethically grounded, and socially relevant innovation outcomes (Yusfiarto et al., 2022).

This study addresses a gap in the literature that has not fully examined the mediating role of *murū'ah* in product innovation (Nuryanto & Dirgantara, 2025). It investigates how *murū'ah* mediates the relationships among social networks, trust, and external collaboration. Social networks denote entrepreneurs' connectedness with communities and industry peers; trust reflects confidence in partners' honesty and reliability; and external collaboration involves cooperation with universities, government agencies, and halal organizations (Fauzi et al., 2024; Nasution et al., 2023). *Murū'ah* serves as a moral foundation directing these influences toward the development of innovative, competitive, ethical, and Islamic value oriented products (Muttaqin et al., 2023). Data from the Bone District Cooperative and MSME Office (2022) indicate about 13,000 active MSMEs, providing a relevant context. Thus, this study highlights the importance of integrating *murū'ah* into product innovation to enhance the quality, ethicality, and competitiveness of local MSMEs (Arum & Azzaki, 2024)

LITERATURE REVIEW

Theoretical Foundation

Social Capital Theory explains that social networks, trust, and shared norms act as strategic resources that facilitate coordination, information exchange, and collective innovation (Do et al., 2025). Despite conceptual differences, Bourdieu, Coleman, and Putnam agree that social ties generate reciprocal benefits and strengthen cohesion within interaction-driven economies (Rossoni et al., 2024). In entrepreneurial settings, social capital expands access to knowledge, collaboration, and value creation (Latifah et al., 2022). When integrated with Islamic ethics particularly *murū'ah* it gains a normative layer emphasizing integrity and social responsibility (Al-Twal et al., 2024). Open Innovation Theory further highlights that innovation emerges through combined internal and external knowledge flows (Annamalah et al., 2023;

Ouechtati et al., 2022), a model especially relevant for resource-limited MSMEs that rely on diverse stakeholders to develop superior products (Harinurdin et al., 2025). Embedding muru'ah into these processes ensures that collaboration remains transparent and ethical, producing innovations that are both competitive and morally grounded.

Muru'ah refers to the preservation of personal honor, social dignity, and morally appropriate conduct. Unlike amanah, which emphasizes trustworthiness and the fulfillment of obligations, and itqan, which focuses on excellence and quality of work, muru'ah functions as a broader mechanism of moral self-regulation. It guides individuals to maintain honorable behavior and protect their ethical reputation in both personal and business activities. Therefore, honesty, respect for others, and exemplary conduct are regarded as manifestations of muru'ah rather than the construct itself.

Muru'ah and Product Innovation

Muru'ah and product innovation form a mutually reinforcing relationship within Islamic value based business development (Yusup & Sulaiman, 2025). As a moral construct embodying dignity, ethical integrity, courtesy, and virtuous conduct, muru'ah serves as a personal ethic and a normative foundation for ethical and just business practices. In product development, muru'ah shapes entrepreneurial behavior to engage in innovation that is technically superior and carries ethical, spiritual, and social value. Entrepreneurs who uphold muru'ah avoid fraud, quality manipulation, unlawful ingredients, and practices that may harm consumers (Riani et al., 2025). Throughout the innovation process, muru'ah functions as a moral regulator grounded in honesty, responsibility, and propriety. This is evident in the use of halal, high-quality raw materials and transparent, non-deceptive marketing strategies. Thus, muru'ah guides innovation toward public benefit, trust-building, and the strengthening of halal product identity (I. J. Ismail et al., 2025).

H1: Muru'ah exerts a significant influence on product innovation.

Participation in External Collaboration and Muru'ah

Participation in external collaboration reflects an individual's or organization's engagement with external partners such as business actors, educational institutions, or government agencies. Such collaboration broadens access to knowledge, technology, and new resources. However, its effectiveness is strongly shaped by the moral and ethical foundation underpinning interactions namely, muru'ah. Core values of muru'ah, including honesty, responsibility, and honor, provide the ethical framework necessary for fair, trustworthy, and accountable cooperation (Mappaterru & S, 2025). Entrepreneurs who embody muru'ah maintain commitments and avoid manipulative practices, resulting in external collaborations that are not only productive but also ethically grounded and sustainable (Kelman, 2018).

H2: Participation in external collaboration exerts a significant influence on muru'ah.

Social Networks and Participation in External Collaboration

Social networks represent structured relationships that emerge through interactions among individuals, groups, and organizations, serving as strategic channels that facilitate participation in external collaboration (Ul Zia et al., 2023). Within the framework of social capital, these networks function as conduits for information exchange and resource sharing, while simultaneously strengthening initial trust, legitimacy, and credibility in interorganizational settings. Strong and high-quality networks enable firms especially SMEs to access external knowledge, new technologies, market prospects, and strategic support that are

often unattainable independently (Lyu et al., 2022; Sarto et al., 2020). The relationship between social networks and participation in external collaboration is mutually reinforcing, as robust networks encourage greater collaborative involvement, and successful collaboration further enhances the breadth and strength of these networks. Based on this reasoning, it can be hypothesized that.

H3: Social networks exert a significant influence on participation in external collaboration.

Trust and Participation in External Collaboration

Trust and participation in external collaboration share a reciprocal and reinforcing relationship in both social and business environments. Trust serves as a foundational mechanism that reduces perceived social and transactional risks, thereby enabling open, transparent, and goal-oriented cooperation among actors (Hwang et al., 2022). In turn, external collaboration represents an active form of engagement in cross-sector or interorganizational partnerships, whose effectiveness is inherently shaped by the level of trust built among stakeholders. When trust is high, entrepreneurs become more willing to share ideas, exchange strategic knowledge, and pursue joint innovation initiatives that require mutual dependence and cooperative effort (Kankam & Dza, 2025). Conversely, sustained collaborative participation promotes repeated interactions, fosters relational familiarity, and gradually strengthens deeper trust over time, creating a self-reinforcing cycle of cooperation and commitment.

H4: Trust exerts a significant influence on participation in external collaboration.

Muru'ah as Mediator

Muru'ah, as an ethical construct grounded in honor, integrity, and moral responsibility, provides a normative basis that shapes collaborative behavior and strengthens credibility and trust in professional exchanges (Su et al., 2021). In external collaboration, muru'ah acts as a moral framework that promotes openness, commitment, and accountability, thereby reducing conflict and improving the sustainability of partnerships (Duy et al., 2023; Mata et al., 2024). It also mediates the link between collaboration and product innovation by ensuring ethical and transparent knowledge exchange, which supports the development of competitive and socially responsible innovations. Conceptually, muru'ah reinforces the functional relationship between collaboration and innovation, consistent with social capital theory and the knowledge-based view (Do et al., 2025). Thus, muru'ah can be considered a strategic factor that enhances the effectiveness of external collaboration in driving high-quality product innovation.

H5: Muru'ah mediates the relationship between Participation in External Collaboration and Product Innovation.

Participation in External Collaboration as Mediator

Participation in external collaboration serves as a key mediating mechanism that connects the influence of social networks and trust to the development of muru'ah, as active engagement in inter-organizational cooperation creates opportunities for transparent, ethical, and mutually oriented interactions in which actors can demonstrate integrity, responsibility, and moral commitment (Bakalo & Bogale, 2024; Nezami et al., 2023). This collaborative involvement strengthens the relational value of social networks by providing a concrete arena where moral principles can be enacted and reinforced through practice. At the same time, participation in external collaboration mediates the effect of trust on muru'ah, since trust evolves into a deeper moral quality when tested through repeated interactions, shared tasks, and the need for consistent ethical behaviour (Szaller et al., 2024). Through these processes, external

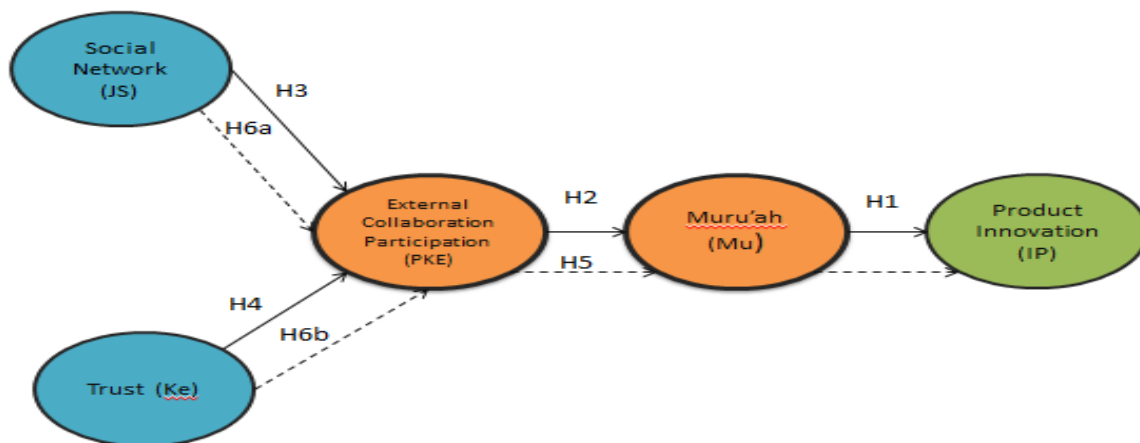
collaboration transforms social and relational resources into tangible expressions of moral character.

H6: Participation in External Collaboration mediates the relationship between: (a) Social Networks and Muru'ah, and (b) Trust and Muru'ah

METHOD

This study adopts a quantitative explanatory research design aimed at empirically examining the causal relationships among Social Networks, Trust, Participation in External Collaboration, Muru'ah, and Product Innovation among local MSME snack entrepreneurs in Bone Regency. The explanatory approach is employed to identify the direction and strength of influence from exogenous variables to endogenous variables while assessing the mediating role of *murū'ah* in channeling the effects of social factors toward the development of ethical and value-based product innovation. Data were analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM), a method appropriate for predictive research involving complex structural models, numerous parameters, and relatively small sample sizes.

The analytical model illustrates the structural relationships among the study's constructs, wherein product innovation (IP) is shaped by muru'ah (Mu), while muru'ah (Mu) itself is influenced by social networks (JS), trust (Ke), and participation in external collaboration (PKE). Positioned as a moral foundation, muru'ah (Mu) functions as a mediating mechanism that transforms the quality of social relationships into innovative behavior that is ethical, responsible, and welfare-oriented. From the perspective of Islamic economics, muru'ah (Mu) represents attributes of integrity, decorum, trustworthiness, honesty, and moral discipline that strengthen the innovation process by aligning professional conduct with spiritual and ethical values.



Source: The authors' own work, 2025

Figure 1. The analytical model of study

The research instrument consists of a structured questionnaire divided into two main sections. The first section outlines the purpose of the study and collects demographic information, including age, education level, employment status, and business duration. The second section comprises 15 indicator statements measuring the five core constructs using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). These constructs include Social Networks (3 items), Trust (3 items), Participation in External Collaboration (3 items), Muru'ah (3 items), and Product Innovation (3 items), each developed based on the conceptual and operational definitions previously established.

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Each construct was measured using three indicators, representing the minimum acceptable specification for reflective measurement models in PLS-SEM. The indicators were selected based on their theoretical relevance and ability to capture the core dimensions of each construct.

Muru'ah was operationalized as a reflective construct representing ethical self-regulation and personal dignity in entrepreneurial activities. Consistent with Islamic ethical literature, the construct was measured through three observable manifestations: (1) honesty and fairness in business conduct, (2) respect for the rights and dignity of others, and (3) exemplary ethical behavior. These indicators were selected because they represent practical expressions of honorable conduct and moral responsibility.

Data collection was conducted over a three-month period, from February to April 2025, using an online survey administered via Google Forms. A cluster sampling technique was applied based on administrative regions, covering five districts in Bone Regency: Tanete Riattang, Tanete Riattang Barat, Tanete Riattang Timur, Palakka, and Awangpone. These locations were selected to capture variations in social, economic, and business characteristics that reflect the dynamics of social networks and moral values among MSME actors. A total of 153 MSME respondents participated in the study, determined using an Observation-to-Parameter (N:p) ratio of 10:1, as recommended by, thereby meeting the minimum sample size requirement for PLS-SEM analysis.

Data were analyzed using SmartPLS version 4.0.8.9 through two major stages. The first stage involved the Measurement Model Evaluation (Outer Model), which assessed convergent validity, discriminant validity, and reliability using factor loadings, Composite Reliability, Cronbach's Alpha, Average Variance Extracted (AVE), and the Fornell-Larcker criterion. The second stage involved the Structural Model Evaluation (Inner Model), which tested the hypotheses by examining R-Square values, F-Square effect sizes, and path coefficients, with statistical significance set at $p < 0.05$ (Hossan et al., 2020)

RESULTS AND DISCUSSION

RESULTS

Demographic Profile of Respondents

Table 1. Demographic Profile of the Respondents

Criteria/Category	Frequency	Percentage (%)
Gender		
Male	47	30,70%
Female	106	69,30%
Age		
18-23 years	124	81%
24-29 years	16	10,50%
30-35 years	7	4,60%
36-41 years	3	2%
42-47 years	3	2%
Marital Status		
Married	133	86,90%
Unmarried	20	13,10%
Educational Background		
Senior High School or quivalent	114	74,50%
Diploma	27	17,60%
Bachelor's Degree (S1)	6	3,90%

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Master’s Degree (S2)	3	2%
Others	3	2%
Occupation		
Student Entrepreneur	94	61,40%
Entrepreneur/Trader	16	10,50%
Others	34	22,20%
Lecturer/Teacher	0	0%
Military/Police	0	0%
Government/Private Employee	0	0%
Monthly Income		
Uncertain/Others	74	48,40%
Below IDR 1 million	35	22,90%
IDR 1 million – IDR 5 million	30	19,60%
IDR 5 million – IDR 7 million	5	3,30%
IDR 7 million – IDR 10 million	2	1,30%
Above IDR 10 million	7	4,60%

Source: Primary data processed in 2025.

The demographic profile shows that most of the 153 respondents were female (69.30%), aged 18–23 years (81%), married (86.90%), and had a senior high school or equivalent educational background (74.50%). Most respondents identified themselves as student entrepreneurs (61.40%) with relatively low or unstable income levels. Despite their young age, all respondents were actively involved in local snack MSME activities, either independently or through family-managed businesses, making them relevant for analyzing social networks, trust, external collaboration, muru’ah, and product innovation.

Measurement Model Assessment

Table 2 shows that all constructs met the criteria for convergent validity and reliability, with Cronbach’s Alpha values ranging from 0.942 to 0.970 and Composite Reliability values exceeding 0.96. The AVE values, ranging from 0.789 to 0.943, were substantially above the recommended threshold of 0.50, indicating strong explanatory power of the indicators for each construct. Therefore, all variables were confirmed as valid and reliable, making them suitable for further structural model analysis.

Table 2. Validity and Reliability Test Results

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Social Network	0.965	0.966	0.977	0.935
Trust	0.942	0.942	0.963	0.895
External Collaboration Participation	0.949	0.949	0.967	0.907
Muru’ah	0.970	0.970	0.980	0.943
Product Innovation	0.950	0.952	0.968	0.789

Source: Primary data processed by using SmartPLS 4, 2025.

Table 3 shows that all indicators exhibit outer loading values well above the 0.70 threshold, confirming the achievement of convergent validity. Indicators such as IP2 (0.972), JS2 (0.958), Ke2 (0.973), Mu2 (0.980), and PKE2 (0.967) demonstrate exceptionally strong contributions to their respective constructs. These results indicate that the measurement instrument possesses excellent reliability and measurement precision.

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Table 3. Outer Loadings

Variables	Product Innovation	Social Network	Trust	Muru'ah	External Collaboration Participation
IP1	0.967				
IP2	0.972				
IP3	0.962				
JS1		0.953			
JS2		0.958			
JS3		0.928			
Ke1			0.957		
Ke2			0.973		
Ke3			0.927		
Mu1				0.967	
Mu2				0.980	
Mu3				0.967	
PKE1					0.945
PKE2					0.967
PKE3					0.950

Source: Primary data processed by using SmartPLS 4, 2025.

Table 4 indicates that all constructs satisfy the Fornell–Larcker criterion, as the square root of the AVE on the diagonal exceeds the inter-construct correlations. This demonstrates that each variable is more strongly associated with its own indicators than with other constructs, thereby confirming adequate discriminant validity. The results further imply that each construct stands independently without conceptual overlap.

Table 4. Fornell-Larcker Criterion

Variables	IP	JS	Ke	Mu	PKE
Product Innovation	0.967				
Social Network	0.849	0.946			
Trust	0.851	0.861	0.952		
Muru'ah	0.834	0.736	0.823	0.971	
External Collaboration Participation	0.878	0.830	0.872	0.840	0.954

Source: Primary data processed by using SmartPLS 4, 2025.

Table 5 reports substantial R² values for Product Innovation (0.696), *Muru'ah* (0.727), and External Collaboration Participation (0.785), reflecting strong predictive power within the structural model. The stability of the adjusted R² values corroborates the absence of overfitting and indicates consistent relationships among variables. Overall, these findings affirm that the model exhibits excellent explanatory accuracy for the key latent constructs.

Table 5. R-Square and Adjusted R-Square Values

Variables	R-square	R-square adjusted
Product Innovation	0.696	0.694
Muru'ah	0.727	0.774
External Collaboration Participation	0.785	0.775

Source: Primary data processed by using SmartPLS 4, 2025.

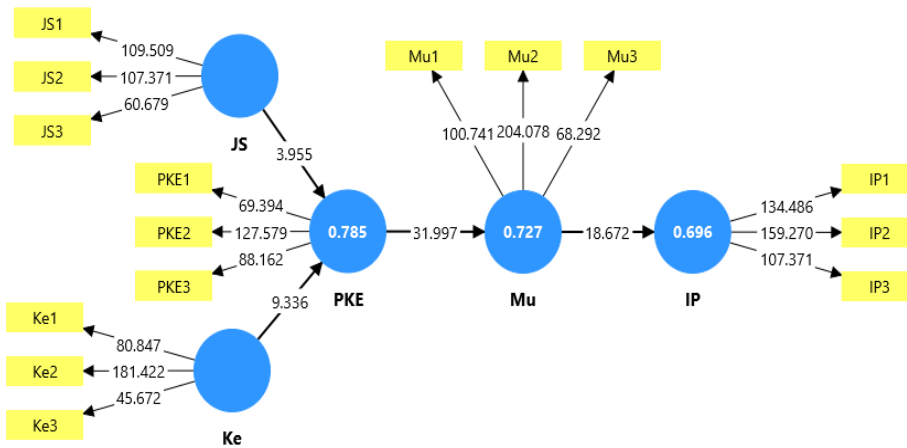
Table 6. F-Square Values

Variables	PI	JS	Ke	Mu	PKE
Product Innovation					
Social Network					0.114
Trust					0.445
Muru'ah	2.292				
External Collaboration Participation				2.670	

Source: Primary data processed by using SmartPLS 4, 2025.

Table 6 shows that *Muru'ah* ($f^2 = 2.292$) and External Collaboration Participation ($f^2 = 2.670$) exert very large effect sizes within the model. In contrast, Social Network demonstrates a small effect ($f^2 = 0.114$), while Trust exhibits a medium effect ($f^2 = 0.445$). Collectively, these findings indicate that the primary constructs play a dominant role in explaining the variance of the endogenous variables.

Structural Model Assessment



Source: Primary data processed by using SmartPLS 4, 2025.

Figure 2. Output of the structural model testing

Table 7 demonstrates that all structural relationships are statistically significant, with Social Network and Trust exerting strong influences on External Collaboration Participation. *Muru'ah* shows a substantial effect on Product Innovation, while external collaboration markedly enhances *Muru'ah*. Overall, social networking, trust, collaborative engagement, and moral values emerge as critical determinants shaping innovative behavior among MSMEs.

Table 7. SEM-PLS: Direct Effect Testing Results

Relationship of Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
H1 Muru'ah → Product Innovation	0.834	0.831	0.045	18.672	0
H2 External Collaboration Participation → Muru'ah (MU)	0.853	0.855	0.027	31.997	0

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H3	Social Network → External Collaboration Participation	0.307	0.309	0.078	3.955	0
H4	Trust → External Collaboration Participation	0.607	0.61	0.065	9.336	0

Source: Primary data processed by using SmartPLS 4, 2025

Table 8 further reveals three significant mediation pathways, indicating that external collaboration through its strengthening effect on *Muru'ah* produces a very strong impact on innovation ($\beta = 0.712$). Both Social Network and Trust influence innovation indirectly through External Collaboration Participation, which subsequently enhances *Muru'ah*. Collectively, these results highlight external collaboration and *Muru'ah* as key mediating mechanisms linking social relations and trust to MSME innovation.

Table 8. SEM-PLS: Indirect Effect Testing Results

Relationship of Variables		Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values
H5	External Collaboration Participation → <i>Muru'ah</i> → Product Innovation	0.712	0.711	0.052	13.606	0
H6a	Social Network → External Collaboration Participation → <i>Muru'ah</i>	0.262	0.264	0.066	3.974	0
H6b	Trust → External Collaboration Participation → <i>Muru'ah</i>	0.518	0.522	0.057	9.092	0

Source: Primary data processed by using SmartPLS 4, 2025.

The mediation analysis demonstrates that External Collaboration Participation and *Muru'ah* function as full mediators in shaping product innovation among micro and small enterprises. The indirect effects reveal that Social Networks and Trust exert no significant direct influence on innovation; instead, their effects operate exclusively through collaborative engagement and the internalization of ethical character. These findings indicate that external social capital must first be converted into substantive collaborative involvement and subsequently internalized as moral integrity before it can drive innovative outcomes. External Collaboration Participation acts as a catalytic mechanism that channels access to resources, information flows, and cross-actor capabilities, whereas *Muru'ah* serves as a transformational ethical filter that directs these inputs into responsible and value-oriented innovative behavior. Overall, the model provides clear evidence of a full mediation effect, underscoring that sustainable product innovation is driven not merely by social exposure or trust, but by the integration of collaborative practices and deeply internalized ethical values.

DISCUSSION

Within the epistemological perspective of Islamic business ethics and Social Capital Theory, the interrelationship among social networks, trust, external collaboration participation, and muru'ah may be conceptualized as an integrated behavioral system rather than a merely spontaneous interactional phenomenon (Yusfiarto et al., 2022).

The structural model evaluation revealed that all hypothesized relationships were positive and statistically significant. Muru'ah exerted a substantial positive effect on Product Innovation ($\beta = 0.834$, $p < 0.001$), indicating that the internalization of ethical and moral principles significantly contributes to strengthening innovation performance among local snack MSMEs. Furthermore, External Collaboration Participation demonstrated a strong positive influence on Muru'ah ($\beta = 0.853$, $p < 0.001$), suggesting that collaborative engagement with external stakeholders reinforces the cultivation of ethical awareness and moral responsibility within entrepreneurial activities. In addition, Social Network positively affected External Collaboration Participation ($\beta = 0.307$, $p < 0.001$), whereas Trust exhibited an even stronger positive effect on External Collaboration Participation ($\beta = 0.607$, $p < 0.001$). These findings imply that social capital dimensions, particularly trust-based relational mechanisms, play a pivotal role in facilitating collaborative engagement among MSME actors. The results further substantiate the proposition that relational connectivity and reciprocal confidence constitute the socio-cognitive foundation through which cooperative and ethically oriented entrepreneurial behavior is developed.

The indirect effect analysis further confirmed the mediating role of Muru'ah within the proposed conceptual framework. External Collaboration Participation significantly influenced Product Innovation through Muru'ah ($\beta = 0.712$, $p < 0.001$), indicating that ethical values function as a critical mechanism through which collaborative activities enhance innovation outcomes. Moreover, Social Network indirectly influenced Muru'ah through External Collaboration Participation ($\beta = 0.262$, $p < 0.001$), while Trust demonstrated a stronger indirect effect through the same mediating pathway ($\beta = 0.518$, $p < 0.001$). Collectively, these findings underscore the strategic importance of social capital and collaborative participation in fostering ethical orientation, strengthening moral integrity, and enhancing innovation capability within MSMEs.

Information flow within social networks and trust-based interactions further illustrates the cognitive moral integration shaping entrepreneurial decision-making. Strong networks facilitate the circulation of knowledge, technical insights, and market intelligence, but these informational benefits become behaviorally meaningful only when filtered through muru'ah as a moral evaluator (Riaz et al., 2024). Similarly, trust strengthens willingness to share resources and reduce relational uncertainty (Kacperska & Łukasiewicz, 2020), yet its influence on innovation is indirect operating through ethical consciousness formed during collaborative engagements. This interplay between rational assessment and moral internalization affirms that entrepreneurial innovation in Islamic contexts embodies both pragmatic rationality and virtue-based reasoning.

Normative and communal expectations reinforce this mediational structure. Participation in collaborative networks embeds entrepreneurs within moral communities where shared values, collective norms, and reputational pressures shape individual behavior. Social Identity Theory explains that alignment with group expectations strengthens internalization of muru'ah, resulting in innovation practices that reflect not merely efficiency but also communal legitimacy (Liu et al., 2022). For Muslim entrepreneurs, innovative outputs such as improvements in product quality, hygiene, safety, and authenticity thus arise from the convergence of social

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capital, ethical identity, and cultural expectations that elevate honor-driven business conduct (Do et al., 2025).

Overall, the findings demonstrate that innovation among local entrepreneurs is a multidimensional construct emerging from the integrated interaction of social structures, moral values, and collaborative mechanisms (Games et al., 2023). Strengthening entrepreneurial innovation therefore requires strategic interventions that reinforce trust-building, expand social networking platforms, and cultivate ethical consciousness through value-based training grounded in Islamic virtues (Jirawuttinunt & Wongsahai, 2021). By embedding moral character (*murū'ah*) at the core of entrepreneurial ecosystems, policymakers and practitioners can promote sustainable innovation that is not only competitive but also socially responsible and spiritually aligned with Islamic ethical frameworks

CONCLUSION

The present synthesis demonstrates that social networks and trust function as pivotal relational assets that substantially enhance external collaboration among micro and small enterprises. The empirical evidence from prior studies consistently shows that network embeddedness improves access to strategic information, strengthens cooperative behavior, and facilitates knowledge exchange, while trust serves as a stabilizing mechanism that reduces transactional uncertainties and reinforces collaborative commitment. Within this relational ecosystem, *murū'ah* as a moral-ethical construct grounded in Islamic business ethics operates as an internal capability promoting responsible conduct, reputational integrity, and innovation-oriented behavior. The convergence of relational and ethical dimensions underscores that innovative performance is not solely determined by technical competencies but emerges from the dynamic interplay between moral values and collaborative structures.

Building on these findings, this research recommends that micro-enterprises intensify participation in structured external collaborations, including inter-firm partnerships, community-based networks, and supply-chain alliances that enable continuous knowledge transfer. Strengthening institutional trust both interpersonal and inter-organizational should also be prioritized through transparent communication, consistent ethical conduct, and formalized cooperation mechanisms. In addition, the cultivation of *murū'ah* as an organizational capability is imperative; enterprises should embed ethical values within operational routines, leadership practices, and decision-making frameworks to create an enabling environment for sustainable innovation. Policymakers and development agencies may further support these efforts by facilitating capacity-building programs, providing networking platforms, and integrating ethical-cultural dimensions into entrepreneurship development frameworks.

Despite its contributions, this study acknowledges several limitations. First, the generalizability of the findings remains constrained by contextual variations in local culture, institutional environments, and sectoral characteristics, which may influence the manifestation of social capital and ethical values such as *murū'ah*. Second, much of the existing empirical evidence relies on cross-sectional designs, limiting causal inference regarding the dynamic interactions among networks, trust, collaboration, and innovation. Future research should therefore employ multi-method approaches, comparative cross-regional analyses, and longitudinal designs to deepen understanding of how relational structures and ethical values jointly shape innovation outcomes.

Although the *murū'ah* construct demonstrated satisfactory validity and reliability, its operationalization remains exploratory and was limited to three indicators. Future studies are

encouraged to develop a more comprehensive multidimensional scale and further establish its discriminant validity from related constructs such as amanah, itqan, and Islamic Work Ethics.

In addition, the use of three indicators per construct may restrict construct coverage despite satisfactory measurement properties. The reliance on single-source self-reported data also leaves the possibility of common method bias. Furthermore, although the model explained a substantial proportion of variance in product innovation ($R^2 = 0.696$), additional robustness and predictive assessments were not performed. Future research should employ more comprehensive measures and incorporate further validation procedures to enhance the robustness of the findings

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