

INTEGRATING MADURESE INDIGENOUS PHILOSOPHY INTO SUSTAINABLE BUSINESS FRAMEWORK: A MODEL FOR *WARUNG MADURA* RESILIENCE

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ABSTRACT

This study examines the influence of Madurese ethnic philosophy on the business sustainability of Madura stalls, emphasizing cultural values as strategic capital that strengthens resilience. Core cultural principles including *tretan dhibi* (based solidarity), honesty, perseverance, and a strong work ethic shape management practices, trust mechanisms, and social networks that enhance competitive advantage. A quantitative approach was employed using Structural Equation Modeling–Partial Least Squares (SEM-PLS), with 257 Madurese stall owners selected through the Slovin formula. The results of the outer model indicate that all indicators meet the required validity and reliability criteria. The inner model reveals an R^2 value of 0.337, indicating that Madurese ethnic philosophy significantly contributes 33.7% to business sustainability. These findings demonstrate that Madurese philosophy serves not only as a moral guideline but also as a form of social capital that facilitates supply stability, operational efficiency, trust-based networks, and the psychological resilience of business owners. The study underscores that local wisdom functions as a strategic asset in strengthening the sustainability of microenterprises and must be integrated with modern innovation to maintain competitiveness in an evolving market landscape.

INTRODUCTION

Micro businesses such as Madura stalls play a vital role in Indonesia's local economic structure, especially in meeting the daily needs of people in urban and semi-urban areas (Azis, Merlinda, et al., 2025). Micro business owners are currently facing heavy pressure, both from the expansion of modern retail, advances in digital technology, and changes in consumer behavior. These challenges make the issue of micro-business sustainability increasingly important, and many studies are beginning to focus on the role of local culture as the foundation of business resilience (Azis, Dwiputri, et al., 2025).

Indigenous entrepreneurship shows that cultural values and ethnic community networks can serve as strategic capital that determines the success of small businesses, especially in the context of diaspora and informal trade (Gonzales, 2025). Cultural values

serve not only as ethical guidelines but also as adaptive mechanisms that can increase business resilience in a competitive environment.

According to data from the Indonesian Central Statistics Agency (BPS), there are 79,493 grocery stores spread across 38 provinces. East Java has a total of 8,493 grocery stores, placing it in second place in Indonesia with the highest number of grocery stores (BPS, 2024). The distribution of grocery stores in East Java Province is 15,355 stores, while the city of Malang has 715 grocery stores (BPS, 2018).

The grocery stores to be studied focus on Madurese grocery stores whose owners are Madurese immigrants. The characteristics of Madurese grocery stores are (1) open 24 hours a day (Hidayat et al., 2024; Widiyastuti & Ningtyassari, 2023) (2) a neat and organized store layout and (3) a mini gas station (Widiyastuti & Ningtyassari, 2023) located in the city of Malang.

The Madurese ethnic group always emphasizes emotional ties to relatives from their region of origin when immigrating to a new land (*patobin*) (Faridi, 2021). The Madurese ethnic group has characteristics that lead to economic and psychological aspects, where economically it will create prosperity, while psychologically it has a tendency towards “kinship” in a group that has the same goals, shared fate, and struggles. The Madurese philosophy that has survived to this day is *tretan dhibi'* (siblings), which is upheld and carried on by migrants as a form of mutual protection (Hidayat et al., 2024).

The Madurese ethnic group has a philosophy that is considered a strategy in conducting business. Efforts to ensure the sustainability of *warung madura* are based on principles (philosophy) that are upheld so firmly that they have become the genius loci of Madurese society. This Madurese ethnic philosophy creates a work ethic and, unconsciously, forms a Standard Operating Procedure (SOP) in their work and business activities (Hidayat et al., 2024). The Madurese community always upholds kinship values, which serve as a foundation for living in a foreign land (Wafiruddaroin & Rezeky, 2022). These philosophical values shape their character as hard workers, giving rise to stereotypes about the majority of Madurese people living abroad.

Madurese traders utilize their philosophy of life and cultural values as a foundation for building stable and sustainable businesses. Values such as hard work, honesty, commitment to maintaining honor, and kinship-based solidarity (*tretan dhibi'*) have proven to form a strong business ethos (Aginta et al., 2024). These values are consistently manifested in operational practices such as long working hours, fast service, and trust-based customer relationships. Research Emon & Khan (2023) in the context of Southeast Asian micro-retail reinforces these findings by showing that long working hours are a competitive factor that significantly increases the attractiveness of traditional shops, a characteristic that has long been associated with Madurese shops.

Ethnic-based social networks and social capital are another factor that strengthens the sustainability of Madurese grocery stores. Madurese traders have developed an internal mechanism in the form of business area division to avoid conflict and unhealthy

competition, a form of social governance that is also found in other ethnic diasporas (Sasongko & Wahyuni, 2013; Wafiruddaroin & Rezeky, 2022). Ethnic supply chains explain that networks based on trust and ethnic norms enable businesses to reduce transaction costs, improve access to supplies, and strengthen distribution stability (Chang et al., 2023). Madurese traders have interconnected supplier networks and often operate through verbal agreements, allowing them to obtain supplies quickly and flexibly (Blue et al., 2025; Scheyvens et al., 2021).

The Madurese merchant community operates a social support system in the form of informal loans, capital assistance, and labor cooperation that strengthens the economic resilience of all members of the network (Dobrevva & Ivanov, 2020; Surya et al., 2021). This support demonstrates how Madurese cultural philosophy creates a social network that functions as “reserve capital” for merchants when facing crises or operational obstacles. This pattern of relationship is referred to as bonding social capital, which is social capital that arises from strong relationships between members of an ethnic group and can be a determining factor for the sustainability of micro-enterprises (Nakazato & Lim, 2024).

The sustainability of Madurese grocery stores cannot be separated from Madurese ethnic philosophy and the social structure that surrounds it. This philosophy shapes the work ethic, management style, distribution structure, trust mechanisms, and social relations that all contribute to business resilience. At the same time, long-term sustainability is highly dependent on the ability of traders to synergize cultural values with modern innovation. Research on the influence of Madurese ethnic philosophy on the sustainability of grocery stores is important to explain how culture is not only an aspect of identity but also a strategic asset in the development of highly competitive micro-enterprises.

METHOD

This study uses a quantitative approach with Structural Equation Modeling based on Partial Least Squares (SEM-PLS) analysis techniques. The SEM-PLS approach was chosen because it is suitable for predictive and exploratory research objectives in explaining the influence of Madurese ethnic philosophy on the sustainability of Madurese grocery stores through latent constructs, and it allows for analysis even though the data distribution is not strictly normal. The research population consisted of 715 Madurese grocery stores spread across the city of Malang. The sample size was determined using the Slovin formula at a 5% error rate. Based on the calculation $n = \frac{715}{1+715(0,05)^2}$, the sample size was 256.6, which was then rounded up to 257 respondents. The data collection instrument was a structured questionnaire using a 1–5 Likert scale, which was compiled based on the following indicators:

Table 1. Instrument Questionnaire

Business Sustainability (Ghoniayah et al., 2024)	Good Image (GI)	Business image internally and externally
	Survive in Long Term	Long-term business sustainability
	Managing Resource	Ability to manage resources effectively and efficiently
	Commitment Adopt	Commitment to adopting ethical ethnic behaviors
	Contribute Economic Development	Business contribution to economic development
	Workers Wellbeing	Business efforts to provide welfare for workers
	Community Affacted	Business impact on the surrounding community
	Human Resource	Standards for utilizing human, economic, and environmental resources
	Responsibilities Government	Business responsibilities toward the government
The Philosophy of the Madurese Ethnic Group (Faridi, 2021; Wafiruddaroin & Rezeky, 2022; Widiyastuti & Ningtyassari, 2023)	<i>Tretan Dhibi'</i>	One's own relatives
	<i>"rèjhekkèna bilis ta' bhâkal èkakan ce ghâjhâ, rèjhekkèna ghâjhâ ta' bhâkal èkakan ce bilis."</i>	One's fortune, even if as large as an elephant, will not be eaten by ants. This means that everyone's sustenance has already been determined, so there should be no belief that someone can take away another person's livelihood.
	<i>"lakonah lakoneh, kennegah kennegeh"</i>	It means: do your duty and stay in your rightful place.
	<i>Patobin</i>	The Madurese ethnic group always emphasizes emotional bonds with relatives from their place of origin when migrating to other regions.

Data analysis begins with an evaluation of the outer model, which includes reliability and construct validity testing. Indicator reliability is assessed through loading factor values with a minimum threshold of 0.70, while construct reliability is examined using the Composite Reliability (CR) value, which is expected to exceed 0.70. Convergent validity is achieved when the Average Variance Extracted (AVE) value is greater than 0.50.

After the measurement model meets the required criteria, the analysis proceeds to the inner model to test the relationships among variables. The evaluation is carried out by examining the R² value for endogenous constructs, with guidelines stating that a value of 0.75 indicates substantial strength, 0.50 moderate, and 0.25 weak. The effect size (f²) is calculated to determine the contribution of each independent construct to the model structure, while the predictive relevance (Q²) is obtained through the blindfolding technique to ensure the model's predictive capability.

RESULTS AND DISCUSSION

Result

Respondent Characteristics

Based on data obtained from a total of 257 respondents from Madura grocery stores in Malang City spread across five subdistricts, the following characteristics were obtained:

Table 2. Respondent Gender

Gender	Total	Percentage
Male	178	69%
Female	79	31%
Total	257	100%

The analysis based on gender shows that out of a total of 257 respondents, the Madurese grocery store owners in Malang City are predominantly male, totaling 178 respondents (69%), while the remaining 79 respondents (31%) are female.

Table 3. Respondent Age

Age	Total	Percentage
18–24 years	60	23.3%
25–31 years	78	30.3%
32–38 years	58	22.6%
39–45 years	34	13.2%
46–53 years	27	10.6%
Total	257	100%

Based on age, the highest number of respondents falls within the 25-31 age group, with 78 respondents (30.3%). This is followed by respondents aged 18-24 years, totaling 60 respondents (23.3%). Respondents aged 32–38 years amount to 58 individuals (22.6%), while those aged 39-45 years total 34 individuals (13.2%). The smallest group consists of respondents aged 46-53 years, totaling 27 individuals (10.6%).

Table 4. Store Location

District	Total	Percentage
Lowokwaru	66	25.7%
Klojen	52	20.2%
Kedungkandang	52	20.2%
Blimbing	47	18.3%
Sukun	40	15.6%
Total	257	100%

Based on store location, Lowokwaru District has the highest number of Madurese grocery stores, totaling 66 stores (25.7%). Klojen and Kedungkandang Districts both have 52 stores (20.2%). Blimbing District hosts 47 stores (18.3%), while the district with the fewest stores is Sukun, totaling 40 stores (15.6%).

Table 5. Duration of Store Operation

Duration	Total	Percentage
2 years	61	23.7%
3–5 years	97	37.7%
6–10 years	64	25%
>10 years	35	13.6%
Total	257	100%

The highest proportion of Madurese grocery stores have been operating for 3-5 years, totaling 97 stores (37.7%). This is followed by stores operating for 6-10 years, with 64 stores (25%). Stores that have operated for 2 years total 61 stores (23.7%), while the

smallest group is stores that have been operating for more than 10 years, totaling 35 stores (13.6%).

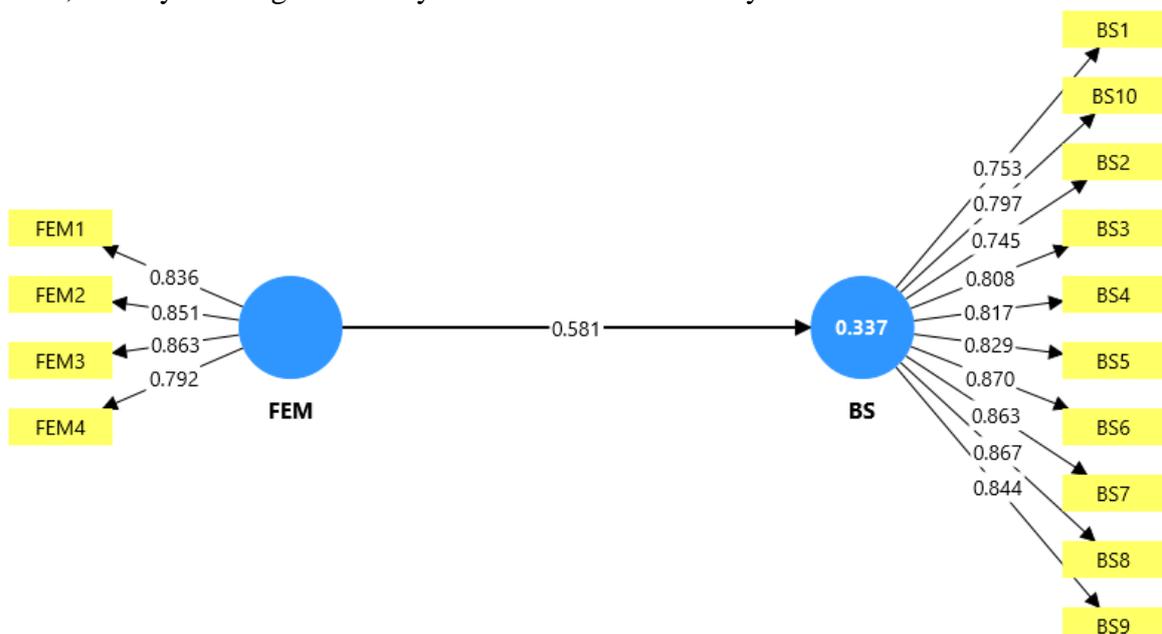
Table 6. Monthly Revenue

Monthly Revenue	Total	Percentage
Rp 0 – Rp 10,000,000	63	24.5%
Rp 10,000,001 – Rp 20,000,000	86	33.5%
Rp 20,000,001 – Rp 30,000,000	72	28%
> Rp 30,000,001	36	14%
Total	257	100%

The monthly revenue data show that 33.5% of respondents earn between Rp 10,000,001 and Rp 20,000,000. The second-largest group consists of respondents earning Rp 0-Rp 10,000,000 (24.5%). Next, 28% of respondents report monthly revenue between Rp 20,000,001 and Rp 30,000,000. The smallest group 14% reports monthly revenue exceeding Rp 30,000,001.

Outer Model

As material in testing the validity and reliability of variables, both are measured through an outer model. Efforts to understand whether a construct meets the requirements to be continued in the research require a validity test. The validity test itself consists of two tests, namely convergent validity and discriminant validity.



Convergent validity describes the loading factor value of a latent variable against its indicators. A good value in a latent variable to be considered valid is above 0.7. In this study, a loading factor value above 0.7 will be used as the threshold for the outer model.

Table 7. Loading Factor Value

	BS	FEM
BS1	0.753	
BS10	0.797	
BS2	0.745	
BS3	0.808	
BS4	0.817	
BS5	0.829	
BS6	0.870	
BS7	0.863	
BS8	0.867	
BS9	0.844	
FEM1		0.836
FEM2		0.851
FEM3		0.863
FEM4		0.792

The processed data shows that a total of 14 questions have met the outer loading value of above 0.7.

Table 8. Results Cronbach's Alpha, Composite Reliability, and AVE

	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
BS	0.946	0.950	0.673
FEM	0.856	0.856	0.699

Cronbach's Alpha values for FEM and BS are 0.856 and 0.946, respectively, while Composite Reliability (CR) values are 0.856 and 0.950, respectively. These values are well above the minimum threshold of 0.70, indicating high internal consistency. In addition, the Average Variance Extracted (AVE) values for both constructs are also greater than 0.50, confirming that more than half of the indicator variation can be explained by the construct it represents.

Inner Model

Table 9. R-Square

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
BS	0.337	0.344	0.063	5.341	0.000

The R-square value for the BS variable is 0.337, which means that FEM is able to explain 33.7% of the variability in the business sustainability of Madura grocery stores. This value is in the moderate category according to criteria commonly used in social research.

Table 10. F-Square

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
FEM -> BS	0.508	0.539	0.154	3.294	0.001

The relationship between FEM and BS was also statistically significant based on the path coefficient test results. The bootstrapping results showed that the T-statistic value

for the FEM → BS relationship was 5.341, well above the threshold of 1.96 for a significance level of 5%. The p-value of 0.000 reinforced the evidence that the effect was significant.

Discussion

The influence of Madurese ethnic philosophy on the sustainability of grocery stores is evident when viewed from the way cultural values shape the social and operational mechanisms of the business (Aginta et al., 2024; Wafiruddaroin & Rezeky, 2022). Ethnographic and descriptive studies of Madurese shop networks describe how norms such as hard work, honesty, ethnic solidarity, and social obligations function not only as moral guidelines but also as economic coordination tools that reduce transaction costs, facilitate access to informal capital, and strengthen customer loyalty (Ach Alfian Irhamsyah & Fahrurrozi, 2024; Hidayat et al., 2024; Sasongko & Wahyuni, 2013). This explanation is in line with the indigenous entrepreneurship literature, which places community values as strategic capital that provides adaptive flexibility for micro-enterprises amid modern market pressures (Gonzales, 2025)

The ethnic-based bonding social capital possessed by Madurese traders enables them to operate fast and mutually trustworthy informal supply and credit networks (Nakazato & Lim, 2024). This mechanism practically improves stock continuity, price flexibility, and the ability to provide microcredit to regular customers—all factors that directly contribute to the sustainability of small grocery stores (Sharma et al., 2025). Ethnic philosophy also strengthens important non-economic aspects of sustainability: reputation, social legitimacy, and the psychosocial resilience of business owners. Empirical studies of Madurese shops show that reputation based on cultural values often forms the basis for customers choosing a particular shop, especially in environments where personal social relationships are still dominant.

CONCLUSION

This study provides an understanding that the sustainability of Madura stalls is strongly influenced by the cultural values embedded within the Madurese ethnic community. Based on the findings, several recommendations can be proposed to strengthen the sustainability of these businesses. Madurese stall owners are encouraged to begin integrating business innovations, particularly in financial management, digital marketing, and inventory control, to complement their locally grounded strengths that have long characterized their operations. Local governments are also expected to provide more comprehensive support through MSME empowerment programs, improved access to capital, and relevant training that aligns with the needs of Madurese traders. Furthermore, future research is advised to explore deeper qualitative aspects related to cultural practices, social network patterns, and technological adaptation so that the dynamics of Madura stalls can be understood more holistically. Overall, this study confirms that Madurese ethnic philosophy plays a fundamental role in building the resilience and sustainability of Madura

stalls. By integrating cultural values with modern innovations, Madura stalls hold strong potential to continue growing and contributing significantly to the local economy. The combination of tradition and adaptation becomes the key to ensuring long-term sustainability in an increasingly competitive market landscape.

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