

INTEGRATING ENTREPRENEURSHIP EDUCATION INTO MSME DEVELOPMENT: A STRATEGIC MODEL FOR ENHANCING HUMAN RESOURCE QUALITY AND VILLAGE ENTREPRENEURSHIP IN GORONTALO REGENCY

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ABSTRACT

The low quality of human resources, exacerbated by a lack of access to structured entrepreneurship education, is a critical barrier to the development of Micro, Small, and Medium Enterprises (MSMEs). Acknowledging education as a fundamental driver of change, this study aims to formulate a strategic model for MSME development by integrating educational approaches to improve the quality of human resources (HR) and foster village entrepreneurship areas in Gorontalo Regency. A descriptive explanatory research method was employed, utilizing the Analytical Hierarchy Process (AHP) for analysis. Data were collected through focus group discussions and structured questionnaires administered to a panel of 21 experts, including MSME practitioners, government officials, and educational experts. The AHP results indicate that expanding access to practical entrepreneurship education and training is a primary strategy, underpinning the top priority of market access (weight: 0.417). This is followed by the core factor of human resource quality (0.271), which is directly addressed through educational interventions. Technology and innovation (0.147), government affirmative policies (0.131), and infrastructure support (0.035) complete the hierarchy. Consequently, the key policy implications are deeply rooted in education. It is recommended that local governments collaborate with educational institutions and the private sector to develop curricula for ongoing community-based education and training programs.

Keywords: Analytical Hierarchy Process (AHP), Entrepreneurship Education, Human Resource Quality, MSME Development, Village Entrepreneurship.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are universally recognized as a critical engine for economic growth, job creation, and innovation. Globally, they form the backbone of many economies; for instance, they constitute 99.92% of all enterprises in Italy, making a monumental contribution to its Gross Domestic Product, while in the United States, they are a primary source of employment (Bertrand et al., 2022; Cordeiro, 2019; Dela Cruz et al., 2023) and one of the main pillars of the economy because they dominate the total number of business units. However, their performance generally remains below that of large companies (Ciocoiu et al., 2025). This underscores their vital role in fostering resilient and sustainable economic ecosystems worldwide.

Poverty alleviation is one of the most important issues in society, especially in rural areas. Entrepreneurship is seen as a strategic solution because it can increase the income of rural entrepreneurs while creating jobs for rural communities (Dong et al., 2021) furthermore MSMEs must be able to meet all export requirements in order to create a balanced supply chain (Purwaningsih et al., 2022).

In Indonesia, the significance of MSMEs is equally profound. They are a major source of national income and have repeatedly proven their resilience, notably by surviving the 1997-1998 Asian financial crisis when many larger corporations faltered (Darmastuti et al., 2021). Recognizing this strategic importance, the Indonesian government has enacted robust supportive regulations, such as Law Number 20 of 2008 and Government Regulation Number 7 of 2021, which are designed to create a conducive climate for MSME development through empowerment, protection, and facilitation (Falahat et al., 2020; Mushtaq et al., 2022). These policies highlight a serious national commitment to harnessing the potential of MSMEs to drive economic development, encourage innovation, and expand business networks (Yang, 2006).

This national focus finds a critical use case at the local level in Gorontalo Regency. The regency has demonstrated significant potential, with the number of MSMEs growing steadily from 2,259 units to 11,189 units between 2021 and 2023. However, despite this quantitative growth, many local MSMEs have not developed optimally. A primary inhibiting factor is the low quality of human resources (HR), which limits capabilities in crucial areas like business management, innovation, and market expansion (Badan Pusat Statistik RI, 2024). Quality HR, encompassing knowledge, skills, and entrepreneurial abilities, is essential for MSMEs to enhance product value, adopt technology, and compete effectively (Law of the Republic of Indonesia Number 20 of 2008; Tambunan, 2020).

The concept of “village entrepreneurship” is often debated, because theoretically there should be no significant difference between entrepreneurship in urban and rural areas. However, in reality, there are differences. This concept is important because many villages are experiencing decline and are marginalized in terms of entrepreneurial opportunities (Smith, 2017).

The concept of developing "entrepreneurs village areas" (*kawasan desa wirausaha*) has emerged as a strategic solution to this challenge. This approach involves designing specific areas to cluster, nurture, and empower MSMEs by leveraging local potential, preserving culture, and driving community economic diversification (Gunawan et al., 2021; Soleh et al., 2019). The ultimate goal is to create a sustainable village economy that improves community welfare (Nurani et al., 2023).

While previous research has extensively explored MSME development, several critical gaps remain. Studies have focused on models based on economic potential (Ardiana et al., 2010), building entrepreneurial spirit (Kartika, 2013; Siahaan, 2022), and local government strategies for HR quality (Mokhammad & Hartono, 2011; Siregar et al., 2020). However, a key limitation is the lack of focus on integrating these strategies into the specific, place-based context of developing a formal entrepreneurs village area as a growth hub.

This study aims to fill this gap. Its novelty lies in its explicit focus on formulating a strategy to improve HR quality specifically for the development of a dedicated entrepreneurs village area in Gorontalo Regency. Unlike prior studies, this research offers an integrated and contextual model that connects HR capacity building-through training, mentoring, and digital literacy directly to the tangible ecosystem of an entrepreneur's village. It considers unique local factors, including cultural assets and regional economic potential, to provide a comprehensive framework that is both academically contributory and practically actionable for regional policymakers and MSME actors. Therefore, this study uniquely bridges the discourse on HR quality with the practical development of physical entrepreneurial zones, offering a novel approach to sustainable rural economic development.

RESEARCH METHOD

Research Design

This study employs a descriptive explanatory design to develop an integrated strategy model for MSME development in Gorontalo Regency. This design is appropriate as it allows for the systematic collection of qualitative and quantitative data to not only describe the current state of MSMEs and their human resource challenges but also to explain the relationships between key factors and to formulate strategic priorities. The research is conducted in two sequential phases: 1.) a descriptive phase involving surveys and focus group discussions to identify and describe the conditions, needs, and problems of MSMEs, and 2.) an explanatory phase utilizing the Analytical Hierarchy Process (AHP) to analyze the data and explain the strategic priorities for developing an entrepreneur's village area. This mixed-method approach ensures the findings are both comprehensive and actionable.

Location and Object of Research

The research was conducted in Gorontalo Regency. This location was selected based on the consideration that it has one of the largest distributions of MSMEs in the province. Furthermore, the socio-economic and demographic diversity of its community makes it a representative case study for the broader

conditions in the region. The research objects are MSME actors operating within Gorontalo Regency.

Data Types and Sources

The types of data needed in this study are primary data and secondary data. Primary data sources are obtained from direct observations in the field and questionnaires and interviews with MSME actors. Secondary data sources are in the form of supporting data obtained from various parties and related institutions.

Population and Sample

The population of this study comprises all MSME actors in Gorontalo Regency. The sampling frame was stratified based on the distribution of MSMEs across each district (kecamatan) within the regency. To ensure representativeness, a Stratified Systematic Random Sampling technique was employed using Proportional to Population Size (PPS) allocation. This meant that the sample size from each district was proportional to its total number of MSMEs. The study specifically targeted established MSMEs, setting the criteria that participants must have been operational for a minimum of three years. Based on this framework and the PPS calculation, a final sample size of 20 expert including stakeholders and MSME actors was determined. From a numbered list of eligible MSMEs in each stratum (district), every k^{th} member was selected systematically to form the sample.

Focus Group Discussion and In-Depth Interviews

To gather in-depth qualitative insights, two Focus Group Discussions (FGDs) were conducted. The participants for the FGDs ($n=15$ total) were purposively selected to represent key stakeholder groups, including: 1.) MSME owners and operators; 2.) Officials from the Cooperative and SME Service; 3.) Officials from the Industry and Trade Service; 4.) Academics with expertise in local economic development.

Each FGD session, lasting approximately 2 hours, was guided by a semi-structured protocol designed to explore: (1) the conditions and potential of MSMEs, (2) HR quality needs and problems, (3) strategic options for development, and (4) the feasibility of an entrepreneur's village area. The discussions were recorded, transcribed, and analyzed to identify key themes and criteria for the AHP model. Supplementary in-depth interviews ($n=5$) were conducted with senior officials to clarify and deepen insights gained from the FGDs.

Data Analysis Technique: Analytical Hierarchy Process (AHP)

The AHP was used to systematically prioritize the strategies identified from the qualitative phase. The procedure was conducted as follows: 1.) Problem Decomposition and Hierarchy Construction: The main goal was placed at the top of the hierarchy. The criteria and sub-criteria (e.g., Market Access, HR Quality, Government Policy) identified from the FGDs and literature were arranged at subsequent levels. The strategic alternatives formed the bottom level; 2.) Pairwise Comparison: Expert respondents from the FGDs

were asked to evaluate and compare the relative importance of each element within a hierarchy level using the standard Saaty's 1-9 scale (where 1 denotes equal importance and 9 denotes extreme importance). This was done for all criteria and alternatives through a structured questionnaire; 3.) Synthesis and Priority Vector Calculation: The pairwise comparison matrices were processed using the eigenvalue method to derive the local priority weights (or eigenvectors) for each element; 4.) Consistency Check: To ensure the judgments were logically consistent, a Consistency Ratio (CR) was calculated for each matrix. The CR is derived from the Consistency Index (CI) and the Random Index (RI): $CR = CI / RI$. A CR value of ≤ 0.10 was considered acceptable; matrices with a higher CR were revisited and re-evaluated by the experts until a consistent judgment was achieved; 5.) Synthesis of Results: The local priorities were aggregated across all levels of the hierarchy to produce a global priority ranking for the alternative strategies, clearly identifying the most critical factors for developing the entrepreneur's village area.

RESULTS AND DISCUSSION

Gorontalo Regency, strategically located in the heart of Gorontalo Province with an area of 2,151.81 km² and a population of 418,244, serves as a crucial hub for micro, small, and medium enterprises (MSMEs) (Nawawi et al., 2023). Administratively divided into 19 districts and 191 villages, the regency's economy is significantly driven by a diverse MSME sector. Our analysis classifies these MSMEs into four primary sectors based on their dominant activities: Culinary, Handicrafts, Trade, and Services. Each sector exhibits distinct characteristics, challenges, and potential for growth, as summarized in Table 1.

Table 1. Classification of MSME Sectors in Gorontalo Regency: Needs and Challenges

Sectors	Key Characteristics		Primary Needs		Major Challenges
Culinary	Local specialties, industries.	food home	Product quality materials, digital marketing.	innovation, raw	Competition with external products, shifting consumer trends.
Handicrafts	Utilizes materials (e.g., bamboo, rotan).	local (e.g.,	Product development, technical skills, e-commerce access.	design	Limited market access, minimal use of digital technology.
Trade	Retail of goods, often family-owned shops ("warungs").	goods, family-owned	Inventory management, pricing strategies, consumer behavior insight.		Market demand fluctuations, intense competition with modern retailers (Indomaret, Alfamart).
Services	Localized services	services	Service quality		Dependence on

Sectors	Key Characteristics	Primary Needs	Major Challenges
	(repairs, transportation).	improvement, customer communication, service diversification.	local economic conditions, changing consumer needs.

Furthermore, we focused on MSMEs with an operational period of over five years for this study. These established businesses demonstrate higher stability, established management practices, and consistent revenue streams, making them ideal candidates for advanced development programs focused on innovation, digitalization, and market expansion.

A notable potential lies within the 191 villages, where rural MSMEs leverage local resources like agricultural products and crafts. A prime example is Haya-Haya Village, where the "*Sukses Selalu*" and "*Tunas Hijau*" business groups have successfully developed banana cultivation and innovated by converting waste into compost and animal feed, embodying the principles of a circular economy and sustainable development.

AHP Results: Strategic Priorities for Development

The Analytical Hierarchy Process (AHP) was employed to determine the strategic priorities for developing an Entrepreneurs Village through HR quality improvement. The consensus from experts revealed a clear hierarchy of factors, as visually represented in Figure 1 and detailed by weight in Table 2. Based on the results of the process hierarchy analysis carried out, the following are the AHP results:

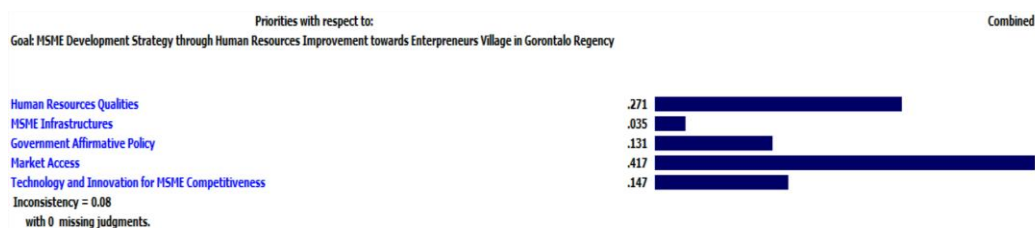


Figure 1. Strategic Priority Weights for MSME Development
Source: Processed Data (2024)

A bar chart would be ideal here. The X-axis lists the factors, the Y-axis shows the weight from 0 to 0.45. Market Access would be the tallest bar, followed by HR Quality, then Technology, Government Policy, and finally a very short bar for Infrastructure.

Table 2. AHP Results for MSME Development Strategy Factors

Strategic Factor	Weight	Rank
Market Access	0.417	1
Human Resources (HR) Quality	0.271	2
Technology and Innovation	0.147	3

Strategic Factor	Weight	Rank
Government Affirmative Policy	0.131	4
MSME Infrastructure	0.035	5

Source: Data Processed (2025)

Critical Interpretation of AHP Findings

The prioritization of Market Access (0.417) as the paramount factor aligns with the core challenge identified in our descriptive analysis: the confinement of MSMEs to limited local markets. This finding resonates strongly with the Resource-Based View (RBV) theory, which posits that access to valuable markets is a critical external resource that drives competitive advantage (Barney, 1991). However, it also presents a intriguing divergence from studies in more developed regions or tech-heavy clusters, where technology adoption might be the primary driver (Huang & Handfield, 2015). For Gorontalo, the experts' consensus suggests that even the best products and skilled are futile without a channel to reach consumers. This underscores a fundamental, first-order barrier: connectivity. The expert weighting implies a sequential logic-first, open the channels to sell (Market Access), then ensure you have the skilled people to create sellable products (HR Quality), and finally, use technology to do both more efficiently.

Market access is a top priority because of its key role in supporting business sustainability and the ability of MSMEs to expand their consumer networks. According to Cordero et al., (2022) In a systematic review of MSME market access in the fisheries and aquaculture sector, better access can increase profitability and competitiveness. This article describes how business networks and technology adoption support MSMEs in overcoming international market barriers. The high priority of market access reflects the reality that without adequate market access, MSMEs cannot grow sustainably. Market access is crucial because it is directly related to the ability of MSMEs to generate income and maintain business continuity.

Bertrand et al., (2022) examines export barriers for MSMEs in developing countries, and concludes that government policies that address economic and institutional barriers are helpful in improving the competitiveness of MSMEs in international markets. This article highlights the important role of government policies in reducing market access barriers.

The results of the analysis on micro enterprises (MEs) show that internet marketing, market orientation, and social entrepreneurship orientation have a significant positive effect on social aspects (Munandar et al., 2025), another study also concludes that business resilience practices act as a mediator that channels the influence of entrepreneurial marketing behavior on business recovery (Li et al., 2023).

The second priority, Human Resource Quality (0.271), directly confirms the human capital theory, which links investment in employee knowledge and skills to greater productivity and innovation (Becker, 1975). This is critically important in the Gorontalo context, as identified in Table 1, where each sector requires specialized training. The weight affirms that market access alone is insufficient; a skilled workforce is needed to capitalize on those new opportunities, innovate products, and build a reputable brand.

Quality human resources are very important for the adaptability and development of MSME businesses in the digital era. Falahat et al., (2020) in his study showed that product innovation and marketing capabilities driven by high-quality human resources enable MSMEs to enter international markets more effectively. The competence of trained human resources helps MSMEs in creating added value and improving business reputation in a competitive market.

Entrepreneur Capacity which represents the human resource quality also has a positive and significant effect on business continuity intentions (Alshebami, 2024). Another research findings such as Madhavan et al., (2025) indicate that knowledge of e-commerce from owner MSME is more important thing. Entrepreneurship education (EE) also functions as a significant moderating variable in relation to social capital and sustainable entrepreneurship (Kanth & Sinha, 2025). The improvement of human resource quality is a key factor in the successful development of MSMEs (Rauf et al., 2023).

The results of the Fresner et al., (2025) study show that by minimizing the time required by management, actively involving owners or managers, providing information tailored to the needs related to the various options available, and involving other stakeholders such as chambers of commerce and financial institutions, companies can participate in large numbers with relatively little effort and achieve significant results. But in another result study revealed that knowledge management does not have a significant effect on the development of MSMEs (Hamsinah et al., 2024).

The lower relative weights for Technology & Innovation (0.147) and Government Affirmative Policy (0.131) do not diminish their importance but rather contextualize their role as enablers. They are not the end goals but the means to achieve market access and improve HR quality. This challenges a common narrative that technology is a universal panacea. In Gorontalo, technology is likely seen as a tool for achieving market access (e.g., through e-commerce) rather than a standalone strategic outcome. Similarly, government policy is crucial for creating a supportive environment, but the experts indicate that its impact is channeled through facilitating the higher-ranked factors.

In the context of other studies, such as Paliwal et al., (2024) it is argued that the use of technology such as computers has a significant negative effect on the intention to adopt blockchain technology. Conversely, software quality and environmental sustainability have a strong positive effect. The integration of AI is thus having a major impact, enabling MSMEs to pursue open innovation strategies (Qu & Kim, 2025).

Technology and innovation are key components in increasing the efficiency and competitiveness of MSMEs, enabling them to compete with large companies. In a study by Mushtaq et al., (2022) found that the adoption of ICT technology helps MSMEs reduce information asymmetry in the credit market, making it easier for them to obtain financing. This technology also increases transparency and accessibility, which are very important for MSMEs who want to expand their business to a wider market. Technological improvements are a key factor enabling MSMEs to successfully implement circular economy practices, while financial constraints are the biggest

challenge faced in both developed and developing countries (Khurana et al., 2022; Mishra et al., 2025; Nandhini et al., 2022).

The development of information technology systems is progressing rapidly and is widely used to meet the needs of companies, with a significant impact on business processes (Armas et al., 2024; Dinata et al., 2024; Gultom et al., 2024; Hendriadi et al., 2025; Kavre et al., 2025; Lestari et al., 2024; Rahayu et al., 2023; Satsangi et al., 2025; Shah et al., 2025). Open innovation has the potential to drive shared value creation through capacity building, operational improvements, and the organization of MSME activities, particularly when mediated and supported by public sector actors (Osorno-Hinojosa et al., 2023). The integration of Industry 4.0 (I4.0) and sustainability principles into the MSME supply chain is carried out through mechanisms involving people, processes, and technology (PPT), based on the triple bottom line (TBL) perspective (Machado et al., 2024). Innovation is also an important factor in empowering MSMEs, where the use of technology to improve service quality has a significant impact on tourism development (Purnomo & Purwandari, 2025).

Although challenges remain in terms of delivery, the findings show that digitization and digital transformation are important strategies for MSMEs in dealing with the crisis (Kawane et al., 2024; Purwoto et al., 2025; Sun & Zhang, 2024). The results from Sudj atmoko et al., (2025) study show that mentoring in digital entrepreneurship plays an important role for MSMEs, as it not only helps improve digital skills, but also encourages the creation of more sustainable business processes, thereby supporting the continuity of their businesses.

The minimal weight for Infrastructure (0.035) is perhaps the most surprising finding, seemingly contradicting literature that emphasizes its foundational role that improving infrastructure in transition countries are crucial to boosting the capacity of small and medium-sized enterprises (SMEs) and enhancing their export performance (Edeh et al., 2025). This could be interpreted in two ways: 1.) that basic infrastructure (e.g., roads, electricity) in Gorontalo is already adequate and thus not a current binding constraint, or 2.) that experts perceive investments in other areas to yield a much higher marginal return. This divergence from other studies highlights the critical importance of context-specific analysis.

The five main factors identified as supporting the mitigation of environmental uncertainty's impact on the recovery of MSMEs undergoing internationalization are access to capital, market knowledge, product innovation, working capital, and entrepreneurial orientation (Saharan et al., 2025). The utilization of business development services and financing programs for MSMEs is crucial for the formulation of MSME-related policies (Elhan-Kayalar et al., 2022). The implementation of performance guarantees emphasizes the potential of productive MSMEs to open up broader access to funding while promoting sustainable business development (Mulyati et al., 2025).

Practical Recommendations for Gorontalo Regency

Based on the AHP findings and the specific context of Gorontalo's MSMEs, we propose the following actionable strategies: 1.) For Market Access (Priority 1): Establish a Gorontalo Regency MSME Digital Marketplace, a unified, government-facilitated e-platform to showcase local products from all districts; 2.) Create Market Linkage Forums quarterly, physically and virtually, connecting MSMEs in sectors like handicrafts and culinary with distributors from larger cities in Sulawesi and digital marketplaces (Tokopedia, Shopee). Develop a One-Village-One-Influencer program to train local youth in digital content creation to promote their village's MSME products on social media (TikTok, Instagram); 3.) For HR Quality (Priority 2): Implement sector-specific, modular training programs based on Table 1: Product innovation and hygiene standards for culinary; advanced craftsmanship and e-commerce photography for handicrafts; inventory management software for trade. Do a partnership with local universities (e.g., Universitas Negeri Gorontalo) to create a MSME Clinic where business students provide consulting to MSMEs as part of their curriculum, offering fresh ideas and digital skills; 4.) For Technology & Innovation (Priority 3): Provide subsidies or grants for the adoption of simple Point-of-Sale (POS) and inventory management apps for trade MSMEs to compete with modern retailers. Launch Innovation Vouchers for MSMEs to access technical expertise (e.g., food technologists, design engineers) to help diversify products, such as creating longer-lasting packaged versions of local delicacies; 5.) For Government Policy (Priority 4): Simplify and digitize the licensing process specifically for MSMEs to obtain halal certification and product distribution permits. Design affirmative procurement policies where a percentage of the budget for government meetings and events must be allocated to catering and souvenirs from local MSMEs; 6.) For Infrastructure (Priority 5): While a lower priority, focus on "last-mile" digital infrastructure improvements in villages like Haya-Haya to ensure stable internet connectivity, which is the bedrock for all digital market access and technology adoption strategies. By implementing this tailored, factor-prioritized strategy, Gorontalo Regency can effectively channel its resources to overcome the most binding constraints first, thereby accelerating the development of its MSME sector towards the vision of prosperous Entrepreneur Villages.

The improvement of students' entrepreneurial intention needs to focus on strengthening objective, rational, realistic, and stable entrepreneurial skills, as reflected in the entrepreneurial self-efficacy. One effective way to achieve this is through entrepreneurship education (Sudrajat et al., 2023; Ye & Kang, 2025). One thing to ensure the MSME sustainable development is to reduce the corruption (Huseynova, 2024).

Good traditional design planning in the MSME sector is considered capable of supporting the formulation of more effective government policies and programs, as well as encouraging the development of transportation infrastructure (Sindhvani et al., 2023). In addition, it is also necessary to develop sharia financing as an alternative source of financing for MSMEs, as suggested by Mujiatun et al., (2023).

Another important thing is social entrepreneurship in village especially in Gorontalo Regency due to the results Ogbari et al., (2025) study confirm that social entrepreneurship has great potential in supporting the achievement of sustainable development goals, particularly through efforts to promote inclusive growth and reduce poverty and inequality in developing countries.

CONCLUSION

This study employed the Analytical Hierarchy Process (AHP) to identify and prioritize the strategic factors essential for developing MSMEs towards an Entrepreneur Village model in Gorontalo Regency. The analysis, based on expert consensus, yielded a clear hierarchy of priorities. The most critical factor is Market Access (weight: 0.417), underscoring its role as the primary gateway for business sustainability and growth. This is followed by the quality of Human Resources (0.271), which is fundamental for adaptability and innovation. Technology and Innovation (0.147) and Government Affirmative Policy (0.131) were identified as crucial enabling factors, while Infrastructure (0.035), though important, was deemed a secondary concern in this specific context.

Theoretical Contributions: This study advances the understanding of MSME development theory by demonstrating the context-dependent nature of strategic priorities. While existing literature often champions technology or human capital as universal keys to growth (Falihat et al., 2020; Mushtaq et al., 2022), our findings from a developing regional context suggest a more sequential model. The primacy of market access aligns with the Resource-Based View (Barney, 1991) by treating it as a critical external resource that must be secured before other investments can yield full returns. Furthermore, the minimal weight given to infrastructure challenges the conventional wisdom of its foundational necessity, suggesting that in certain contexts, strategic and managerial interventions (like market linkages and training) can deliver more immediate impact than physical infrastructure, offering a nuanced contribution to entrepreneurship theory in emerging economies.

Practical Implications: The prioritized list provides a clear, actionable roadmap for policymakers in Gorontalo Regency: 1.) Market Access: Immediately focus on creating digital marketplaces, facilitating partnerships with larger distributors, and organizing regular product expos; 2.) Human Resources: Develop sector-specific training modules aligned with the identified needs of culinary, handicraft, trade, and service MSMEs, focusing on digital marketing, financial literacy, and production quality; 3.) Technology and Innovation: Introduce subsidy programs for simple technology adoption and foster university-MSME partnerships for product development and innovation; 4.) Government Policy: Design targeted affirmative policies, including simplified licensing processes, tax incentives for certified MSMEs, and easier access to micro-financing schemes; 5.) Infrastructure: While a lower priority, ensure ongoing improvements to digital connectivity in rural areas to support the digital market access strategies.

This study has several limitations that provide context for its findings and opportunities for future research. Firstly, the AHP methodology relies on the

judgments of a limited number of experts (however experienced), which may introduce bias and may not fully capture the perspectives of a larger population of MSME owners. Secondly, the study is geographically confined to Gorontalo Regency, which, while providing deep contextual insight, limits the generalizability of the findings. Future research should therefore aim to conduct comparative studies applying the same AHP model in other regencies in Indonesia or similar developing regions to validate or contrast the hierarchy of priorities found here, employ quantitative methods such as surveys to test the relationships between these factors and MSME performance across a larger and more representative sample, investigate the causal relationships between these factors, how exactly improved market access drives the need for specific HR skillsets, and lastly explore the role of social capital and local leadership in facilitating market access and technology adoption, which are often informal but critical factors in rural MSME development. In conclusion, by presenting a clear, prioritized strategy grounded in local expert consensus, this study offers a valuable framework for policymakers to allocate resources efficiently and for scholars to build upon in understanding the complex dynamics of MSME growth in regional economies.

ACKNOWLEDGMENT

This research was funded by Universitas Negeri Gorontalo through Faculty's Leading Assignment Research 2024 (Penelitian Penugasan Unggulan Fakultas Tahun Anggaran 2024) via Decree of Rector of Universitas Negeri Gorontalo No: 657/UN47/HK.02/2024.

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