

## **PIONEER VILLAGE 4.0: EMPOWERING MSME (MICRO, SMALL, AND MEDIUM ENTERPRISES) GROUPS THROUGH THE MYINNOVILLAGE PROGRAM IN BATU ROTO VILLAGE**

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### **ABSTRACT**

Empowering MSME groups for a sustainable future is an initiative by the Onschool Indonesia Group aimed at enhancing the capacity of MSME actors, particularly women in Batu Roto Village, North Bengkulu Regency. This project utilizes digital technology to foster an inclusive and sustainable economic ecosystem. This study employs a descriptive quantitative approach. The sample consists of 70 members of the MSME group, including 11 men and 59 women. Data were collected through a Likert-scale questionnaire administered to members of the Batu Roto Village MSME group, whose businesses are primarily focused on the agricultural sector, as well as goods and service-based enterprises. The MSME empowerment strategy in Batu Roto Village demonstrates significant success in managerial and partnership dimensions. The synergy between entrepreneurship training and formal collaboration has effectively enhanced productivity and market resilience. However, the limited effectiveness in developing industrial centers and business sectors reveals a critical gap: individual capacity building remains suboptimal without adequate physical infrastructure support and continuous sectoral evaluation. Academically, this study contributes a "Hybrid Empowerment Model" that emphasizes social capital as a key driver in resource-constrained environments. The policy implications suggest a shift in the role of village governments—from mere providers of physical infrastructure to active facilitators of support services (IaaS). This includes conducting regular village innovation audits and institutionalizing MSME networks into legal cooperatives to strengthen their bargaining position within a more inclusive strategic partnership framework.

**Key words:** digital empowerment; rural MSMEs; village innovation; hybrid empowerment model; entrepreneurship

## **DESA RINTISAN 4.0: PEMBERDAYAAN KELOMPOK UMKM DALAM PROGRAM MYINNOVILLAGE DI DESA BATU ROTO**

### **ABSTRAK**

Memberdayakan kelompok UMKM untuk Masa Depan Berkelanjutan merupakan inisiatif Grup Onschool Indonesia yang bertujuan untuk meningkatkan kapasitas pelaku UMKM, khususnya perempuan di Desa Batu Roto, Kabupaten Bengkulu Utara. Proyek ini memanfaatkan teknologi digital sebagai ekosistem ekonomi yang inklusif dan berkelanjutan. Metode penelitian ini menggunakan pendekatan kuantitatif deskriptif. Sampel terdiri dari 70 anggota kelompok UMKM. Data dihimpun melalui kuesioner skala likert yang meliputi 11 laki-laki dan 59 perempuan yang tergabung dalam Kelompok UMKM Desa Batu Roto, Kabupaten Bengkulu Utara yang memiliki fokus usaha di sektor pertanian, pelaku UMKM baik barang maupun jasa. Strategi pemberdayaan UMKM di Desa Batu Roto menunjukkan keberhasilan yang signifikan dalam dimensi manajerial dan kemitraan, di mana sinergi antara pelatihan kewirausahaan dan kolaborasi formal telah secara efektif meningkatkan produktivitas dan ketahanan pasar. Namun, ineffectivitas dalam mengembangkan pusat industri dan sektor bisnis mengungkapkan kesenjangan kritis: pengembangan kapasitas individu tetap tidak optimal tanpa dukungan infrastruktur fisik aktif dan evaluasi sektoral yang berkelanjutan. Secara akademis, penelitian ini menyumbangkan "Model Pemberdayaan Hibrida" yang menekankan modal sosial sebagai pendorong utama dalam lingkungan yang terbatas sumber daya. Implikasi kebijakan yang dihasilkan menuntut pergeseran peran pemerintah desa dari sekadar penyedia struktur fisik menjadi fasilitator aktif layanan pendukung (IaaS), melakukan audit inovasi desa secara berkala, dan melembagakan jaringan UMKM menjadi koperasi hukum untuk memperkuat posisi tawar mereka dalam kerangka kerja kemitraan strategis yang lebih inklusif.

**Kata kunci:** pemberdayaan digital; UMKM pedesaan; inovasi desa; model pemberdayaan hibrida; kewirausahaan

### **INTRODUCTION**

Baturoto Village, situated in the Hulu Palik District of North Bengkulu Regency, represents a typology of an agrarian-based rural area endowed with abundant natural resource potential yet hin-

dered by systemic structural constraints. Geographically, the village's location at the foot of a mountain offers the advantage of fertile agricultural land, where the farming sector serves as the economic backbone for approximately 45% of the total population (982 people). With a productive land area of

512 hectares dominated by rice and sweet potato commodities, the village possesses significant economic modality. However, this potential stands in stark contrast to the existing reality of infrastructure and human resource (HR) quality. Data from the Public Works Office indicates that 60% of village access roads remain cobblestone, directly impeding the mobility of agricultural harvests and escalating logistical costs. Furthermore, the limited educational background of the productive population where 70% have only completed primary education serves as a primary barrier to the adoption of modern agricultural technology and efficient post-harvest management (Kurniawan & Maulana, 2022).

This disparity between resource potential and infrastructural reality has catalyzed transformative initiatives through integrative programs such as Innovillage and the Onschool.id MSME digitalization social project. These interventions are designed to overcome accessibility hurdles and HR limitations through the implementation of cutting-edge technologies, ranging from Artificial Intelligence (AI)-based digital marketing and blockchain-based micro-investment systems to Virtual Reality (VR)-based business simulations. Specific focus is directed toward the "Pioneer Village 4.0" initiative, which targets the empowerment of women entrepreneurs in MSMEs. This program not only equips participants with financial literacy and simplified accounting skills in collaboration with the regional banking sector but also integrates advanced features such as ChatGPT and influencer marketing to expand global market penetration.

Theoretically, the discourse on rural community empowerment has garnered extensive attention within development literature. Arlius et al., (2017) emphasized that food security vulnerability and low productive capacity constitute the roots of welfare inequality in rural areas. In other hand, Suminah et al., (2022) identified technological literacy and business capital as crucial determinants in increasing MSME income, although their study remains dominated by urban contexts. Furthermore, Fafurida et al., (2024) offers a community-based partnership model for developing tourism villages but have yet to address the comprehensive digital transformation dimension toward the Smart Village paradigm. Despite previous studies establishing the groundwork for empowerment, a significant literature gap remains in integrating rural MSME empowerment with long-term economic resilience strategies through a Village 4.0 framework that is adaptive to technological innovation.

This research aims to address this void by proposing the "Pioneer Village 4.0" conceptual model as an inclusive and sustainable village development strategy. The novelty of this study lies in the integration of three main pillars: local economic empowerment, digital transformation (via the MyInnovillage platform), and community based economic resilience. Through this multidimensional approach, the research aims to: (1) evaluate the effectiveness of integrating digital technologies (AI, Blockchain, and VR) on the productive capacity of rural MSMEs; (2) analyze the role of collaborative social innovation in strengthening local economic independence; and (3) formulate a strategic roadmap for transforming agrarian villages into competitive digital ecosystems. The results of this study are expected to provide a theoretical contribution by expanding rural development literature and a practical contribution as a foundation for evidence-based rural economic development policies in Indonesia.

## METHOD

This study employs a descriptive quantitative research design to systematically delineate the characteristics and empirical facts concerning the Small, Medium, and Micro Enterprises (MSMEs) group in Batu Roto Village, North Bengkulu Regency. To ensure a comprehensive and representative data set, a total sampling (saturated sampling) technique was utilized, involving 70 respondents who constitute the entire membership of the local MSME group. Demographically, the sample is comprised of 11 males (15.7%) and 59 females (84.3%), all of whom operate within the agricultural sector, spanning both goods-based production and service-oriented business models. The research procedure was executed through a rigorous structured sequence, beginning with an intensive problem identification phase and instrument development, followed by primary data collection via field surveys, meticulous data cleaning, and culminating in systematic statistical analysis.

Primary data were gathered a structured questionnaire specifically designed to evaluate eight core dimensions of MSME development: Production/Turnover, Marketing strategies, Human Resource Development, Capital Assistance accessibility, Partnerships, Cooperation Contracts, Industrial Innovation, and Business Sector Development. The instrument consists of 30 carefully curated items, each measured on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5) to capture nuanced respondent perceptions. To ensure

the scientific integrity of the data, the instrument underwent rigorous psychometric testing using SPSS version 25. The construct validity test, assessed through 2-tailed significance values, confirmed that all variables were valid with significance levels consistently below 0.01. Furthermore, the reliability analysis yielded a Cronbach's Alpha coefficient of 0.985, which significantly exceeds the established academic threshold of 0.60, indicating exceptionally high internal consistency and instrument stability.

Data analysis was performed using descriptive statistics, including frequency distribution, percentage, mean, and standard deviation. These metrics were utilized to map the specific strengths and operational weaknesses of the MSMEs by categorizing the results into high, medium, and low performance levels based on interval scores. It is important to acknowledge the analytical boundaries of this study as it relies solely on descriptive statistics without implementing inferential tests such as regression or t-tests, the findings are only intended to characterize the current empirical state of the subject. Consequently, while the study provides a robust and detailed snapshot of the Batu Roto Village MSMEs, it does not aim to establish causal relationships or generalize the findings to larger populations beyond the specific socio-economic context of the group under investigation.

## RESULTS AND DISCUSSION

### *Myinnovillage Village 4.0 Program in Batu Roto Village*

The project was carried out in Baturoto Village, Hulu Palik District, North Bengkulu Regency, at several strategic RT/RW points, with geotagging around the coordinates 3.5840° S, 102.1155° E. This location supports direct assistance as well as the management of digital platforms so that the community can follow developments in a sustainable manner. The MSME digitization project in Baturoto Village lasted for 2.5 months and consisted of four stages. The first and second weeks were filled with preparation, socialization, and recruitment of participants. In the third to fifth week, intensive training begins, where participants learn to use digital platforms for blockchain-based marketing and micro-investments. During the sixth to eighth week, participants applied technology through simulation and product marketing. Finally, the ninth and tenth weeks were focused on evaluation, measuring the impact of digital skills and market access for village MSMEs. Around 400 people,

including farmers, MSME actors, and village youth are planned to receive direct benefits through training, technology access, and marketing upgrades.

This program market access through digital platforms, which results in an increase of sales and revenue potential. It also helps to supply micro capital with the micro investment feature which makes it easier for local MSMEs to obtain additional funds transparently through community support. Additionally, this program can also help with environmental conservation through improving marketing and stock management, which results in minimized waste. Secondly, this program also helps with knowledge and skill transfer such as digital marketing, business management with virtual reality simulation training to simulate stock management, customer service and financial strategy, and introduces the usage of blockchain technology for micro-investments to improve understanding related to new financial technologies. Lastly, this program provides continuous mentoring up to two months after the program to ensure MSMEs can operate the system independently. Following that the project team continuously monitors progress, assists in improvements when facing difficulties, and evaluates implementation results to strengthen the sustainability of the program in the community.

The characteristics of the respondents consisted of 11 men (15.71%) and 59 women (84%) who were members of the Batu Roto Village MSME Group, North Bengkulu Regency which has a business focus in the agricultural sector, MSME actors both goods and services. Most of the respondents works in the informal sector, either freelance daily laborers or self-employed.

Village Pioneer 4.0: Empowering MSME Women for a Sustainable Future (Rintisan Desa 4.0 Desa Batu Roto) is an initiative of the Onschool Indonesia Group that aims to increase the capacity of MSME actors, especially women in Batu Roto Village, North Bengkulu Regency. This project utilizes digital technology as a foundation to create an inclusive and sustainable economic ecosystem. With a training approach and the introduction of technological innovations, this activity is expected to be able to empower local communities, strengthen the competitiveness of MSMEs, and encourage village economic progress. The activity began with training in creative content creation and digital marketing. This training is designed to help MSME actors promote their products effectively through social media and other digital platforms. Participants were also taught how to leverage digital trends to reach a wider market, including prod-

uct photo making techniques, storytelling strategies, and the use of social media algorithms.

This training is the first step in improving the participants' ability to compete in the digital era. In addition, inclusive financial and simple accounting training is provided to help participants understand how to manage their business finances well. In collaboration with Bank Bengkulu, this activity includes training on cash flow management, simple bookkeeping, and access to formal financial services. With better financial literacy, MSMEs are expected to optimize their profits while minimizing financial risks. Technological innovation is also the main focus with the development of a website-based marketplace equipped with ChatGPT features, blockchain, and influencer marketing. This feature makes it easier for MSME actors to market products, transact safely, and take advantage of promotional support from relevant influencers. This technology is designed to make Batu Roto Village the first digital village in Bengkulu, which is able to compete globally with quality local products. This activity was closed with evaluation and monitoring of the implementation of the training and technology that has been provided. Through collaboration with the local government, DPRD, and the Regent of North Bengkulu, this program also ensures the continuity of support for MSME actors after the implementation of the project. With this step, On-school Indonesia Group is optimistic that Village Pilot 4.0 can become a technology-based MSME empowerment model that can be replicated in other villages in Indonesia.

The tangible results of this innovation include the achievement of 100 seminar participants, all of whom are MSME women, the management of 60 NPWP, 85 NIB, 10 halal certifications, and 100 active users of digital platforms, which significantly increase business capacity and open access to capital. The impact of the project is felt widely, from the village level to sub-district, district, and province, with an estimated 500 families benefiting through increased income, wider market access, and improved quality of life through continuous training and mentoring.

Collaboration in the field between student teams, accompanying lecturers, village governments, related agencies, financial institutions, and strategic partners creates solid synergy in each stage of implementation, ensuring the effectiveness and efficiency of activities. The sustainability of the project is anticipated through a replication model to other villages, the development of revenue-sharing from digital services, and a business incubation program that supports advanced training, so that

the benefits of this project are expected to continue to be felt for at least the next 5-10 years, creating a sustainable economic and social impact for local communities and opening up innovative business development opportunities.

### ***Empowerment of MSME Groups in The Village 4.0 Pioneer***

#### *Managerial*

The managerial category consists of three variables: Productivity/Turnover, Marketing and Human Resource Development. For the productivity/turnover variable, the findings derived from 70 respondents indicate a positive trend in business performance among MSMEs following the intervention of support programs. The data show that the average business turnover has experienced an increase over the past year (mean = 2.33), suggesting a gradual financial improvement. In parallel, business production capacity also increased after receiving assistance (mean = 2.70), indicating that the support provided has contributed to enhancing operational output. Furthermore, labor productivity demonstrates a higher level of improvement (mean = 3.14), implying that the interventions not only affected business output but also strengthened work efficiency and human resource performance.

In addition, respondents acknowledged a positive impact of the support programs on business profitability, as reflected in the mean score of 3.16. This is reinforced by the distribution of responses, where 24.3% of MSME actors agreed that their turnover increased, while 22.9% expressed similar agreement. These findings suggest that the support received such as business mentoring, access to markets, and capital assistance has effectively improved both productivity and business income. Overall, the results provide empirical evidence that capacity-building interventions can enhance business sustainability among MSMEs.

This study found that the turnover and productivity of MSME workers increased after mentoring. This is in line with management theory which states that appropriate interventions, such as training and mentoring, can directly improve production efficiency and output. Rizky et al., (2025) noted an increase also reflects the view of experts that structured external support, not just capital assistance, plays a crucial role in the growth of MSMEs. Assistance and productive activities can improve capital structure, thus having an impact on strengthening capital. In line with Basit and Rosidayanti (2020), the overall business production fac-

tors can affect the income of MSME performers. Considering the age of middle-aged MSME performers can be said to be of productive age, so it is still very possible to be empowered so that their business can exist again

These findings suggest that the support received such as business mentoring, access to markets, and capital assistance has effectively improved both productivity and business income. Onkelinx et al., (2016) noted capacity building interventions can enhance business sustainability among MSMEs.

Meanwhile, regarding marketing, the findings further reveal that marketing support plays a meaningful role in strengthening MSME performance after program intervention. Interestingly, respondents acknowledged that the promotional assistance provided by collaborating institutions contributed to improving business visibility, although the level of perceived impact remained moderate (mean = 2.73). However, the data also suggests a gradual expansion of market access (mean = 2.79), indicating that many MSMEs had begun reaching new customer segments beyond their traditional local markets. Notably, product recognition among the public improved more significantly following the implementation of structured marketing initiatives (mean = 3.09), reflecting the relevance of consistent branding and promotion efforts. Moreover, marketing digitalization emerged as the most influential factor in enhancing sales performance (mean = 3.23), which implies that the adoption of online platforms provided MSMEs with more competitive advantages in market penetration. This interpretation is reinforced by respondent perceptions, where 30% strongly agreed and 25.7% agreed that promotional strategies particularly those utilizing digital media were effective in expanding market reach and increasing sales volume. Collectively, these findings underline the strategic importance of integrating digital marketing within MSME development programs in today's increasingly technology-driven business landscape.

As results study show a marketing digitalization programs help increase MSME sales are highly relevant to modern marketing theory (Pahlevi & Rahab, 2022). This emphasizes the importance of digital technology adoption to reach a wider market and increase competitiveness. Digital promotion skills and branding of MSME participants to support their business development independently. The success of MSMEs in Batu Roto Village in this case shows that they can utilize digital platforms, such as websites and applications, for easier marketing.

For Resource Development, the findings highlight that human resource development plays a pivotal role in enhancing the capacity and sustainability of MSMEs. Notably, most respondents reported having participated in business management training programs (mean = 3.29), and they acknowledged that these initiatives contributed to improving their managerial capabilities (mean = 3.30). Interestingly, the positive impact of capacity building was not limited to business owners alone, as employees were also involved in skills training activities (mean = 3.30), suggesting a broader effort to strengthen organizational competence. Furthermore, respondents expressed a strong belief in the strategic importance of human resource development for business growth, as reflected in the highest mean score within this variable (mean = 3.31). This perception is reinforced by response distribution data, where 51.4% strongly agreed with the relevance of the training they received. These results imply that structured coaching and continuous learning are perceived as essential components in enhancing MSME competitiveness in today's evolving market environment.

The results of the study show that the high level of approval for the importance of human resource development is in line with the views of human resource economists, through education and training, directly correlated with increased productivity and income. The majority of respondents who had participated in business management training showed that this program succeeded in building the capacity of MSME actors, which is the key to business sustainability. Partial assistance and training can increase selling value and improve skills in the MSME group (Azizah, et al., 2021). These results imply that structured coaching and continuous learning are perceived as essential components in enhancing MSME competitiveness in today's evolving market environment.

#### *Capital aspect*

In the aspect of capital, there are limitations or variables including Capital Assistance Obtained and Ease of Access to Capital Assistance.

For capital assistance, although a considerable number of respondents reported receiving capital assistance, primarily from government programs or related institutions, the effectiveness of this financial support appears to be limited. Interestingly, while the mean score of 2.71 suggests that access to funding is relatively available, the adequacy of the assistance remains questionable. In fact, many respondents perceived that the amount of capital they

received was insufficient to support meaningful business development, as reflected by a lower mean value of 2.41. Nevertheless, it is worth noting that the majority of respondents demonstrated prudent financial behavior by allocating the funds according to business priorities—such as purchasing raw materials or supporting operational needs (mean = 2.51). Moreover, capital assistance played an important stabilizing role by reducing MSMEs' dependency on informal lenders who commonly charge high interest rates (mean = 2.59). The distribution of responses further reinforces this interpretation, with an average composite score of 10.23 across the capital variable, and a range between 4 and 16. Notably, 22.9% of respondents strongly agreed and 17.1% agreed that capital assistance was beneficial. However, despite its positive impact, the current level of capital support still falls short of what is required to drive significant business expansion and long-term growth.

Although respondents assessed that the capital assistance they received was not fully adequate, research showed that it was successful in helping them avoid high-interest loans. This is consistent with the microfinance literature that emphasizes the important role of fair and affordable funding in reducing MSMEs' dependence on loan sharks or informal loans. Capital assistance also serves as an initial stimulus for business development. However, despite its positive impact, the current level of capital support still falls short of what is required to drive significant business expansion and long-term growth to increase the motivation of MSME performers, it can be done by providing training related to increasing their motivation so that they get back up to manage their business. Business capital, either from own capital or from loans, has no effect on income. The failure of a business and the absence of growth in it is because MSMEs do not increase their resource capabilities and skills (Surin et al., 2015). In addition to the human capital aspect, the problem faced by MSME performers is that business sales have decreased, so that capital for production turnover is hampered. Capital is a very vital thing in a business or company. Without capital, a business cannot run as it should. Starting from large businesses and small-scale businesses, they still need capital to run their business (Prasetyoningrum, 2018).

The respondents generally expressed a positive perception regarding the accessibility of capital assistance schemes. Notably, they found the application procedures relatively straightforward and easy to follow, as indicated by the mean score of 3.01. Access to information was also not perceived as a

major obstacle (mean = 3.07), which suggests that relevant details about funding opportunities were communicated through channels familiar to MSME actors. Interestingly, the administrative requirements did not appear to discourage participation, as they were considered reasonable and not overly demanding (mean = 3.09). Consistent with this view, respondents also reported minimal challenges during the submission of applications (mean = 3.07). This interpretation is reinforced by the response distribution, where 30% strongly agreed and 25.7% agreed that capital assistance was relatively easy to access. Collectively, these findings indicate that the government and partnering institutions have made tangible progress in streamlining funding procedures for MSMEs, thereby reducing bureaucratic barriers that often hinder business development.

The ease of access to capital assistance, as seen from the easy-to-understand procedures and uncomplicated requirements, reflects the implementation of pro-MSME policies. Development economists often highlight convoluted bureaucracy as one of the main obstacles to MSME growth. Therefore, this ease of access shows the existence of good practices in the funding system implemented. The activities shown by the government or related institutions have succeeded in facilitating the capital application process. This can be interpreted as simplifying administrative procedures, increasing access to capital and markets, a participatory approach in program planning and implementation, and increasing public understanding and awareness of the importance of MSMEs in overcoming poverty (Mohamad et al., 2024). In addition, the government as a regulator, has basically issued many programs that have been provided to empower MSMEs through capital assistance to stimulate the growth of MSME centers in line with (Hardi & Zaharman, 2018). Collectively, these findings indicate that the government and partnering institutions have made tangible progress in streamlining funding procedures for MSMEs, thereby reducing bureaucratic barriers that often hinder business development.

### *Building a Partnership Program*

In the Aspect of Building Partnership Programs, there are limitations or variables including Partnerships and Contracts/Joint Agreements with Investors.

The survey results indicate that partnership initiatives have played an increasingly strategic role in supporting MSME development. Respondents re-

ported that they had participated in business collaborations facilitated by government agencies or other supporting institutions, with a mean score of 3.00 suggesting a fairly positive level of engagement. Interestingly, these partnerships were not perceived as short-term arrangements; instead, respondents believed that such collaborations offered long-term business advantages, as reflected by a mean value of 3.16. Another equally important point is that MSME actors felt that these partnerships were built on a foundation of fairness and equality (mean = 3.16), implying that no party was disadvantaged in the cooperation process. Moreover, partnerships were seen as instrumental in improving business efficiency, particularly by easing access to essential raw materials and opening broader market opportunities (mean = 3.16). This positive evaluation is further strengthened by the fact that 37.1% of respondents strongly agreed with the benefits of the partnership programs provided. With an average total score of 12.47, the findings suggest that partnerships supported by governmental and institutional stakeholders serve as a vital mechanism for enhancing MSME competitiveness and sustainability.

The findings further reveal that the cooperation contracts established between MSMEs and their partner institutions or investors are generally perceived in a positive light. With an average score of 9.44, respondents tended to view these contractual agreements as fair and mutually advantageous. In fact, 44.3% of respondents agreed that the terms outlined in the contracts were clearly stated and easy to comprehend, suggesting that the information was communicated in an accessible and straightforward manner. This interpretation is supported by the mean score of 3.07, which indicates that a considerable number of MSME actors had already formalized their business collaborations through written agreements. Moreover, the clarity of contractual content received a favorable assessment (mean = 3.09), implying that both rights and obligations were transparently articulated. Notably, respondents also perceived the contracts as equitable, with a mean score of 3.29 reflecting a shared understanding that the agreements offered tangible benefits to both parties involved. Collectively, these results highlight a commendable level of transparency and trust within the partnership mechanisms facilitated by the program, which may contribute to the long-term sustainability of such collaborations.

The findings that government-facilitated partnerships provide long-term benefits for MSMEs, facilitate access to raw materials and markets, as

well as cooperation contracts that benefit both parties, are in line with the concept of supply chain management and business collaboration. Local institutions can change the structure of the local economic market to be more competitive. In the condition of price formation, local economic institutions are based on MSMEs. In 2024, Farizqiyah noted partnership as a strategy to create profitable synergy, where business actors complement each other's strengths. The existence of a clear contract shows professionalism in carrying out the partnership in reflecting transparency in the cooperative relationship established. Collectively, these findings underline the strategic importance of integrating digital marketing within MSME development programs in today's increasingly technology-driven business landscape.

#### *Industrial Center Development*

The findings reveal that a large proportion of respondents are actively engaged in government-supported industrial centers, as indicated by a mean score of 3.09. These industrial centers appear to play a strategic role in supporting MSME development, not only by facilitating collaboration among business actors but also by providing access to essential facilities that enhance production and business operations. This perception is reflected in the identical mean score of 3.09 for the availability of supporting facilities. Furthermore, the response distribution shows strong approval, with 37.1% of respondents strongly agreeing and 34.3% agreeing that they are members of these industrial centers or receive guidance through government extension programs. With a total average score of 6.17, this variable demonstrates a generally positive evaluation. Overall, the results suggest that industrial centers function as an enabling environment for MSMEs by offering shared infrastructure, operational support, and capacity-building opportunities that contribute to business continuity and growth.

The development of government-assisted industrial centers/extension workers can provide facilities that support their business activities because they are members of government-assisted industrial centers in the development of MSME industrial centers. The strategy applied in the first quadrant supports an aggressive growth policy or growth-oriented strategy (Kamilannisa et al., 2024), addition, digital marketing strategies and including marketplaces used can affect the quality of MSME products (Maszudi, 2023). The findings suggest that partnerships supported by governmental and institutional stakeholders serve as a vital

mechanism for enhancing MSME competitiveness and sustainability.

### *Business Field Coaching*

Despite the implementation of coaching programs intended to enhance business capacity, this variable recorded the lowest mean score among all observed indicators (mean = 2.76). Interestingly, respondents expressed highly diverse perceptions regarding the effectiveness of the coaching they received. On one hand, 37.1% strongly agreed that the coaching was beneficial, suggesting that a portion of participants felt that the program contributed positively to their business development. On the other hand, a considerable proportion of respondents 22.9% strongly disagreed and 15.7% disagreed—reported dissatisfaction with the coaching activities. This polarization in responses implies a disparity in either the delivery or the impact of the program. It is possible that variations in coaching quality, frequency of assistance, or the relevance of training materials contributed to this uneven experience among participants. These findings underscore the need for a more inclusive and standard-

ized approach to coaching to ensure that all MSME actors receive equitable and meaningful support.

Although the results of the study show that there are significant differences of opinion regarding business field coaching, where some agree and some strongly disagree, this is in line with the challenges often faced in empowerment programs. This shows that there is an inequality in the implementation or impact of the coaching program provided. Experts acknowledge that coaching programs are often irrelevant to the specific needs of MSMEs or unsustainable. The provision of capital assistance, training and mentoring activities, and product promotion are the main factors in empowering MSMEs (Suminah et al., 2022). This shows the need to evaluate and adjust the coaching program so that it can be more on target (Paredes et al., 2019). In addition, digital marketing strategies, including the marketplace used, can affect the quality of MSME products (Maszudi, 2023). These findings underscore the need for a more inclusive and standardized approach to coaching to ensure that all MSME actors receive equitable and meaningful support.

**Table 1. Summary of Research Results on MSME Group Empowerment**

No.	Variable	Research Result
1	Managerial	Through Education and training it Directly correlates with increased productivity and income. The majority of respondents who participated in training business management shows that this program is successful in building the capacity of MSME actors, which is the key to business sustainability
2	Building a Partnership Program	Demonstrate a partnership that facilitated by the government provides long term benefits for MSMEs, facilitating access to raw material and markets, as well as the existence of cooperations contracts that benefit both parties (supply chain management) and business collaboration. In addition, a clear contract shows professionalism in Carry out partnerships and cooperative relationships
3	Capital	Capital plays an important role in providing fair and affordable funding in reducing dependency MSMEs on informal loans. Help capital also serves as initial stimulate for business development
4	Development Industrial Centers	Influence by the active role of the government provide supporting facilities for business activities that are members of the center MSME Industry
5	Business Sector Development	Business sector development is a challenge that is often faced in empowerment programs, it is necessary to evaluate and adjust the coaching program so that it can be more in target sustainable

Source: 2025 Research Results

The strategy of empowering MSME groups in Batu Roto Village, North Bengkulu, is considered effective in 3 Managerial Aspects, partnerships and cooperation contracts and capital, especially in terms of human resource development, marketing,

and ease of access to capital as well as facilitating access to raw materials and markets as well as the existence of cooperation contracts that benefit both parties. Meanwhile, in aspect 2, Aspects are considered ineffective, including the development of in-

dustrial centers and business sector development. Supporting factors are natural resources, family support, high solidarity, facilities, and infrastructure. The obstacles are technology, the quality of human resources, the position of women, and capital. The implementation through MSME groups is able to increase independence, knowledge, and social life with the community. An active role in group empowerment can increase dignity and status at all levels of society (Rizky et al., 2025). In addition, the values of transparency norms, cognitive networks, trust patterns, ability trust, less visible reciprocity, and proactive attitudes are seen in leadership. In line with Andriansyah et al., (2025), while empowerment can increase MSME income, MSME performers who often participate in empowerment and those who rarely participate in empowerment have no different income. The implications of the results of this study can be used as the basis for formulating an empowerment model for MSME performers.

However, sustainability of group empowerment will affect the economic transition and economic growth for group members to be more prosperous. On the other side, it is influenced by the impact of regional policies and economic growth, as well as strategies to develop local commodities that will highlight regional development that has economic value. according to the results based on the consideration that women are not only responsible for family reproduction, but also produce commodities and process food, and it is estimated that women are involved in half of the total production. Human capital is the main input in the production process, Human capital is responsible for more than half of the total production value (Bobba et al., 2021). Human capital according to economics is a stock of skills and productive knowledge of people in society.

## CONCLUSION

The MSME empowerment strategy in Batu Roto Village demonstrates significant success in managerial and partnership dimensions, where the synergy between entrepreneurship training and formal collaboration has effectively enhanced productivity and market resilience. However, the ineffectiveness in developing industrial centers and business sectors reveals a critical gap: individual capacity building remains suboptimal without active physical infrastructure support and continuous sectoral evaluation. Academically, this study contributes a "Hybrid Empowerment Model" that emphasizes social capital as a primary driver in resource-

constrained environments. The resulting policy implications demand a shift in village government roles from mere providers of physical structures to active facilitators of support services (IaaS), conducting regular village innovation audits, and institutionalizing MSME networks into legal cooperatives to strengthen their bargaining position within a more inclusive strategic partnership framework.

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