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Optimizing the Marketing of Local Mung Bean Sprout MSMEs Through the Development of Display Banners and Google Maps Integration

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Abstract

The household-scale mung bean sprout enterprise managed by Ibu Bhuna in Moktesareh Village, Sampang Regency, faced limited market visibility because of conventional sales practices, absent business signage, and no registered digital location. This community outreach activity aimed to strengthen local marketing through integrated visual branding and location-based digital promotion. A Participatory Action Research approach involved the business owner in planning, implementation, observation, and reflection. Interventions comprised installing a 2 × 0.8-meter display banner, registering a Google Business Profile linked to Google Maps, and configuring WhatsApp Business for direct orders. Evaluation drew on field observations, interviews, digital registration evidence, customer communication records, and daily sales monitoring over two weeks following implementation. The enterprise acquired a recognizable physical identity and an accessible digital location, while WhatsApp enabled approximately two to three daily preorders from customers outside the village. Average mung bean sprout sales increased from approximately 15 to 21 kilograms per day, representing a 40% rise. The owner also demonstrated independent management of incoming orders. These findings indicate improved promotional accessibility and short-term commercial performance, although concurrent interventions prevent attribution to individual tools. Longer monitoring and structured financial records are needed to evaluate sustainability and to distinguish sustained growth from temporary fluctuations.

Keywords: *Bean Sprout MSMEs, Google Business Profile, Participatory Action Research, Physical Evidence, Visual Branding.*

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INTRODUCTION

Micro, small, and medium enterprises (MSMEs) play an important role in sustaining local economic activities, particularly in rural communities where household businesses provide employment opportunities and essential food commodities. The development of digital marketing has introduced new opportunities for microenterprises to expand their market visibility, although the adoption of digital technologies remains uneven across businesses with different resources and operational capacities. Research examining digital marketing strategies among Indonesian MSMEs emphasizes the relevance of accessible digital tools for improving business capabilities and strengthening market participation (Alteza et al., 2025). Empirical investigations of digital marketing strategies further identify digital capabilities and strategic implementation as important considerations in understanding business performance among small and medium-sized enterprises (Wu et al., 2024). Location-based platforms have become particularly relevant for geographically concentrated businesses because Google Maps increasingly influences how local enterprises are represented and discovered within digital environments (Courmont, 2025). Community-based initiatives involving Google Maps demonstrate the practical relevance of digital location mapping for improving the accessibility and promotional presence of small businesses (Firdayanti et al., 2025). These developments are especially relevant to household-scale mung bean sprout producers, whose market activities depend on local consumer accessibility, product availability, and efficient distribution within geographically limited trading areas.

The effectiveness of MSME marketing increasingly depends on the interaction between physical business visibility and digital accessibility rather than the independent application of conventional or online promotional instruments. Physical marketing elements, including storefront identification, display arrangements, and promotional banners, contribute to the visual presentation of

businesses and shape how potential customers recognize commercial establishments. Research synthesizing the relationship between servicescape characteristics and consumer satisfaction provides a theoretical foundation for understanding the significance of physical environments in commercial interactions (Wang et al., 2025). Studies examining retail store design also highlight the relevance of visual presentation and spatial characteristics to consumer perceptions, although their findings require contextual adaptation before being applied to household-scale food businesses (Ye et al., 2023). Indonesian community empowerment initiatives have increasingly addressed visual identity development as a practical strategy for strengthening the branding of small food enterprises with limited promotional resources (Ariyanti et al., 2025). Related interventions combining Google Maps registration with banner installation illustrate the growing adoption of complementary physical and digital marketing practices among community-based MSMEs (Agustin et al., 2026). The existing literature consequently suggests that business identification and digital discoverability can be addressed through coordinated marketing interventions, although their practical effectiveness depends on enterprise characteristics, implementation conditions, and the continuity of promotional management.

Despite growing attention to integrated MSME marketing, several contextual and operational limitations remain insufficiently addressed in relation to household-scale producers of highly perishable food commodities. Community outreach involving traditional food enterprises has documented the combination of promotional banners and Google Maps-based location digitalization, indicating that hybrid marketing strategies have already been introduced within Indonesian local business environments (Rauzan et al., 2025). Similar initiatives integrating promotional banners, Google Maps, and digital content demonstrate the practical feasibility of combining offline and online promotional instruments in community empowerment activities (Saifuloh et al., 2026). These initiatives provide relevant implementation precedents but do not necessarily establish how marketing interventions operate under the distinctive conditions of daily mung bean sprout production, limited product shelf life, and highly localized distribution. Research concerning local businesses and Google Maps also raises questions about the dependence of enterprises on digital platforms and the organizational implications of maintaining an online presence (Courmont, 2025). Location mapping initiatives emphasize business accessibility and promotional opportunities, yet the relationship between digital location availability and independently managed marketing practices requires closer examination at the individual enterprise level (Firdayanti et al., 2025). The resulting research gap concerns the limited contextual understanding of how simple physical identification and digital location integration can be implemented, maintained, and evaluated within household-scale mung bean sprout enterprises. This gap calls for an intervention-oriented examination that considers both the marketing characteristics of perishable agricultural products and the operational capabilities of their producers.

The urgency of integrated marketing assistance becomes particularly apparent among traditional household enterprises that rely primarily on direct transactions and personal customer networks. The mung bean sprout business managed by Ibu Bhuna in Moktesareh Village, Kedungdung District, Sampang Regency, represents a local food enterprise whose marketing activities are described as dependent on conventional transactions and word-of-mouth communication. Limited physical business identification and the absence of an established digital location may restrict opportunities for unfamiliar customers, retailers, and potential wholesale buyers to identify and locate the production site. Studies concerning MSME digital marketing emphasize the importance of strengthening business capabilities through technological adoption that corresponds to the resources and operational characteristics of individual enterprises (Alteza et al., 2025). Research on the relationship between physical commercial environments and customer satisfaction also provides a conceptual basis for treating visible business identification as a component of customer-facing marketing quality (Wang et al., 2025). Empirical scholarship on SME digital marketing strategies further suggests that promotional technologies should be evaluated according to their practical contribution to business activities rather than the mere presence of digital tools (Wu et al., 2024). Without context-sensitive assistance, the enterprise may continue to depend on existing informal customer networks while remaining insufficiently identifiable to potential buyers seeking reliable information about local product availability and business location.

The present community outreach initiative is positioned within applied MSME marketing research by integrating physical promotional identity and location-based digital marketing into an intervention adapted to a household-scale mung bean sprout enterprise. Previous community

empowerment activities have combined banners and Google Maps to improve MSME visibility and accessibility, providing a practical foundation for developing an intervention that links physical identification with digital discoverability (Agustin et al., 2026). Research involving hybrid promotion for traditional food products similarly demonstrates the relevance of combining promotional signage and digital location services, although its product characteristics and enterprise setting differ from those of a household mung bean sprout producer (Rauzan et al., 2025). Other community outreach initiatives have incorporated promotional banners, Google Maps, and digital promotional content, indicating that the integration of these instruments is not itself an entirely new marketing approach (Saifuloh et al., 2026). Research on visual identity development further supports the importance of recognizable business presentation, which can be adapted to small food producers without requiring complex branding infrastructure (Ariyanti et al., 2025). The proposed contribution therefore lies in contextualizing an established hybrid marketing approach for a highly perishable food commodity characterized by daily production, localized demand, and limited promotional resources. Its practical originality concerns the coordinated development of a physical display banner and a Google Maps business location, accompanied by attention to the partner's ability to maintain basic promotional information independently. This positioning distinguishes the unresolved contextual and operational research gap from the intervention's specific contribution without presenting the combination of banners and digital mapping as an unprecedented marketing innovation.

This community outreach study aims to optimize the marketing of a local mung bean sprout MSME managed by Ibu Bhuna in Moktesareh Village, Kedungdung District, Sampang Regency, through the development of a display banner and integration of the business location into Google Maps. The activity adopts a participatory orientation to involve the business partner in identifying promotional needs, developing an appropriate physical business identity, and establishing accessible digital location information. Its principal objectives are to strengthen business visibility, facilitate location identification for potential customers, and support the partner's ability to manage basic digital promotional information. The intervention also seeks to examine its practical marketing implications, including changes in customer accessibility, sales volume where comparable records are available, and the partner's capacity for independent digital management. The scientific contribution is directed toward providing a context-specific account of how low-cost physical and digital promotional instruments can be integrated within the operational limitations of household-scale enterprises producing perishable food commodities. The practical contribution is expected to provide a replicable reference for community empowerment initiatives seeking to strengthen the market presence and promotional capabilities of local food MSMEs without requiring substantial financial investment or complex technological infrastructure.

METHODS

This community activity employed a Participatory Action Research (PAR) approach, involving the MSME owner as an active partner in identifying marketing problems, planning interventions, implementing promotional strategies, and evaluating program outcomes (Afandi et al., 2022). The activity was conducted in Moktesareh Village, Kedungdung District, Sampang Regency, with Ibu Bhuna, the owner of a household-scale mung bean sprout enterprise, as the primary community partner, covering her production house and daily trading stall at Kedungdung Traditional Market. The planning stage involved field observations and structured interviews to examine existing transaction practices, identify limitations in physical business identification, and determine the requirements for display banner development and digital location registration. The identification of promotional needs reflected community-based marketing approaches emphasizing the integration of visual business identity and accessible digital location information for local MSMEs (Agustin et al., 2026). The action stage included producing and installing one display banner measuring 2 × 0.8 meters and labeled "Tauge Tradisional Ibu Bhuna," registering the enterprise through Google Business Profile, undertaking its verification procedure for Google Maps integration, and configuring WhatsApp Business as a direct ordering channel. The combination of physical promotional materials and digital mapping services was consistent with community empowerment initiatives integrating banners and Google Maps to strengthen the promotional accessibility of small enterprises (Saifuloh et al., 2026).

The observation stage involved monitoring customer responses at the traditional market, recording Google Maps profile interactions, examining incoming WhatsApp inquiries, and

documenting daily mung bean sprout sales volumes in kilograms over two weeks following the intervention. Digital location monitoring was incorporated to examine business accessibility and promotional interactions, reflecting the application of Google Maps as a practical location-based marketing instrument for small enterprises (Firdayanti et al., 2025). The reflection stage consisted of discussions with the business partner to identify operational difficulties, assess implementation against predetermined indicators, and formulate strategies for maintaining the promotional instruments independently. Program evaluation employed physical indicators covering banner installation and stall arrangement, digital indicators concerning an active and verified Google Business Profile, operational indicators measuring the partner's ability to manage WhatsApp orders independently, and marketing indicators examining new preorders and changes in daily sales volume. The assessment of digital management capacity was consistent with MSME assistance approaches emphasizing independent business profile management as an important component of sustainable digitalization (Martiyanti et al., 2026). Qualitative data obtained from interviews, observations, and transaction records were analyzed through data reduction, data display, and conclusion drawing and verification, while credibility was addressed through source triangulation involving the MSME owner, retail buyers, and food-stall traders, alongside methodological triangulation combining interviews, physical observations, and digital registration evidence (Miles et al., 2014).

RESULTS AND DISCUSSION

Implementation of Participatory Marketing Assistance and Visual Branding Development

The community outreach intervention involving Ibu Bhuna's household-scale mung bean sprout enterprise in Moktesareh Village, Kedungdung District, Sampang Regency, was organized to address limitations in local marketing visibility. Before the intervention, the enterprise relied primarily on direct transactions and informal customer referrals to distribute fresh mung bean sprouts within its established market. Its production house and traditional market stall lacked a distinctive business identifier, making the enterprise less recognizable to customers unfamiliar with the owner. The existing marketing arrangement also provided limited opportunities for prospective buyers to obtain business information without visiting the selling location or contacting existing customers. Such dependence on conventional customer networks reflects the challenges faced by microenterprises when promotional resources and digital capabilities remain constrained (Alteza et al., 2025). Related MSME assistance programs have identified visual signage and map-based business identification as complementary instruments for improving the accessibility of local enterprises (Agustin et al., 2026). These initial conditions established a practical foundation for interventions emphasizing physical business identification, accessible location information, and direct customer communication.

The assistance employed Participatory Action Research (PAR), positioning Ibu Bhuna as an active participant in identifying marketing problems and selecting feasible improvements. During the planning stage, the outreach team conducted field observations and structured interviews to examine transaction patterns, physical business identification, and opportunities for digital registration. The assessment encompassed the mung bean sprout production house in Moktesareh Village and the daily trading stall at Kedungdung Traditional Market. These operating locations were considered separately because production-site identification and market-stall presentation serve different functions in facilitating customer recognition and commercial interaction. Participatory approaches emphasize collaboration with community partners throughout problem identification, intervention implementation, observation, and reflection to ensure that proposed actions correspond to actual community needs (Afandi et al., 2022). The resulting intervention plan prioritized accessible promotional instruments that could be managed by the business owner without requiring complex technological infrastructure or substantial financial investment.

The planning outcomes were translated into an integrated intervention comprising physical signage, digital business registration, and a direct customer ordering channel. The physical component involved designing a display banner measuring 2 × 0.8 meters and displaying the business name "Tauge Tradisional Ibu Bhuna" as a recognizable commercial identifier. The digital component included registering the enterprise through Google Business Profile, integrating its location with Google Maps, and configuring WhatsApp Business as a customer communication channel. These instruments were selected to accommodate the operational characteristics of household-scale mung bean sprout production, which depends on local demand, product freshness, and timely communication with

potential buyers. Research on visual identity development among food MSMEs emphasizes the contribution of recognizable business presentation to strengthening commercial identification and local branding practices (Ariyanti et al., 2025). Studies examining physical commercial environments also demonstrate the relevance of environmental characteristics to consumer perceptions and satisfaction, providing an analytical foundation for understanding the promotional function of physical business presentation (Wang et al., 2025). The intervention consequently treated the banner as an instrument of physical recognition and the digital platforms as complementary mechanisms for improving accessibility and customer interaction.

The documented comparison of business conditions before and after assistance covered five indicators consisting of visual identity, digital presence, ordering channels, daily sales volume, and partner digital literacy. Before implementation, the enterprise had no dedicated promotional banner, registered digital business location, or advance-ordering channel. Following implementation, the activity documentation recorded the installation of a display banner, activation of the Google Maps business location, and availability of WhatsApp-based ordering services. The same records indicated an increase in average daily sales from approximately 15 kg to 21 kg and an improvement in the owner's ability to manage incoming customer orders independently. These changes are presented in Table 1 using the quantitative values and qualitative descriptions documented during the community outreach activity. Comparable community empowerment initiatives involving physical signage and digital location registration provide a relevant basis for examining these changes, although simultaneous interventions require caution when attributing individual effects to specific marketing instruments (Rauzan et al., 2025).

Table 1. Comparative Evaluation of the Mung Bean Sprout MSME Before and After Assistance

Evaluation Indicator	Condition Before Assistance	Condition After Assistance	Empirical Change/Impact
Visual Identity and Physical Evidence	No business-name signage (0 banners); an unmarked trading stall without a distinctive identity.	Installation of a 2 × 0.8 m display banner labeled "Tauge Tradisional Ibu Bhuna" and hygienically arranged product containers.	Establishment of brand identity and improvement in the perceived cleanliness of the trading stall.
Digital Presence (Google Business Profile)	Not registered on digital maps (0% map-search visibility).	Active Google Business Profile and Google Maps location pin with precise coordinates.	Business location became publicly accessible, generating local searches from prospective customers.
Customer Communication and Ordering Channel	Marketing conducted entirely through face-to-face transactions (100%), without an advance-ordering option.	WhatsApp-based preorder channel integrated with the digital profile and display banner.	Establishment of a new preorder channel.
Daily Sales Volume	Average sales of approximately 15 kg of mung bean sprouts per day, primarily involving regular customers.	Average sales of approximately 21 kg of mung bean sprouts per day.	Increase in average daily sales volume of approximately 40%.
Digital Literacy and Partner Independence	The business owner did not use a mobile phone for business activities (0%).	The business owner could independently check WhatsApp messages and confirm customer orders.	Improved operational digital literacy and a shift from passive to proactive business practices.

The physical marketing intervention was implemented through the installation of one display banner at the front of Ibu Bhuna's mung bean sprout production house. Measuring 2 × 0.8 meters, the banner displayed the business name "Tauge Tradisional Ibu Bhuna" alongside promotional information emphasizing product freshness, crispness, and hygiene. Its installation introduced a recognizable business identifier at a production location that had previously operated without dedicated commercial signage. The banner provided a direct visual reference through which potential customers could associate the household production site with its products and business owner. Research concerning retail design suggests that visual presentation and environmental characteristics influence consumer evaluations, although findings obtained from formal retail settings require careful adaptation when applied to traditional food enterprises (Ye et al., 2023). Community assistance involving banner development and Google Maps registration provides a closer implementation comparison for microenterprises seeking accessible promotional instruments without extensive marketing infrastructure (Khoirunisya et al., 2026). The documented intervention therefore established a tangible improvement in physical business identification, while its independent effect on customer purchasing behavior was not measured separately.

Field observations following the intervention described a more orderly presentation of the trading area and hygienically arranged product containers. These physical improvements complemented the newly installed business identifier by presenting a more organized appearance at the production and selling locations. The combination of recognizable signage and improved stall presentation provided visible cues that could influence customers' initial impressions of the enterprise. Research on servicescapes identifies physical surroundings as relevant factors in consumer evaluations, although perceived cleanliness must be distinguished from independently verified food safety and product quality (Wang et al., 2025). Community-based visual branding initiatives similarly emphasize the role of consistent business identification in strengthening the commercial presentation of small food enterprises (Ariyanti et al., 2025). The observed changes are therefore interpreted as improvements in physical identification and stall organization rather than conclusive evidence that the intervention independently increased customer trust or objectively enhanced product quality.



Figure 1. Installation of the Display Banner in Front of Ibu Bhuna's House

The activity documentation indicated that the presence of a clearly identified business location was associated with more favorable impressions among prospective customers who had previously expressed uncertainty about purchasing from a household producer. This observation suggests a potential relationship between recognizable physical identification and customer confidence, although no standardized consumer perception survey or comparative trust measurement was reported. A visible business name may reduce uncertainty when customers encounter similar fresh food products offered by multiple traders within a traditional market. Brand equity theory identifies brand awareness and recognizable associations as important elements through which consumers distinguish commercial offerings from competing alternatives (Aaker, 1991). Contemporary research on retail environments similarly supports the relevance of physical presentation to customer evaluation, while the characteristics of household food enterprises differ substantially from those of organized retail establishments (Ye et al., 2023). The installed banner also established a consistent business name that could be reproduced across digital location information and customer communication channels. Its

contribution can consequently be identified through the establishment of recognizable branding, although the available evidence does not permit quantitative conclusions regarding changes in purchase intention, customer loyalty, or perceived product superiority.

Visual branding constituted the initial operational outcome of participatory marketing assistance by connecting the existing mung bean sprout production activity with a clearly identifiable commercial identity. The banner dimensions, installation location, and improved presentation of selling materials provided observable indicators for examining physical changes following the intervention. These improvements occurred alongside broader marketing developments documented in Table 1, including digital location registration, new ordering facilities, and increased average daily sales volume. Previous community outreach initiatives integrating promotional banners with Google Maps demonstrate the practical relevance of coordinating physical business identification and digital accessibility for locally oriented MSMEs (Saifuloh et al., 2026). The recorded increase in sales cannot be attributed exclusively to banner installation because digital registration and WhatsApp-based ordering were introduced during the same intervention period. The physical branding component is therefore best interpreted as one element of an integrated marketing strategy whose digital implementation, commercial outcomes, and sustainability require further examination.

Google Maps Integration and Development of Location-Based Marketing Accessibility

Before the marketing intervention, Ibu Bhuna's mung bean sprout enterprise relied on conventional customer networks without an established digital business location or structured online promotional presence. The absence of digital location information limited the availability of accessible business references for prospective customers unfamiliar with the production site in Moktesareh Village. For a household-scale enterprise distributing perishable food products within a geographically concentrated market, location accessibility represents an important consideration because purchasing decisions frequently depend on the ability to identify nearby suppliers. Research on digital location mapping for community enterprises identifies Google Maps as a practical instrument for improving business accessibility and supporting promotional activities among local MSMEs (Firdayanti et al., 2025). The increasing influence of Google Maps on local business representation also demonstrates how digital platforms shape commercial visibility and the relationship between small enterprises and geographically oriented information systems (Courmont, 2025). The intervention consequently addressed the limitations of geographically restricted marketing by establishing a searchable digital business identity that complemented the enterprise's existing face-to-face transactions.

The digital marketing intervention involved registering Ibu Bhuna's mung bean sprout enterprise through Google Business Profile and integrating the registered business information with Google Maps. The registration process incorporated business identification and geographic location information to establish a digital reference accessible to prospective customers searching for local food suppliers. Location accuracy received particular attention because the enterprise operated through two interconnected commercial locations consisting of the household production site in Moktesareh Village and the daily selling stall at Kedungdung Traditional Market. The intervention documentation reported that the business profile was successfully activated and associated with precise geographic coordinates, allowing the enterprise to establish its presence within the digital mapping environment. Research on Google Business Profile-based assistance emphasizes the contribution of digital business identification to strengthening the online presence and operational capabilities of microenterprises (Martiyanti et al., 2026). Community empowerment initiatives involving business identity development and Google Maps integration similarly demonstrate the relevance of coordinated digital registration and branding activities for geographically concentrated MSMEs (Abidin et al., 2026). The completed registration established a digital location reference that had previously been unavailable, although the available records do not provide sufficient information to assess changes in search rankings or broader platform visibility quantitatively.

The registered Google Business Profile provided an informational structure through which the business location, operating hours, product photographs, and customer contact details could be presented within a single digital platform. These components were intended to facilitate customer access to essential business information before making purchasing decisions or visiting the production location. The availability of recognizable location information also created opportunities for communication with potential retailers, food vendors, and household consumers seeking fresh mung

bean sprouts. Research examining digital marketing strategies among SMEs emphasizes that promotional technologies should correspond to business capabilities and the information requirements of their intended customers (Wu et al., 2024). Similar community assistance involving Google Business Profile and digital promotional materials highlights the practical value of accessible online business information for extending the potential market reach of small enterprises (Affifatusholihah & Pertiwi, 2026). The establishment of this informational structure represented a measurable change in digital business presence, although the documentation did not provide complete platform analytics concerning impressions, direction requests, or customer conversion rates.

Google Maps integration introduced a location-based marketing instrument that connected the enterprise's commercial identity with its geographic position and physical production activities. The location marker enabled prospective customers to identify the registered business location through a digital map rather than relying exclusively on informal directions from existing customer networks. This capability was particularly relevant for potential buyers outside the immediate neighborhood who required accessible information before arranging product purchases or collection. Community-based digital mapping initiatives have emphasized the relationship between geographically accessible business information and opportunities to strengthen promotional reach among local enterprises (Firdayanti et al., 2025). Research examining local business participation in Google Maps also highlights the importance of maintaining accurate platform information because digital visibility introduces continuing responsibilities associated with data representation and platform dependence (Courmont, 2025). The mapped business location consequently functioned as a complementary promotional reference that connected online identification with the enterprise's physical production activities without independently establishing an increase in customer acquisition. Figure 2 presents the Google Maps location display documented during the digital registration intervention.

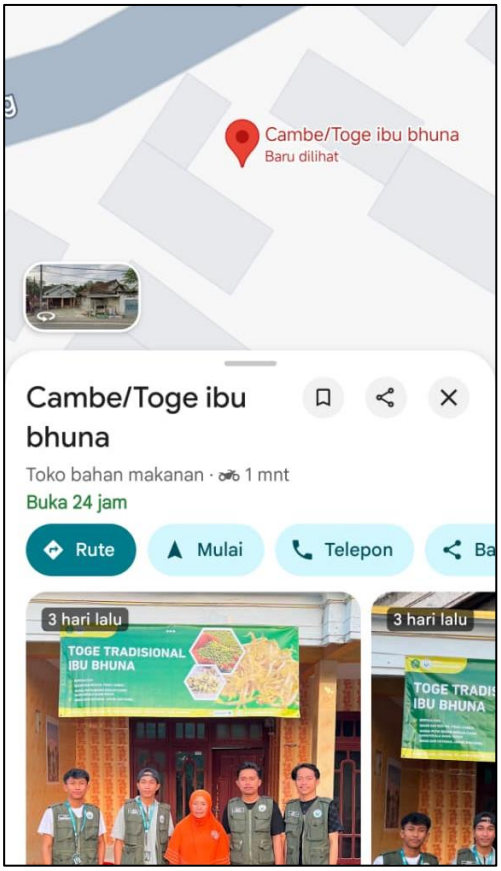

Figure 2. Google Maps Location Display of the Mung Bean Sprout MSME

The intervention extended digital business identification by configuring WhatsApp Business as a direct customer communication and advance-ordering channel. The business contact number was integrated into the promotional information to facilitate communication between prospective buyers

and the enterprise owner. This development introduced an additional ordering mechanism beyond the previous arrangement, which depended entirely on face-to-face transactions and did not provide a structured preorder facility. Research on MSME digitalization recognizes the integration of online communication, transaction support, and geographic information as an accessible approach to improving business interaction and operational flexibility (Siswanta et al., 2026). Community empowerment activities combining promotional banners, Google Maps, and digital communication instruments also demonstrate the practical relevance of coordinating physical business identification with accessible online customer contact (Saifuloh et al., 2026). WhatsApp Business therefore served as a communication instrument connecting the enterprise's promotional visibility with direct customer inquiries while preserving its existing traditional market transactions.

The transaction records collected following digital registration indicated the emergence of approximately two to three daily preorders through WhatsApp from buyers located outside the partner's village. These recorded transactions demonstrated that the newly introduced communication channel was used for advance ordering after the marketing intervention. The emergence of preorders also provided initial evidence of customer interaction extending beyond the enterprise's established face-to-face transaction mechanism, although the records did not specify the number of unique customers or the quantities associated with individual orders. The observed changes could not be attributed exclusively to Google Maps because the display banner, digital location registration, and WhatsApp ordering channel were implemented within the same intervention period. Research on hybrid promotional assistance for traditional food MSMEs supports examining physical signage and digital location services as complementary instruments rather than independent marketing mechanisms (Rauzan et al., 2025). Empirical research on digital marketing strategies similarly emphasizes the need to distinguish technological adoption from measurable business performance when evaluating the contribution of digital interventions (Wu et al., 2024). Table 2 summarizes the relationship between the promotional instruments implemented during the activity and their respective functions in supporting business identification, location accessibility, and customer communication.

Table 2. Integration of Physical and Digital Marketing Instruments in the Mung Bean Sprout MSME

Marketing Instrument	Documented Implementation	Marketing Function
Display Banner	Installation of a 2 × 0.8 m banner displaying "Tauge Tradisional Ibu Bhuna"	Strengthening physical business identification and local visual recognition
Google Maps and Google Business Profile	Registration and activation of the business location with geographic coordinates and business information	Improving digital location accessibility and business discoverability
WhatsApp Business	Configuration of a direct communication and preorder channel	Facilitating customer inquiries, advance orders, and direct transaction coordination

Table 2 demonstrates that the marketing instruments implemented during the intervention performed distinct but interconnected functions within the enterprise's promotional activities. The display banner established physical business identification, while Google Maps provided geographic information that could support customers in locating the household production site. WhatsApp Business complemented these instruments by allowing prospective buyers to communicate directly with the enterprise owner and arrange purchases before visiting the business location. Research integrating visual identity development with Google Maps registration identifies consistency between physical and digital business information as a relevant component of local MSME branding assistance (Abidin et al., 2026). Similar community outreach initiatives combining promotional banners and digital location mapping demonstrate the practical relevance of connecting offline recognition with online business accessibility (Agustin et al., 2026). The intervention established an integrated promotional pathway through which customers could recognize the enterprise, identify its location, and initiate communication, although the available documentation did not isolate the contribution of each instrument to customer acquisition.

The suitability of location-based marketing for Ibu Bhuna's enterprise was closely associated with the characteristics of mung bean sprouts as a perishable food commodity requiring relatively rapid distribution and regular market access. A geographically accessible business location and direct communication channel offered a practical arrangement for serving households, traditional food vendors, and other local buyers requiring fresh ingredients. Unlike geographically extensive marketplace strategies, the intervention prioritized local business identification and direct transaction coordination within the enterprise's existing distribution environment. Research concerning digital marketing adoption among SMEs indicates that technological decisions should consider organizational capabilities, operational requirements, and the practical conditions influencing business adoption (Ahmad & Rasheed, 2026). Community assistance involving Google Business Profile similarly highlights the relevance of accessible digital platforms for supporting promotional capabilities among small enterprises with limited technological resources (Sabina et al., 2025). The active digital business profile and emergence of WhatsApp preorders demonstrated initial implementation and use of the integrated marketing instruments, but they did not independently establish long-term market expansion or sustained improvements in business performance. Evaluating the broader contribution of these interventions requires examining changes in sales volume, operational digital literacy, and the business partner's capacity to maintain promotional activities independently.

Evaluation of Marketing Performance and Sustainability of MSME Digital Independence

The evaluation of the community outreach intervention examined changes in the marketing performance of Ibu Bhuna's mung bean sprout enterprise through physical, digital, operational, and commercial indicators. Physical indicators concerned the installation of the display banner and improvements in the organization of the trading area, while digital indicators focused on the activation and accessibility of the business location through Google Maps. Operational indicators addressed the owner's ability to manage customer communication independently through WhatsApp Business, particularly in responding to inquiries and confirming advance orders. Commercial performance was assessed through changes in average daily mung bean sprout sales and the emergence of new preorder transactions following the intervention. The comparative findings presented in Table 1 indicate improvements across the documented evaluation dimensions, although the extent of change differs according to the characteristics of each indicator. Marketing management literature emphasizes the importance of aligning promotional activities with measurable organizational objectives rather than evaluating marketing initiatives solely through the availability of promotional instruments (Kotler & Keller, 2016). The evaluation consequently distinguished the successful implementation of marketing facilities from evidence of business performance improvement, providing a more appropriate basis for interpreting the outcomes of the participatory intervention.

The most prominent quantitative outcome involved an increase in average daily mung bean sprout sales from approximately 15 kg before the intervention to 21 kg following implementation. This difference represents an additional average sales volume of approximately 6 kg per day, equivalent to an increase of approximately 40% relative to the initial reported level. The post-intervention observation period covered two weeks, during which daily sales records formed part of the monitoring process, although the duration and variability of the baseline measurements were not specified. The recorded increase occurred alongside the installation of the display banner, activation of Google Maps business information, and introduction of WhatsApp-based advance ordering. Research on MSME digitalization emphasizes the relevance of adopting accessible technological instruments to strengthen operational capabilities and support business development among small enterprises (Yusupa et al., 2024). Related community empowerment initiatives combining digital mapping and online transaction facilities provide comparative evidence that location-based technologies can be incorporated into practical marketing assistance for resource-constrained enterprises (Siswanta et al., 2026).

The approximately 40% increase in daily sales indicates an improvement in the enterprise's reported commercial performance during the observed intervention period. Nevertheless, the simultaneous introduction of several promotional instruments prevents the independent contribution of the display banner, Google Maps registration, or WhatsApp Business from being determined. Changes in purchasing patterns may also be influenced by customer demand, product availability, market conditions, and other operational factors that were not systematically isolated in the available documentation. The absence of a comparison enterprise and detailed historical sales records further

limits the extent to which the observed increase can be attributed exclusively to the marketing intervention. Empirical research on digital marketing strategies among SMEs demonstrates the importance of examining the relationship between technological implementation and business performance through clearly specified analytical indicators (Wu et al., 2024). Studies concerning food-related consumer decisions also indicate that purchasing behavior involves multiple considerations, suggesting that improved promotional accessibility should not automatically be interpreted as the sole explanation for commercial outcomes (Zanetta et al., 2024). The findings are therefore interpreted as an observed improvement in sales associated with the implementation period rather than definitive causal evidence of the effectiveness of individual marketing instruments.

The development of a WhatsApp-based preorder channel provided an additional operational outcome by establishing a communication mechanism that had not been available under the enterprise's previous face-to-face transaction arrangement. Post-intervention transaction records indicated approximately two to three daily preorders from buyers outside the partner's village, suggesting that customer communication extended beyond the immediate neighborhood. These transactions demonstrate the practical use of direct messaging for coordinating advance purchases, although the available records do not identify the proportion of orders generated specifically through Google Maps searches. Community empowerment activities combining promotional banners and digital location information have similarly emphasized the relevance of integrated promotional instruments for strengthening local business accessibility (Hasanah et al., 2026). Research examining the integration of visual promotion and Google Maps within rural MSME development also provides a practical reference for understanding how physical identification and digital communication can complement existing marketing practices (Saiful et al., 2026). The emergence of new preorders consequently represents an identifiable improvement in communication accessibility, while its contribution to total revenue requires more detailed transaction-level evidence.

An important qualitative outcome concerned the development of the business partner's operational digital literacy following the introduction of WhatsApp Business and Google Business Profile. Before the intervention, Ibu Bhuna did not use a mobile phone for business-related communication, indicating dependence on conventional customer interaction and the absence of digital transaction management. The post-intervention documentation reported that the owner could independently examine incoming WhatsApp messages and confirm customer orders without continuous assistance from the outreach team. This change indicates an initial transition from passive reliance on existing customer networks toward more active management of direct digital communication. Research on microenterprise digitalization emphasizes that technological adoption should be accompanied by improvements in entrepreneurs' practical capabilities to manage digital business information and customer interactions (Martiyanti et al., 2026). Community empowerment scholarship also identifies technological skills and the ability to address digital marketing challenges as relevant considerations in strengthening MSME participation in digital commercial environments (Indahsari et al., 2024). The observed capability represents an initial form of operational independence, although sustained digital literacy would require further examination of the owner's ability to update business information, respond consistently to customers, and manage digital communication over an extended period.

The participatory implementation process provided a framework for examining how identified marketing problems were translated into practical interventions and subsequently evaluated with the business partner. During planning, field observations and structured interviews identified limitations in physical business identity, digital accessibility, and customer communication. The action stage introduced the display banner, Google Business Profile registration, Google Maps integration, and WhatsApp Business configuration, while observation focused on customer responses, digital interactions, incoming orders, and sales records. The reflection stage involved discussions with Ibu Bhuna concerning implementation conditions, operational difficulties, and the continuation of promotional activities. Participatory Action Research emphasizes the relationship between collaborative problem identification, practical intervention, observation, and reflection as interconnected components of community empowerment (Afandi et al., 2022). The use of observations, interviews, transaction records, and source triangulation provided a qualitative basis for reviewing implementation, consistent with principles of systematic data interpretation and verification in qualitative research (Miles et al., 2014).

The sustainability of the marketing intervention depends on the enterprise's ability to maintain consistent physical identification, accurate digital business information, and responsive communication with prospective customers. Although the display banner provides a relatively stable form of visual identification, Google Business Profile requires periodic attention to contact information, operating hours, location accuracy, and other details relevant to customer searches. Research examining the relationship between local businesses and Google Maps highlights the continuing responsibilities and platform dependencies associated with maintaining a digital commercial presence (Courmont, 2025). The owner's demonstrated ability to respond to WhatsApp orders represents a positive operational development, but digital independence cannot be established solely through the completion of initial registration and messaging activities. Community empowerment initiatives involving visual rebranding and marketing digitalization indicate that maintaining consistent business identity and promotional information remains relevant to the longer-term development of local food enterprises (Febriani et al., 2026). An integrated marketing communication approach further emphasizes the importance of consistency across promotional channels so that physical signage, digital location information, and customer communication convey a recognizable business identity (Belch & Belch, 2018). Continued management of these instruments would provide a practical foundation for sustaining the intervention, although the available monitoring period does not establish whether the reported sales improvement and digital communication practices continued over time.

The community outreach intervention demonstrates the practical applicability of combining low-cost visual branding and location-based digital marketing within a household-scale enterprise producing perishable food commodities. The documented results include the installation of a recognizable display banner, activation of a Google Maps business location, establishment of WhatsApp-based preorders, increased average daily sales, and improved operational digital literacy. These outcomes contribute to applied community empowerment practice by illustrating how physical marketing identity and accessible digital instruments can be introduced without requiring complex e-commerce infrastructure. Previous MSME assistance programs integrating banner development and digital location mapping provide comparative support for the feasibility of this approach, while differences in enterprise characteristics indicate the need for context-specific implementation (Saifuloh et al., 2026). The observed commercial improvement should nevertheless be interpreted cautiously because the intervention combined several promotional components and employed a relatively short post-intervention observation period. Future evaluations should incorporate longer sales monitoring, consistent baseline records, customer acquisition information, and assessment of the owner's continued ability to maintain the digital platforms to strengthen conclusions regarding marketing effectiveness and intervention sustainability.

CONCLUSION

The community outreach initiative employing Participatory Action Research (PAR) at Ibu Bhuna's mung bean sprout MSME in Moktesareh Village demonstrated the practical value of integrating visual branding through display banners with Google Business Profile registration to strengthen local marketing strategies. The installation of a 2 × 0.8-meter display banner established a recognizable physical business identity, improved the presentation of the trading location, and provided visual information for prospective customers. Google Maps integration enhanced digital location accessibility, while WhatsApp Business introduced a direct communication channel that generated approximately two to three daily preorders from buyers outside the village. The documented commercial outcomes indicated an increase in average daily mung bean sprout sales from approximately 15 kg to 21 kg, representing a 40% improvement during the observation period. The intervention also strengthened the business owner's operational digital literacy, as demonstrated by her ability to independently check incoming messages and confirm customer orders. These findings indicate positive changes in marketing accessibility, sales performance, and operational independence, although the simultaneous implementation of promotional instruments prevents the independent effects of each intervention from being established.

The intervention remains subject to several limitations, including the relatively short two-week observation period, potential deterioration of the physical banner under adverse weather conditions, and the absence of integrated digital bookkeeping and electronic payment facilities. The limited monitoring duration also restricts conclusions regarding long-term sales growth, customer retention, and the

sustainability of the business owner's digital capabilities. Continued assistance should prioritize maintaining the display banner, regularly updating Google Business Profile information, and strengthening independent management of WhatsApp-based customer communication. Future community empowerment initiatives are recommended to introduce hygienically labeled product packaging to improve product identification, presentation, and potential acceptance within broader local retail networks. Additional training in simplified digital financial recording and electronic payment systems could strengthen transaction management, financial monitoring, and operational efficiency. Further assistance with business legality, including Business Identification Number (NIB) registration and halal certification where applicable, should be accompanied by longer-term performance evaluation to support sustainable market development and strengthen the competitiveness of household-scale food MSMEs.

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