Jurnal Pemberdayaan Masyarakat
Volume 5 Issue 3 Year 2026 | Pages 685-695
ykgm.org

E-ISSN 2962-8091
DOI: https://doi.org/10.46843/jpm.v5i3.770

A Holistic Approach to Empower Micro Food Enterprises through Halal, Healthy, and Digital Practices

Illah Sailah[1]*, Khaswar Syamsu[1], Ahmad Faroby Falatehan[2], Mulyorini Rahayuningsih[1], Didah Nur Faridah[1], Sugiarto[1]
[1]Faculty of Engineering and Technology, IPB University, Bogor, Indonesia
[2]Faculty of Economic and Management, IPB University, Bogor, Indonesia

ABSTRACT

Following the COVID-19 pandemic, the Pasar Online Pakcy community in the Pakuan Regency residential area expanded significantly; however, home-based online food production has largely operated without adequate oversight and limited knowledge of halal compliance, food safety, and hygienic processing. These conditions highlighted the need for holistic training and mentoring to improve product quality, halal literacy, and digital marketing professionalism among local micro food enterprises. This community empowerment program aimed to strengthen microenterprises through integrated training on halal ingredients, healthy food processing, appropriate packaging, and digital marketing. The program involved 40 participants and applied a holistic approach combining lectures, hands-on practice, and post-training mentoring. Knowledge gains were measured using pre- and post-tests, while short-term impacts were assessed through a follow-up survey conducted two months after training and observation of participants' activities in the community's WhatsApp group as a marketing platform. Results showed an increase in knowledge. Survey findings indicated high perceived usefulness, increased self-confidence, and improved understanding of halal principles. Observations revealed better promotional images, clearer pricing, and more effective communication. Overall, integrated training supported by digital community platforms enhanced knowledge and marketing practices, contributing to more competitive, halal, and sustainable micro food businesses.

ARTICLE INFORMATION

Keywords:
food micro enterprises; halal; holistic approach

Correspondent Author:
Illah Sailah

Email:
illahsailah@apps.ipb.ac.id

© Yayasan Keluarga Guru Mandiri. This is an open-access article under the CC Attribution 4.0 International License.
Article info: Submitted: 2026-01-19 | Revised: 2026-05-20 | Accepted: 2026-06-19 | Published: 2026-08-06
Recommended citation: Sailah, I., Syamsu, K., Falatehan, A. F., Rahayuningsih, M., Faridah, D. N., & Sugiarto. (2026). A Holistic Approach to Empower Micro Food Enterprises through Halal, Healthy, and Digital Practices. *Jurnal Pemberdayaan Masyarakat, 5*(3), 685-695.

INTRODUCTION

In Indonesia, micro and small enterprises dominate the structure of business actors and play a crucial role in supporting community-based economic development. Data from Badan Pusat Statistik (BPS, 2024) indicate that the food and beverage sector represents a substantial segment of micro enterprises, with approximately 4.85 million businesses employing around 9.8 million workers. This highlights the strategic importance of food-related micro enterprises in sustaining local livelihoods, particularly in urban areas. Micro enterprises, particularly in sectors such as food and culinary businesses, are widely recognized as strategic drivers of local and community-based economic development due to their significant contribution to employment generation, income distribution, and local economic resilience (Tambunan, 2019). MSMEs play a role as labor absorbers while encouraging increased household income and regional economic growth (Inegbedion et al., 2024; Malau & Ekananda, 2025).

Despite their strategic contribution, the capacity and competitiveness of food micro enterprises remain limited. Various studies indicate constraints in managerial capability, technological adoption, marketing, product quality, and compliance with food safety and halal standards (Ab Talib, 2021; Dayar et al., 2024). In terms of halal compliance, although the number of certified products has increased significantly—reaching 9.6 million products recorded in the Halal Information System (Sihalal) of the Halal Product Assurance Agency (BPJPH) as of October 2025—many micro enterprises still lack sufficient understanding of halal requirements and certification procedures (Ali & Ahmad, 2023). The system itself was established based on Government Regulation No. 42 of 2024, reflecting efforts to strengthen halal assurance in Indonesia. The challenges faced by food micro enterprises are multidimensional and interrelated. Low digital literacy limits the ability of business actors to utilize accessible technologies such as WhatsApp Business for marketing and customer management (Sapriyadi et al., 2026). The transition from traditional to digital media is necessary to maximize efficiency in resource use and time management (Fadhillah & Yuniarti, 2023). As consumer preferences shift toward digital platforms, micro entrepreneurs must adapt their marketing strategies accordingly. However, many still rely on conventional methods, reducing their competitiveness.

In addition, limited knowledge of healthy and nutritious food processing affects product quality and consumer trust (Wastutiningsih et al., 2025). Food safety awareness is increasingly important, and the inability to meet these expectations can reduce product acceptance. Product packaging is another critical aspect that is often overlooked, even though it plays a key role in maintaining quality, extending shelf life, and enhancing product attractiveness and added value (Widyaningrum, 2022). Furthermore, limited understanding of halal raw materials and certification procedures becomes a barrier to market expansion, particularly among Muslim consumers who are increasingly aware of product halalness (Salam & Makhtum, 2022; Ali & Ahmad, 2023).

In this context, empowering micro enterprises becomes essential to improve the capacity and independence of business actors. Community empowerment should not be limited to knowledge transfer but should be understood as a systematic process to strengthen the ability of business actors to make decisions, manage resources, and sustain their businesses (Ulum & Anggraini, 2020). An effective empowerment approach must address the actual needs of business actors and focus on measurable outcomes, such as improved skills, behavioral changes, and business performance. Previous studies and community service initiatives show that training and mentoring can positively impact micro enterprise capacity. Digital literacy training improves the ability to use digital communication and marketing tools to reach wider markets (Setiawan et al., 2025). Training in healthy and nutritious food processing enhances product quality and awareness of food safety (Wastutiningsih et al., 2025). Assistance in packaging and branding increases product value and competitiveness (Saati et al., 2022). In the halal aspect, improved understanding and certification positively influence consumer trust and market opportunities (Nurhayati & Hendar, 2020).

However, these empowerment efforts are often conducted in a fragmented manner, focusing on only one aspect, such as marketing or production. Such partial approaches are less effective in addressing the interconnected challenges faced by micro enterprises. The literature examining empowerment through a holistic approach—integrating digital literacy, food processing, packaging, halal understanding, certification, and business development—is still limited, particularly in structured and output-based community service contexts. A holistic approach is therefore considered more relevant for addressing the complexity of these multidimensional problems and is considered a system (Kohl, 2007). Based on these conditions, a gap exists between the actual needs of food micro enterprise actors and the empowerment models that have been implemented. This gap lies in the lack of integration among various capacity-building aspects within a structured and outcome-oriented framework. In addition, the limited number of scientific studies that systematically document the

outcomes of applying a holistic approach to empowering food micro enterprises highlights a significant research gap. Therefore, community service activities should not only be implemented but also rigorously evaluated to demonstrate their academic and empirical benefits.

This study aims to address this gap by empowering 30 micro enterprises in the food and culinary sector through a holistic training approach, with women as the majority of business owners. Digitalization has been identified as a key instrument for empowering women micro-entrepreneurs. By using social media and user-friendly applications, women can expand market access, enhance product attractiveness, increase sales, and sustain their businesses while maintaining cultural identity (Refnida et al., 2025). Digitalization also enables women to overcome the limitations of conventional markets, strengthen economic independence, and contribute to household welfare and regional economic development. This is supported by studies highlighting the role of digitalization in expanding market access and economic opportunities for women entrepreneurs (Fizzanty & Maulana, 2023; Boateng et al., 2023). The training program is designed to produce measurable outputs, including improved capabilities in using WhatsApp Business, the implementation of healthy and nutritious food processing, improved product packaging, increased understanding of halal raw materials and certification processes, and strengthened business development skills. Through this integrated and output-based approach, the program is expected not only to provide short-term benefits but also to support the sustainability of food micro enterprises and serve as a replicable empowerment model for other communities.

METHOD

This community service activity uses a holistic approach, which is adopted from holistic education related to pedagogic transformation to develop a holistic person (Miseliunaite et al., 2022). The holistic approach was chosen because the problems of food micro enterprises are multidimensional and interrelated, combining social, mental/spiritual, physical, financial, aesthetic, and emotional aspects (Zainuddin, 2016). This training integrated interventions across digital marketing (social, aesthetic, emotional), product processing (physical taste and aesthetic), understanding of halal food (spiritual), and micro business development (financial). The service output is designed not only in the form of training, but also changes in the knowledge, skills, and business readiness of participants in managing and developing their businesses.

The implementation of the service was carried out through six main stages that are mutually sustainable and oriented towards external achievements. The initial stage was carried out through the identification and selection of prospective participants based on their needs, business characteristics, and readiness to participate in the training program (Idawati et al., 2016). This selection aims to ensure that participants are active food micro enterprise actors and have the potential to be developed. The output at this stage was the selection of 30 food micro enterprise actors in accordance with the activity criteria. The second stage is participatory planning (Indahsari, 2020). Activity planning is carried out in a participatory manner by involving the manager of the Pakcy Online Market as the main partner. According to Shrivastava et al. (2022), in a different case, partner involvement aims to align the training material with the real needs of business actors and the marketing context carried out by the participants. The output of this stage is a contextual and applicable design of activities and training materials. The third stage was the preparation of facilitators and materials. At this stage, the preparation of modules and training materials as well as the preparation of facilitators is carried out in accordance with their respective fields of expertise. The material is designed to produce specific outputs on each training topic, such as improving the usability of WhatsApp Business, understanding halal principles, and improving the appearance of product promotions. The next stage was the implementation of training and mentoring. Training was carried out face-to-face and was

followed by one-on-one assistance. The learning methods used include interactive lectures, discussions, hands-on practice, and case studies based on participants' experiences. This stage is the core of the service activity, with outputs in the form of increasing participants' knowledge and skills shown through the results of practice and interaction during the training.

After the training and mentoring were implemented, the dissemination of activities was carried out through online media as a form of publication of activities and joint learning. Apart from being a means of documentation, dissemination also serves to expand the impact of service and increase participants' motivation in developing their businesses. The output of this stage is content for disseminating activities that the wider community can access. The final stage was carried out through evaluation of activity achievements and post-training follow-up planning. Program evaluation is an important part of the program management cycle that aims to assess the performance, effectiveness, and systematic and objective impact of the program (Djazuli, 2024). The evaluation is focused on measuring the output and *outcome* of activities, both from the aspect of increasing knowledge and the perception of the usefulness of activities for participants' businesses, as a potential sustainable impact.

The service activity was carried out in the Pakuan Regency area, Bogor City. The participants of the activity amounted to 30 micro enterprise actors in the food/culinary sector who joined and actively marketed their products through the Pakcy Online Market WhatsApp Group. The characteristics of participants who are homogeneous in the type of business but diverse in scale and experience provide relevant context for the application of a holistic approach. Training materials were designed to produce specific and measurable outputs, including a) Business Development and Digital Marketing Outputs: increased participants' ability to use WhatsApp Business features for promotion, customer communication, how to take pictures, and manage the business; b) Understanding of Halal Ingredients and Halal Certification Awareness Outputs: increasing participants' knowledge of halal raw materials, halal production processes, and readiness to participate in halal certification; c) Enhancement of Product Promotional Display Outputs: improvement of the visual appearance of products and promotional materials that are more attractive and informative.

Evaluation of activities is carried out to assess the achievement of outputs and service outcomes. Evaluation methods include: a) pre-test and post-test, to measure the improvement of participants' knowledge before and after training, b) survey of the perception of usefulness, to assess the level of satisfaction and relevance of the training material to the business needs of the participants, and c) observation during practice and mentoring, to see changes in participants' skills and readiness in applying training materials. The results of the evaluation are used as a basis to assess the effectiveness of the holistic approach applied as well as the materials for the formulation of subsequent activities. This service activity uses a holistic external-based approach with stages of participant identification, participatory planning, training, mentoring, and evaluation. The evaluation focused on measuring improvements in knowledge and skills, as well as the usefulness of the training for participants. In summary, Table 1 shows the scope of community service activities.

Table 1. Scope of activities to the community through a holistic approach

Empowerment Aspects	Forms of Intervention	Output	Expected Outcome	Achievement Indicators
Business digital literacy	WA Business Training	Participants can use the WA Business feature	Increased marketing effectiveness	Increased post-test scores
Food safety and nutrition	Food processing and packaging education	Healthy food processing and precise packaging	Safer and more reliable products	Changes in business practices
Halal and certification	Halal ingredient education and certification procedures	Increased awareness of halal ingredients	Halal certification readiness	Perception and interest scores
Business Development	Micro business training	Understanding of business strategy	More planned and targeted efforts	2-month post-activity survey

To measure the increase in participants' knowledge, a pre-test was carried out before the training, and a post-test after the training was completed. The pre-test and post-test included aspects of understanding the use of halal ingredients, processing healthy and nutritious food, and selecting packaging for food (Bou-Mitri et al., 2021).

RESULTS AND DISCUSSION

The total number of training participants was 40 people, exceeding the initial target of 30 people. The majority of participants were women (35 people), with the length of running the business ranging from 6 months to 5 years. Participants came not only from the Pakuan Regency-Bogor City area, but also from outside the area, considering that some business actors carry out production and marketing activities in school canteens and from home. The types of food products produced by the participants are diverse, including side dishes for main consumption, various types of porridge, semi-wet snacks, and dry foods such as dry spicy potatoes. The diversity of these product types shows that participants face different challenges in terms of food safety, halal, and packaging and marketing strategies.

Based on the initial survey, as many as 33% of participants have never used *the* WhatsApp Business application, while 67% have used the application on a limited to regular basis, especially for the product catalog feature. The majority of participants have understood the basic function of a digital catalog, but observations show that the visual quality of the products displayed still varies and is not optimal in terms of attractiveness and clarity of information. These initial conditions illustrate that the participants already have business experience but still need to strengthen their knowledge and skills, especially in halal and healthy food production and strategies to support product added value. Therefore, increasing the capacity of micro enterprise actors needs to be done through a holistic approach in the form of training and mentoring.

The holistic approach in this activity is implemented by integrating three main aspects, namely halal practices, healthy and safe food processing, and digital marketing practices. These three aspects are not positioned separately, but as a unit that supports increasing the competitiveness and sustainability of micro-food enterprises. In the holistic approach training, the trainers focus on the outcomes rather than outputs. Kohl (2007) said that the training will be more effective and impactful

in the long term if it is designed holistically, in accordance with the real context of its use, and in harmony with the natural way of human learning and with the principles of nature.

Through a combination of training, hands-on practice, and mentoring, participants are encouraged to understand the relationship between the selection of halal ingredients, healthy food processing, the right packaging appearance, and how to communicate the value of these products through digital media. Thus, the training is not only oriented toward increasing knowledge but also toward real changes in business practices. The training is designed using a holistic approach that integrates aspects of knowledge, skills, and hands-on practice. The material provided includes the introduction of halal ingredients, healthy and nutritious food processing, and the selection of packaging that is in accordance with the characteristics of food products. Business development materials through digital platforms, improving skills to create attractive images, and business development through the BMC concept enrich a holistic approach to training. This approach places participants as active subjects in the learning process, through discussions and simple practices that are relevant to the business being run. Thus, the training is not only oriented toward knowledge transfer, but also toward increasing participants' capacity to make more appropriate and sustainable business decisions, and to apply them in their own business.

To measure the increase in participants' knowledge, a pre-test was carried out before the training and a post-test after the entire training series was completed. The measurement includes three main aspects, namely understanding halal ingredients, processing healthy and nutritious food, and selecting food product packaging. The measurement results showed a 10% increase in the average post-test score in all aspects assessed. In the aspect of halal practice, the results of the pre-test and post-test showed an increase in participants' understanding of halal raw materials and the basic principles of halal production. The average pre-test score of 9.0 increased to 9.2 in the post-test, with a percentage increase of 2.2%. This relatively small increase shows that most of the participants already have a fairly good initial understanding of the halalness of food products.

Nevertheless, the results of the post-training survey showed an increase in participants' awareness of the importance of halal certification as part of business development. A total of 14 participants expressed interest in following up on the halal certification process, and three of them have applied for halal certification through the self-declared mechanism. These findings show that training plays a role in encouraging participants' readiness and motivation to increase halal compliance as a strategy to strengthen consumer trust. In addition to the halal aspect, the holistic approach also emphasizes the importance of healthy and safe food processing as the foundation of product quality. The results of the evaluation showed a significant increase in participants' understanding of healthy and nutritious food processing. The average pre-test score increased from 9.0 to 9.8 on the post-test, with a percentage increase of 8.9%. This improvement shows that the training has succeeded in strengthening participants' knowledge of food processing practices that are more hygienic, safe, and in accordance with health principles.

Participants see a better understanding of healthy food processing as important because it is directly related to product quality and consumer trust. In discussions and practices, participants began to realize that food health not only affects consumption safety but also becomes part of the added value of food micro business products. The biggest improvement was seen in the packaging selection aspect, where the average pre-test score of 6.2 increased to 8.8 in the post-test, with a percentage increase of 28.9%. These findings show that packaging selection is an aspect that was previously relatively poorly understood by participants and is the most impactful area of intervention. Strengthening halal and healthy aspects, as well as the selection of packaging materials, is then complemented by increasing the participants' ability to promote their products digitally.

In the aspect of digital practice, the results of observations of participants' promotional activities in the WhatsApp Group of the Pakcy Online Market showed positive changes after the training. Participants began to use the WhatsApp Business feature more consistently, especially the product catalog and more structured promotional messages, which can be observed in WAG; even the number of members in the group increased by 7%, which at the time of observation, 5 months after the training, became 625 people. This means that this market has more sellers and buyers. These findings are supported by Refnida et al. (2025), who found that digitalization, especially the use of Instagram and Canva, significantly increases competitiveness, product visibility, packaging innovation, and the sale of traditional cakes of Jambi Malay women MSMEs. Another study found that companies in Lahore using social media are more popular than those that do not advertise online (Zafar & Madni, 2024). Sugiyantoro et al. (2022) also confirm that WhatsApp is useful as a communication medium for work coordination and building social relationships in the production sector of Farizka Fashion's jeans convection business. Before the training was carried out, most product promotion still featured photos with low visual quality and incomplete information. After training and mentoring, participants showed improvements in photo lighting, product composition, price explanation, and packaging (Figure 1).



(a) (b)

Figure 1. Promotion Appearance Before Training (a) and After Training (b)

These changes show that the increase in digital literacy is not only cognitive, but also reflected in everyday marketing practices. Less attractive promotional looks become more attractive with more adequate packaging. The strengthening of digital promotion practices also has an impact on increasing participants' confidence in offering their products to consumers through community-based digital media. Overall, the increase in post-test scores in all aspects shows that holistic training can increase the knowledge of food micro enterprise actors. These findings are in line with Widyaningrum et al. (2022), who state that needs-based training and direct practice are effective in increasing the capacity of micro enterprise actors. The variation in the level of knowledge improvement between materials reflects the differences in the initial conditions of the participants. The halal ingredient aspect showed a relatively small increase because participants already had a good basic understanding, along with the characteristics of food products that are close to daily consumption practices.

In contrast, the packaging selection aspect showed the greatest improvement, indicating a knowledge gap before training. This is in line with the findings of field observations, where some participants have not paid attention to the optimal function of packaging, both as a product protector and as a medium of communication and promotion. Thus, this training was instrumental in

broadening the participants' perspective that packaging not only serves as a wrapper, but also as part of the product's value-added strategy. The holistic approach applied allows participants to understand the relationship between halal ingredients, healthy processing processes, and the right packaging selection in supporting the sustainability of micro-food enterprises.

The results of the two-month post-training survey showed that all participants gave a positive assessment of the suitability of the material, training methods, and benefits of the activity for their business. This survey aims to evaluate participants' perceptions of the relevance of the material, the effectiveness of the method, and the benefits of training on the business being run. Most of the participants stated that the training was very helpful in improving understanding, skills, and confidence in running a food micro enterprise. This increase in confidence is an important indicator in the empowerment process, because it is a psychological capital for participants to apply the knowledge and skills gained sustainably. In Table 2, the results of the survey are presented to the participants two months after the training.

Table 2. Survey results on the perception of post-training participants

Aspects Assessed	Highly Appropriate (%)	Appropriate/Effective/Improved (%)
Material suitability	57	43
Training Methods	64	36
Quality of material	64	36
Effectiveness of practice	36	64
Help businesses	57	43
Understanding halal	71	29
Benefits of training	57	43
Confidence	71	29
Participant satisfaction	57	43

The survey results showed that all participants gave a positive assessment of the suitability of the training materials, with 57% of respondents stating that the material was very suitable and 43% stating that it was in accordance with business needs. These findings indicate that the material presented has been in line with the real conditions and challenges faced by food micro enterprise actors. In terms of training methods, the majority of participants assessed that the methods used were easy to follow, with 64% of respondents stating that they were very easy to follow and 36% stating that they could be followed. A similar assessment can also be seen in the quality of the material, where 64% of respondents rated the material as very high quality and 36% rated it as of high quality. This shows that the training approach applied is not only relevant, but also delivered effectively and understandably by the participants. In terms of practice effectiveness, 36% of respondents rated the practice as very effective and 64% rated it as effective. Although the percentage of "very effective" was lower than other aspects, these results showed that the practice provided an applied learning experience, although it still had the potential to be improved through advanced mentoring.

The impact of training on participants' businesses can also be seen from respondents' perceptions, where 57% stated that training was very helpful in creating better businesses and 43% stated that it was helpful. These findings indicate that the benefits of training do not stop at increasing knowledge, but are beginning to be felt in daily business practices. Increasing understanding of halal food is one of the most prominent impacts, with 71% of respondents stating that it greatly increases understanding and 29% stating that it increases understanding. This strengthens the results of the pre-test and post-test, which show that halal material is an important aspect in strengthening the capacity of food micro enterprise actors. In addition, training also has an impact on the psychological

aspect of business actors. A total of 71% of respondents stated that their confidence increased greatly, and 29% stated that it increased after participating in the training. This increase in confidence is an important indicator in the empowerment process, because it is the initial capital for business actors to apply the knowledge and skills that have been acquired.

Overall, participants' satisfaction with the training was very high, with 57% of respondents stating that they were very satisfied and 43% satisfied. This high level of satisfaction reflects that training is not only well received, but also felt to provide real benefits in the short term. These findings show that training not only increases participants' knowledge, but also has a short-term impact that is directly felt in business practices and the confidence of food micro enterprise actors. In addition, in the survey, participants also expressed their interest in following up with halal certification. 14 people expressed interest. However, until this program is completed, only three people will submit and fill out the self-declared certification application form completely. During the five months after the training, there is a real change in the appearance of promotions in WAG. The technique of shooting products is more interesting, with product clustering and a clear message conveyed through images. Meanwhile, those who have not participated in the training are still the same. Overall, these results need to be understood in an integrated manner through the synthesis of the holistic approach applied.

The synthesis of results shows that halal practices, healthy food processing, and digital practices strengthen each other in increasing the empowerment of food micro enterprises. Product halalness builds consumer trust, healthy food processing improves product quality and safety, while digital practices expand market access and marketing communication effectiveness. The holistic approach applied in this activity allows food micro enterprise actors not only to increase knowledge, but also to integrate various important aspects in business management more systematically and sustainably. Thus, the empowerment carried out is not partial, but results in a more complete change in the capacity and business behavior of participants. The holistic approach carried out in this activity is consistent with Syipa et al. (2024), who found that community empowerment through the development of culinary micro-enterprises, which is carried out in stages through the 5 principles (enabling, strengthening, protection, support, and maintenance) approach, can increase the capacity of business actors sustainably. This approach has proven to have a real impact on increasing the income and creativity of micro enterprise actors in innovating products, with the government's role as the main facilitator in training, legality, halal certification, and continuous mentoring. These findings confirm that training based on a holistic approach can generate sustainable cognitive and psychological impacts, which is an important foundation for implementing better business practices. Participants also stated in the survey that advanced training is needed, such as business management, business license management, and halal certification.

CONCLUSION

The holistic approach-based training for food micro-enterprise actors significantly improved participants' knowledge across key areas, including halal ingredients, healthy and nutritious food processing, and product packaging, with the most substantial gains observed in packaging, indicating a previously unmet need. In addition, digital training through WhatsApp Business effectively enhanced participants' promotional capabilities, as evidenced by improved product presentation, clearer pricing communication, and increased group engagement. Despite variations in knowledge gains due to differing initial conditions among participants, the findings consistently demonstrate that an integrated training approach encompassing production, food safety, and value-added aspects plays a critical role in strengthening the capacity of food micro-enterprises. Importantly, the implementation of this approach not only improves product quality and marketability but also

supports compliance with halal and food safety standards, enhances consumer trust, and ultimately contributes to the sustainable development and competitiveness of local food micro-enterprises.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI or AI-assisted technologies were used in the writing process of this manuscript.

CONFLICTING INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

FUNDING INFORMATION STATEMENT

The authors would like to express their deepest gratitude to the Directorate of Development for Agro-maritime Community-IPB University for the institutional and financial support provided throughout the Community Services in the Program of *Dosen Pulang Kampung.* The authors appreciate the valuable cooperation of Pakcy Online Market members who participated in this program, the postgraduate students of the Agro-industrial Engineering Program-IPB University, and reviewers whose constructive feedback helped improve the quality of this paper.

REFERENCES

Ab Talib, M. S. (2021). Identifying Halal Logistics Constraints in Brunei Darussalam. *Journal of Islamic Marketing, 12*(6), 1145–1158.

Ali, M. Q., & Ahmad, N. (2023). The Factors That Effect Halal Food and Food Products Awareness and Different Challenges: An Overview. *Journal of Agribusiness Marketing, 10*(1).

Badan Pusat Statistik. (2025). *Profil Industri Mikro dan Kecil 2024* (Vol. 15). Badan Pusat Statistik.

Boateng, S. L., Boateng, R., & Anning-Dorson, T. (Eds.). (2023). *Empowering Women in the Digital Economy: A Quest for Meaningful Connectivity and Access in Developing Countries*. Routledge.

Bou-Mitri, C., Abdessater, M., Zgheib, H., & Akiki, Z. (2021). Food Packaging Design and Consumer Perception of the Product Quality, Safety, Healthiness and Preference. *Nutrition & Food Science, 51*(1), 71–86.

Dayar, M. B., Syafitri, A. D. A., Damayanti, T., Wirapradipta, I. M., Ningrum, H. I., & Margaretha, J. A. (2024). Digitalisasi Marketing UMKM Pangan Lokal Desa Mendukung Ketahanan Pangan. *International Journal of Community Service Learning, 8*(4), 455–466.

Djazuli, R. A. (2024). *Evaluasi Program Pemberdayaan Masyarakat*. UMG Press.

Fadhillah, P., & Yuniarti, A. (2023). Pemberdayaan UMKM: Melihat Peluang Bisnis UMKM di Era Digital di Desa Ujunge Kecamatan Tanasitolo Kabupaten Wajo. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan, 2*(1), 291–298.

Fizzanty, T., & Maulana, I. (Eds.). (2023). *The Digitalization of Indonesian Small and Medium Enterprises: Human Capital, Inclusivity and Platform Capitalism*. Springer.

Idawati, Mahmud, A., & Dirawan, G. D. (2016). Effectiveness of Training Model Capacity Building for Entrepreneurship Women Based Empowerment Community. *International Education Studies, 9*(11).

Indahsari, K. (2020). Urgensi Perencanaan Partisipatif dalam Pemberdayaan Ekonomi Masyarakat Desa (Studi Kasus Pemberdayaan Kelompok Perempuan Desa Pendabah). *MEDIA TREND, 15*(1), 123–132.

Inegbedion, H. E., Thikan, P. R., David, J. O., Ajani, J. O., & Peter, F. O. (2024). Small and Medium Enterprise (SME) Competitiveness and Employment Creation: The Mediating Role of SME Growth. *Humanities and Social Sciences Communications, 11*(1), 11.

Kohl, J. (2007). Reflections. *The SoL Journal on Knowledge, Learning, and Change, 8*(2).

Malau, A. G., & Ekananda, M. (2025). The Impact of MSMEs on Employment, Investment, and Income. *Economics Development Analysis Journal, 14*(2).

Nurhayati, T., & Hendar. (2020). Personal Intrinsic Religiosity and Product Knowledge on Halal Product Purchase Intention: Role of Halal Product Awareness. *Journal of Islamic Marketing, 11*(3), 603–620.

Pemerintah Republik Indonesia. (2024). *Peraturan Pemerintah Republik Indonesia Nomor 41 Tahun 2024 tentang Penyelenggaraan Bidang Jaminan Produk Halal*. Sekretariat Negara.

Refnida, R., Syuhada, S., Muslim, F., & Mayasari, M. (2025). Digitalization for Traditional Cakes from Small and Medium Enterprises by Malay Jambi Women. *Jurnal Pemberdayaan Masyarakat, 4*(4), 898–908.

Saati, E. A., Br, A., Cahyono, E. B., Agustino, H., Inayah, R., Sukmana, O., & Harini, R. (2022). Penerapan Ipteks dalam Penguatan Usaha Mikro Pangan. *Jurnal Aplikasi dan Inovasi Ipteks SOLIDITAS, 5*(1).

Salam, D. Q. A., & Makhtum, A. (2022). Implementasi Jaminan Produk Halal melalui Sertifikasi Halal pada Produk Makanan dan Minuman UMKM di Kabupaten Sampang. *Qawwam: The Leader's Writing, 3*(1), 10–20.

Sapriyadi, S., Ilham, S., & Zizih, A. R. T. (2026). Restrictions on Digital Transformation on Micro and Small Enterprises in Kolaka Regency. *Equity: Jurnal Ekonomi, 14*(1), 1–17.

Setiawan, R., Prasetyo, P. T., & Yuniawan, A. (2025). Digital Marketing Strategy for Sustainable Performance of MSMEs: Literature Review. *Research Horizon, 5*(1), 33–46.

Shrivastava, S., Bardoel, E. A., Djurkovic, N., Rajendran, D., & Plueckhahn, T. (2022). Co-Creating Curricula with Industry Partners: A Case Study. *The International Journal of Management Education, 20*(2), 100646.

Sugiyantoro, N. L. A., Wijaya, M., & Supriyadi, S. (2022). Benefits of WhatsApp as a Communication Media on Small Business Social Networks. *The Journal of Society and Media, 6*(1), 1–16.

Syipa, M., Karwati, L., & Hamdan, A. (2024). Pemberdayaan Masyarakat melalui Pengembangan Usaha Mikro di Kecamatan Tawang Kota Tasikmalaya (Studi pada Pelaku Usaha Mikro yang Bergerak pada Bidang Kuliner). *Jurnal Pemberdayaan Masyarakat, 3*(2), 50–64.

Tambunan, T. (2019). Recent Evidence of the Development of Micro, Small and Medium Enterprises in Indonesia. *Journal of Global Entrepreneurship Research, 9*(1), 18.

Ulum, M. C., & Anggraini, N. L. V. (2020). *Community Empowerment: Teori dan Praktik Pemberdayaan Komunitas*. UB Press.

Wastutiningsih, S. P., Lestari, L. A., Utami, S. N. H., Meilani, N., Yantafi, U., & Partini, P. (2025). Peningkatan Pengetahuan Pengolahan Makanan Sehat untuk Cegah Foodborne Diseases di Wisata Negeri Kahyangan, Sawangan, Magelang. *GEMAKES: Jurnal Pengabdian Kepada Masyarakat, 5*(3), 442–451.

Widyaningrum, R., Ayuningtyas, C. E., Suryani, D., Khofifah, H., Mutmainah, S., & Putri, S. N. (2022). Peningkatan Pengetahuan UMKM Pangan tentang Produk Pangan Bergizi, Aman, dan Halal. *Jurnal Ilmiah Pengabdian kepada Masyarakat, 7*(3), 401–406.

Zafar, N., & Madni, A. R. (2024). Adoption of social media by Small and Medium Sized (SMEs) Enterprises of District Sargodha for Promotion of Businesses. *Social Science Review Archives, 2*(2), 1424–1434.

Zainuddin, A. F. (2016). *On Becoming HOPE Holistic Person*. Logos Institute.