

Digital Marketing Implementation to Improve the Business Income of Sihobuk Peanut MSMEs in Sipoholon District North Tapanuli Regency

Sabda Dian Nurani Siahaan¹, Lenti Susanna Saragih², Dede Ruslan³

{sabda@unimed.ac.id¹, lenti@unimed.ac.id², drasruslan@yahoo.com²}

Department of Management, Faculty of Economic, Universitas Negeri Medan, Indonesia¹

Department of Economic, Faculty of Economic, Universitas Negeri Medan, Indonesia²³

Abstract. Digitalization has become a crucial necessity in the development of MSMEs to enhance competitiveness and increase income. This study aims to implement a social media based digital marketing for Sihobuk Peanut MSMEs in Sipoholon District, North Tapanuli Regency, and to measure its impact on business income. These MSMEs have experienced stagnant revenues due to their continued reliance on conventional marketing methods, particularly because most business owners are elderly and less familiar with technology. The research was conducted on five MSMEs using the ADDIE method (Analysis, Design, Development, Implementation, and Evaluation). The results show that after the implementation of the digital marketing, all MSMEs experienced an increase in business income. These findings demonstrate that digital marketing has a positive impact on the growth of local businesses. Therefore, digitalization should be continuously encouraged, especially through ongoing training for senior business owners to ensure they are not left behind in the digital transformation.

Keywords: . Social Media Marketing, Business Income, Sihobuk Peanut, Sipoholon

1. Introduction

The business sector includes all activities that offer and sell products or services to make a profit [1]. In Indonesia, the sector has grown significantly, with around 65.5 million MSME units recorded nationwide in 2023, according to the Ministry of Cooperatives and MSMEs [2]. At present, there is a growing emphasis not only on increasing the number of MSMEs but also on enhancing their quality. In this context, quality enhancement refers to the shift from conventional business models to digitally based operations a transformation widely recognized as digitalization. MSME digitalization refers to the integration of digital technologies into business operations with the aim of enhancing efficiency and effectiveness [3]. This transformation involves the utilization of digital tools and platforms to streamline workflows, improve operational performance, and accelerate business processes. The adoption of digital strategies is essential for strengthening overall business outcomes including increased sales, enhanced brand identity, and improved competitiveness [4]. Recent data indicates that out of the 65.5 million MSMEs in Indonesia, approximately 27 million have embraced digital technologies as of 2023 [5], marking a significant increase from 21 million in 2021. In response, the Indonesian government has set a target to digitalize 30 million MSMEs by 2024 [5], reflecting a strong commitment to fostering digital transformation within the sector.

For many small scale business owners, the implementation of digitalization is still predominantly focused on the marketing dimension. Marketing refers to a set of strategies, processes, and activities implemented by individuals or organizations to promote and deliver products or services to consumers or the wider public [6]. In the context of MSMEs, a key aspect of digital transformation is the adoption of digital marketing, which involves the integration of digital technologies into marketing practices. This method involves utilizing various digital platforms, including websites, social media, email marketing, search engines, and mobile applications, to engage customers in a more targeted, efficient, and cost effective manner. Among the various digital marketing strategies, social media marketing through platforms such as Instagram, Facebook, and TikTok stands out as particularly suitable for Micro and Small Enterprises. While younger entrepreneurs often adapt easily to these digital tools, older business owners frequently encounter significant challenges. These may include limited digital literacy, difficulty in keeping up with technological advancements and a general reluctance to shift away from long-standing traditional business practices. As such, digital adoption among older entrepreneurs requires more tailored support and continuous capacity building efforts to ensure inclusivity in the digital transformation process.

Such is the case with Sihobuk Peanut MSMEs located in Sipoholon District, North Tapanuli Regency. Sihobuk Peanuts are a traditional product originating from North Tapanuli and have become an integral part of the region's cultural heritage. Widely regarded as a legendary local snack, Sihobuk peanuts have been produced since the 1970s. Deeply embedded in Batak cultural identity, the product represents the local wisdom and culinary legacy of the North Tapanuli community. Among the 15 districts in the regency, Sipoholon is recognized as the largest production hub for Sihobuk peanuts, with more than 20 active business operators involved in its manufacture.

Based on observations of five MSME actors, a common issue identified is stagnant business performance. Business performance refers to how effectively a company operates and achieves its predetermined goals, which can be assessed through business income [7]. Business income is a critical indicator of a company's financial health and overall performance. It refers to the revenue generated from the sale of goods or services before expenses are deducted [8]. For Micro, Small, and Medium Enterprises (MSMEs), especially in developing regions, business income often serves as the primary source of livelihood for business owners and their families. Steady or increasing income enables businesses to invest in better equipment, improve product quality, and expand operations. Conversely, stagnant or declining income can hinder growth, limit innovation, and reduce the ability to compete in a dynamic market environment.

Several factors can influence business income, including market demand, pricing strategies, operational efficiency, and marketing effectiveness. In today's digital era, the ability to adopt and utilize digital tools such as social media marketing, e-commerce platforms, and digital payment systems has become a major driver of business income growth [9]. Digitalization allows businesses to reach wider markets, operate more efficiently, and respond quickly to consumer needs. For traditional businesses that have yet to transition to digital methods, income growth often remains limited due to narrow market access and outdated marketing strategies. According to interview results, the average cumulative income of five business actors over the past year (2024) ranged between IDR 2,500,000.00 and IDR 2,700,000.00. In terms of profile, these entrepreneurs belong to the Baby Boomer generation (aged 50 and above). Stagnant business performance and low income levels are concerning, as these businesses constitute the primary source of livelihood and economic support for their families. Interview findings suggest that this stagnation is largely attributed to the absence of digitalization in their marketing strategies.

In the case of 5 Sihobuk Peanut MSMEs, social media marketing has not existed at all. Social media marketing is a strategy that utilizes social media platforms to promote products, services, or brands to targeted consumers. Commonly used platforms include Facebook, Instagram, TikTok, Twitter, WhatsApp, and others. In Indonesia, out of a total national population of 278.7 million people, there were 185 million internet users as of January 2024. Among them, 139 million individuals or approximately 49.9% of the total population were active social media users. In other words, nearly half of Indonesia's population is engaged in social media [10]. This data highlights the high level of social media activity among Indonesians. Such a trend presents a significant opportunity for business owners to utilize social media not only for personal use but also as a powerful tool for running and growing their businesses. Social media platforms like Facebook, Instagram, and TikTok have millions of active users. This allows businesses to reach a much broader and more diverse audience an outreach that would be difficult to achieve using traditional marketing methods. So far, Sihobuk Peanut MSMEs have marketed their products conventionally by waiting for buyers to come to the business location. This condition is very unfortunate because Sihobuk Peanut entrepreneurs should be able to use social media to expand their marketing reach. Increased engagement in social media marketing could significantly enhance the product's visibility among a wider audience. Business actors who have not utilized social media can be left behind due to competition and the increasing number of businesses using social media [11].

Based on the problems above, improvements to these MSMEs are very necessary to be able to increase their income. Business actors admit that limited knowledge and skills are one of the factors that have not implemented digitalization in their businesses. Therefore, this study aims to implement TikTok-based digital marketing for five Sihobuk Peanut businesses and evaluate the impact of this implementation on their income growth. The choice of TikTok as a marketing platform is based on several considerations. First, TikTok is one of the fastest growing social media platforms, including in Indonesia, offering a wide market reach. Second, the short video format provided by TikTok allows product information to be delivered in a visual, engaging, and easily understandable way for various audiences. Lastly, although most of the business owners are in the older age category, TikTok's user-friendly interface still enables them to use the platform, especially with proper training and assistance. Through this strategy, it is expected that Sihobuk peanut entrepreneurs can expand their market reach and increase their business income by utilizing digital technology effectively. The implementation of this study is based on previous studies that have found that implementing marketing through Tiktok social media is effective in increasing sales results [12], [13].

2. Methods

This research was conducted in Sipoholon Subdistrict, North Tapanuli Regency, North Sumatra Province, and is scheduled to take place from April to June 2025. The research uses a Research and Development (R&D) approach, as it involves the stages of designing, developing, and implementing a digital marketing strategy. This approach was chosen to allow the researcher to produce a practical product, a marketing system that utilizes the TikTok social media platform. The study is systematically developed based on the five stages of the ADDIE model: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model was selected because it offers a structured and systematic framework.

Data analysis was carried out using descriptive quantitative techniques, aimed at describing and interpreting the data collected through observation, interviews, documentation, and field notes during the mentoring and implementation of the TikTok-based digital marketing strategy. The analysis process includes data reduction, data presentation, and conclusion

drawing. The main focus of this analysis is to understand behavioral changes among MSME participants, their responses to the use of social media, and their perceptions of how digital marketing influences business income. Each step of the research follows the structured process outlined in the ADDIE model.

2.1 Analysis

The analysis stage serves as the preliminary step before designing the marketing strategy for Sihobuk Peanut through the TikTok social media platform. This process begins with identifying the main problems faced by MSME actors, particularly the low income resulting from the continued use of traditional marketing methods. In addition, a needs assessment and analysis of the business owners' characteristics are carried out to determine the most appropriate digital strategy based on real field conditions.

2.2 Design

The design stage involves planning the digital marketing strategy to be implemented. It starts with the creation of a TikTok account, which includes selecting the account name, profile photo, and registering an email address. After the account is set up, the next step is to design marketing content, such as visually appealing photos of Sihobuk Peanut products intended to attract consumer interest. The photos are designed not merely as plain product images, but with added visual appeal and artistic value to enhance their attractiveness. In addition to photo content, promotional videos are also planned during this stage.

2.3 Development

The development stage involves the realization of all plans that have been prepared. This includes the development of the TikTok account, the creation of digital content (both photos and videos), and the development of measurement tools to evaluate any increase in income following the implementation of the strategy.

2.4 Implementation

Implementation refers to the execution phase of the digital marketing strategy. This involves launching the TikTok account and consistently posting content according to the planned schedule. During this stage, sales data is also collected throughout the implementation period, using the previously developed measurement tools to track changes in business performance.

2.5 Evaluation

The evaluation stage focuses on analyzing the data collected during implementation to assess whether the digital marketing strategy has led to an increase in the income of MSME actors.

3. Results and Discussion

The entire research activity consists of five stages: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. The results of this study can be described as follows:

3.1 Analysis Stage

At this stage, several activities were carried out as follows:

1. Problem Analysis

The main problem identified at this stage was the low income generated by the Sihobuk Peanut MSMEs.

2. Needs Identification

The identification of needs was carried out through direct observations and in depth interviews with the owners of Sihobuk Peanut businesses. The findings indicated that their marketing strategies remained conventional and that they had not yet adopted digital marketing approaches. Furthermore, the observations revealed that the business owners lacked familiarity with digital marketing concepts and possessed limited knowledge regarding its operation and effective utilization.

3. Target Market Analysis

A target market analysis was also conducted to ensure that the implementation of digital marketing strategies would be appropriately directed. This analysis was based on observations and interviews with business owners. The results indicated that the consumer base consists of the general public. From a demographic standpoint, the product is suitable for a wide range of age groups, including children, adults, and the elderly. Geographically, the product has the potential to be marketed beyond the local area, as Sihobuk peanuts possess a long shelf life, allowing for safe distribution over long distances. This durability is not attributed to artificial preservatives but rather to the natural properties of the peanuts and the traditional processing methods employed. Given that the product originates from the Batak region and considering the widespread Batak diaspora outside of North Sumatra, digital marketing offers a significant opportunity to broaden market reach and enhance sales performance. The outcome of the analysis stage is the identification of an urgent need to implement digital marketing in order to improve the business performance of the Sihobuk Peanut MSMEs.

3.2 Design Stage

The design stage refers to the planning and structuring of the digital marketing strategy intended for implementation. During this phase, the researcher formulated a strategic design for the core components required to support digital marketing through social media platforms. The design process included the following elements:

1. Social Media Account Design

This step focused on establishing a clear and professional digital identity for the business. The process involved selecting an appropriate account name and designing a visually appealing profile picture that aligns with the brand image. The primary objective was to create a credible and recognizable online presence that enhances the perceived professionalism of the product.

2. Visual Content Design (Photos and Videos)

Visual media plays a central role in digital marketing effectiveness. The researcher developed various types of content, including high quality product photographs showcasing packaging, texture, and presentation emphasizing aesthetic elements such as lighting and composition. In addition, short video clips (15–60 seconds in length) were designed to deliver engaging narratives, customer testimonials, and persuasive calls to action that encourage viewers to purchase Sihobuk Peanut.

3. Caption and Copywriting Design

Beyond visual elements, the design stage also included the development of written content in the form of captions for each post. These captions were carefully crafted to be communicative, attention-grabbing, and action-oriented. The goal was to support user engagement and drive interactions, such as prompting purchases or increasing visits to the business's official social media account.

3.3 Development Stage

The development stage involves the implementation of all elements previously planned during the design phase. This includes the following activities:

1. Creation of Social Media Accounts for Sihobuk Peanut MSMEs

The creation of social media accounts marks the initial step in the digitalization of marketing activities. Account names were aligned with each MSME's brand name to enhance recognition and were complemented by a profile photo and brief biography. This process is essential for establishing a consistent digital identity for each Sihobuk Peanut business. To support the visual branding, profile photos were specifically designed using the Canva application, ensuring a cohesive and professional appearance.

2. Digital Content Development

Following the completion of account setup and profile customization, the next step focused on content development. Content serves as the core component of digital marketing strategies. The research team assisted MSMEs in producing high-quality visual content, including engaging product photographs, short promotional videos, and persuasive messaging designed to encourage consumers to try and purchase Sihobuk Peanut. Photo shoots were conducted with attention to aesthetic elements such as lighting, background, and composition, in order to present the product in a more professional manner. All content was prepared as initial promotional material for use during the implementation phase. Photo content was designed using Canva, while video content was developed using the CapCut application.

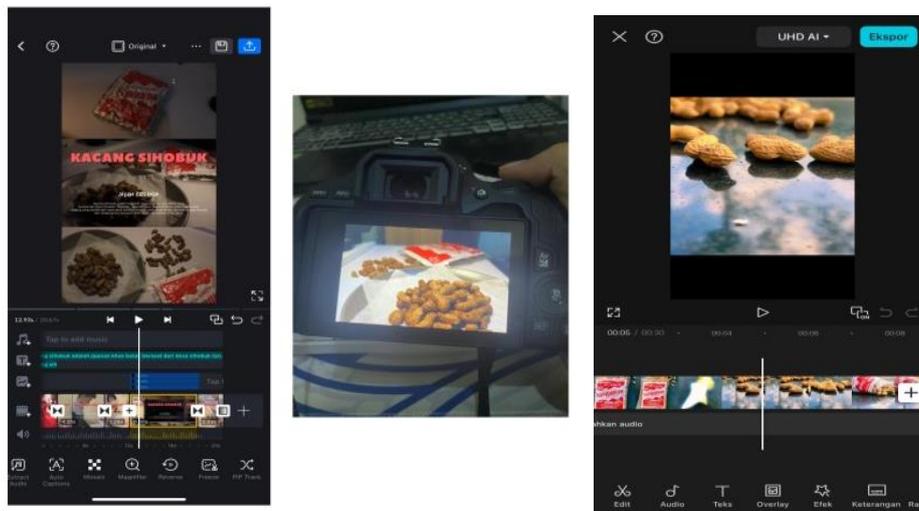


Fig 1. Digital Content Development (Photos and Videos)

Several content samples produced during this stage are presented as follows:



Fig 2. Several Content Samples

3.4 Implementation Stage

The implementation stage focused on the direct application of the digital marketing strategy that had been previously designed and developed. The social media marketing activities were carried out by regularly publishing digital content on the Tiktok platform. Each MSME was assisted in managing a content upload schedule, with a minimum frequency of two to three posts per week. These posts included promotional materials, educational content related to the production process, and customer testimonials. All content utilized captions and visual designs prepared during the earlier stages to ensure consistency and maintain audience engagement. The implementation of social media marketing activities was conducted from April to June 2025. The appearance and execution of each Sihobuk Peanut MSME's Tiktok social media marketing can be described as follows:

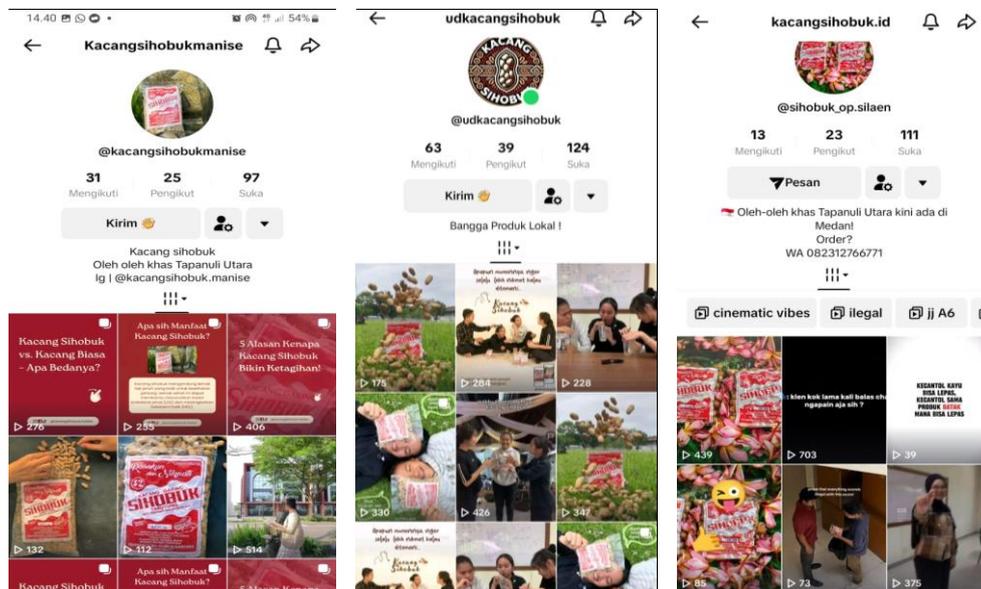


Fig 4. TikTik Social Media Marketing of Kacang Sihobuk MSMEs

In the figure above, the response from TikTok users appears to be relatively high, as indicated by the number of views reaching 700. At this stage, the business owners also engaged with users by responding to comments on the posted content.

3.5 Evaluation Stage

The purpose of this evaluation is to measure the impact of implementing Tiktok-based social media marketing on the business income of five Kacang Sihobuk MSMEs located in Sipoholon Subdistrict. The evaluation was conducted by comparing the average monthly income of each MSME across two periods:

- Before Implementation: January, February, and March 2025.
- After Implementation: April, May, and June 2025

To provide a more detailed picture of the dynamics of changes in income over time, table 1 presents data on monthly income trends for each MSME from January to June 2025.

Table 1. Income Before Digitalization Implementation (January – March 2025)

No	Name of MSME	Jan (Rp)	Feb (Rp)	Mar (Rp)	Average Before (Rp)
1	MSME A	2.500.000	2.600.000	2.600.000	2.566.667
2	MSME B	2.600.000	2.500.000	2.600.000	2.566.667
3	MSME C	2.600.000	2.700.000	2.600.000	2.633.333
4	MSME D	2.500.000	2.500.000	2.600.000	2.533.333
5	MSME E	2.600.000	2.600.000	2.500.000	2.566.667

At this stage, data on income after the implementation of digital marketing were also obtained and are presented in the table below.

Table 2. Income After Digitalization Implementation (Apr – June 2025)

No	Name of MSME	Jan (Rp)	Feb (Rp)	Mar (Rp)	Average After (Rp)
1	MSME A	3.300.000	3.400.000	3.500.000	3.400.000
2	MSME B	3.100.000	3.200.000	3.200.000	3.166.667
3	MSME C	3.500.000	3.600.000	3.600.000	3.566.667
4	MSME D	3.000.000	3.100.000	3.200.000	3.100.000
5	MSME E	3.200.000	3.300.000	3.300.000	3.266.667

Tables 1 and 2 present a comparison of the average monthly income of five Sihobuk Peanut MSMEs before and after the implementation of digital marketing. The data indicate that each MSME experienced an increase in income following the use of social media. To provide a more detailed overview of the income dynamics over time, table 4 displays the monthly income trends of each MSME from January to June 2025.

Table 3. The Impact of Digitalization on MSME Income

No	Name of MSME	Average Before (IDR)	Average After (IDR)	Difference (IDR)	Percentage Increase (%)
1	MSME A	2.566.667	3.400.000	833.333	32,47%
2	MSME B	2.566.667	3.166.667	600.000	23,38%
3	MSME C	2.633.333	3.566.667	933.333	35,45%
4	MSME D	2.533.333	3.100.000	566.667	22,37%
5	MSME E	2.566.667	3.266.667	700.000	27,27%

Table 3 presents the monthly income trends of each Sihobuk Peanut MSME during the period from January to June 2025. The data indicate that in the initial three-month period prior

to the implementation of digital marketing strategies (January–March), the income levels remained relatively stagnant, with an average ranging between IDR 2,500,000 and IDR 2,600,000. However beginning in April, coinciding with the introduction of digital marketing interventions all participating MSMEs exhibited a consistent upward trajectory in income through June. The observed increases ranged from 20% to 30% compared to the pre-intervention period. These findings suggest that the income enhancement target set for the three months following the implementation of digitalization was successfully achieved across all MSMEs included in the study.

To complement the presentation of monthly income trends as shown in table 3, a bar chart visualization is provided to clarify the comparison of average income among Sihobuk Peanut MSMEs before and after the implementation of digital marketing. This graphical representation offers a more concise and informative depiction of the income changes for each MSME across the two periods, while also highlighting the significant differences observed following the digitalization intervention.

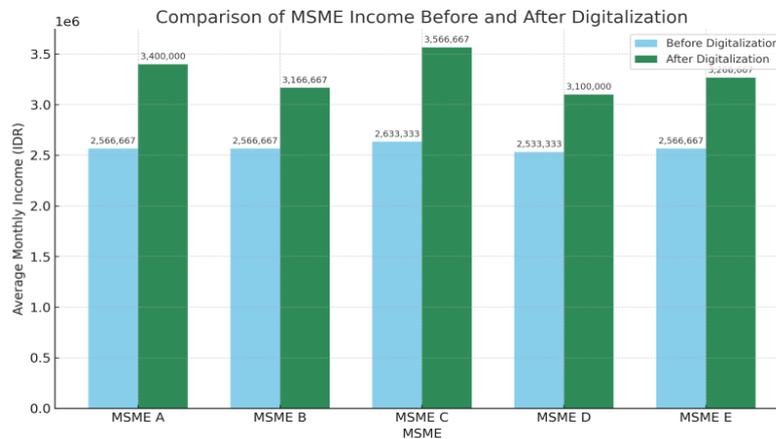


Fig 4. Comparison Chart of Income Before and After Digitalization

3.6 Discussion

This study reveals that the digitalization of marketing through Tiktok social media has successfully increased the income of five Sihobuk Peanut MSMEs in Sipoholon District, North Tapanuli. Previously, business actors experienced stagnant sales due to the limitations of conventional marketing strategies, which relied solely on direct sales through physical stores or roadside stands along the Trans-Sumatra highway. Digitalization emerged as a strategic solution with tangible impact.

Tiktok has been utilized as the primary channel to introduce Sihobuk Peanut products to a broader audience. Through features such as Stories, Reels, and feed posts, MSME actors were able to promote their products consistently. This approach not only enhanced product exposure but also facilitated interaction with previously unreachable consumers. These findings align with the study by [14], [15] which concluded that Tiktok social media significantly enhances visibility and sales of culinary MSMEs. In the context of Sihobuk Peanut, social media has enabled business owners to access markets beyond North Tapanuli, even reaching outside the province.

This study demonstrates that digitalization is not only feasible but also capable of generating direct economic benefits. Digital platforms help overcome geographical constraints and open broader market opportunities without the need for substantial physical distribution costs. In the long term, this strategy can support business sustainability and preserve the existence of Sihobuk Peanut as a locally inherited product that remains competitive on a national scale.

4. Conclusions

This study concludes that marketing digitalization consisting of Tiktok social media strategies significantly improves the performance of Sihobuk Peanut MSMEs in Sipoholon District. The average income of MSMEs increased by 20–30% within three months after digitalization was carried out. Digital marketing strategies have proven effective in overcoming the limitations of conventional marketing, such as restricted market reach and low digital literacy. By leveraging Tiktok features such as stories, reels, and feed posts, business actors have successfully enhanced product visibility, reached new consumers beyond their local areas, and fostered more active engagement with customers. Digitalization has emerged as a strategic solution that is effective, efficient, and sustainable in strengthening the presence and competitiveness of local products in the digital economy era.

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