

Digital Marketing Development for Aren Sugar MSME in Dalig Raya Village Simalungun Regency

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Abstract. This study aimed to develop a digital marketing strategy for aren palm sugar using the 4D Research and Development model. The study integrated four digital platforms Tiktok, Instagrams, Facebook, and Shopee to increase product sales. Define stage needed to conduct an analysis and identify internal and external issues affecting the business. Design stage included creating business accounts, visual branding, and content planning for each platform. Develop stage focused on producing and publishing engaging content, while the Disseminate stage included implementing cross-platform promotions. The results of this study indicated that expert, digital marketing users responded positively to the content presented, categorizing it as very interesting. The effectiveness of digital marketing for aren palm sugar products were measured by tracking sales through the developed platform for three consecutive months. The results showed that, during the three-month trial period, the number sales increased, impacting the income of aren palm sugar farmers in Dalig Raya.

Keywords: Digital Marketing; Aren Palm Sugar; MSME.

1 Introduction

The development of information and communication technology has transformed marketing methods from conventional to digital-based marketing [1]. Digital marketing is the process of building and maintaining strong relationships with customers through the internet and digital media [2]. Digital marketing enables businesses to reach wider markets, interact directly with consumers, and build a strong brand image through various online platforms. For Micro, Small, and Medium Enterprises (MSME), implementing digital marketing is a crucial strategy for increasing competitiveness amidst increasingly fierce market competition [3]. Palm sugar, as a local commodity, has significant potential for growth, given its superior taste, health benefits, and inherent traditional values. However, limited marketing strategies and minimal use of digital technology often hinder market expansion for this product, resulting in limited distribution and recognition within specific regions. Indonesian government, through the Indonesian Chamber

of Commerce and Industry, is encouraging digital transformation of MSME to strengthen the position of local products in national and international markets [4]. Digital marketing can be conducted through various platforms, one of which is social media. [5]Van Djik, in Nasrullah, states that social media is a media platform that focuses on user presence and encourages their activity and collaboration. Utilizing platforms such as Shopee, TikTok, Instagram, and Facebook is considered an effective means of promoting palm sugar products. Each platform offers specific, attractive advantages [6]. However, the implementation of digital marketing in palm sugar, MSME facing several obstacles. These obstacles include limited technological skills, lack of a consistent branding strategy, low-quality digital content, and suboptimal utilization of social media and e-commerce features.

Based on these challenges, this research was conducted to design and development a digital marketing strategy through several social media and e-commerce platforms, namely TikTok, Instagram, Facebook, and Shopee, in an effort to expand market reach, creating brand awareness, and sales growth.

2 Methods

This research is R&D study, a research method aimed at producing effective products and testing their effectiveness. This study uses a quantitative approach with an experimental research design to examine the effect of digital marketing on the income of palm sugar MSME in Dalig Raya. Causal testing is conducted to determine the relationship between each variable and the effects of a treatment[7]. Development model in this study uses the 4D model. There are four development stages carried out in this research 1) Define Stage: The define stage is the analysis stage to identify the main issues in the research, namely an initial analysis to identify the issues discussed in the development. 2) Design Stage: The design stage is the stage in developing solutions to the research problems. The steps involved in designing the solutions to the research problems include designing the digital marketing used. 3) Development Stage: The development stage in this research is the development of the product that was designed in the design stage. 4) Disseminate Stage: Several activities are planned to be implemented as part of this stage. Disseminate is the evaluation stage of the development results.

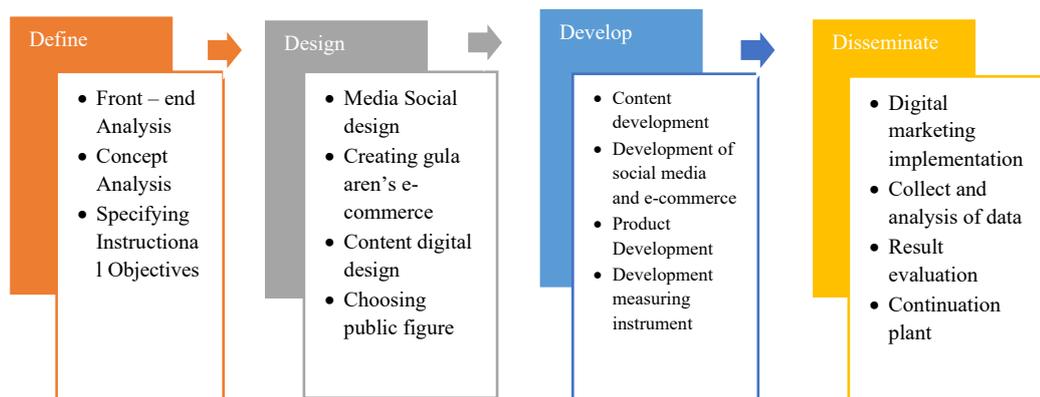


Fig. 1. Research Procedures

3 Result and Discussion

3.1 Result

There are four stages that can be done in doing digital marketing research on palm sugar, such as follows:

Stage 1 Define

This stage is an initial analysis to identify the main problems facing palm sugar MSME in Dalig Raya and determine development focuses. The analysis is conducted in three steps:

a. *Front-end Analysis*

The primary analysis identified the core challenges facing palm sugar MSME, which still rely on traditional marketing, with limited market reach within the local region. Despite the product's high quality and market potential, competition is intensifying due to the abundance of similar products on e-commerce and social media. Low digital literacy, a lack of branding strategies, and suboptimal utilization of social media and e-commerce are key obstacles. Promotional content that doesn't keep up with trends makes it difficult for products to be promoted in platform algorithms. Other factors hindering growth include limited digital marketing knowledge, a lack of training and mentoring, a weak brand identity, and limited access to online promotional opportunities. Therefore, a targeted digital marketing strategy is needed to increase brand awareness, expand the market, and build the brand image of local palm sugar.

b. *Concept Analysis*

A concept analysis was conducted to understand the characteristics of palm sugar MSME, the primary target of digital marketing programs. In general, they are highly motivated to develop their businesses and already use social media platforms like Instagram and Facebook, but have not yet utilized their features optimally. Their uploaded content tends to be monotonous, doesn't follow trends, and hasn't been able to attract platform algorithms. The ability to create trend-relevant content, utilize storytelling, and analyze consumer interests still needs improvement. Current digital platforms include: Instagram for visual promotions reaching the younger generation, Facebook for local communities and adult consumers, TikTok for viral reach through short videos, and Shopee as an e-commerce platform with integrated payment and logistics systems. Each platform has different potential, but optimizing its use requires training focused on digital trend analysis, content marketing techniques, and utilizing the latest features. With this approach, aren palm sugar MSME in Dalig Raya are expected to increase the appeal of their content, reach a wider audience, and strengthen their brand position in the digital marketplace.

c. *Specifying Instructional Objectives*

The Specifying Instructional Objectives stage establishes the digital marketing concept that the aren palm sugar MSME in Dalig Raya used in developing promotional media. The chosen strategy is trend-driven content combined with informational storytelling, leveraging current social media trends (viral audio, TikTok challenges, educational instagram content) to increase the chances of appearing on recommendation pages and reach audiences organically.

Stage 2 Design

This stage designs the digital marketing strategies and tools that will be used, including:

- a. *Creating Social Media Account Specifically for Business*

Social media accounts utilize Facebook, Instagram, TikTok, and Shopee to focus on marketing products. The design encompasses the selection of names, profiles, content, and cross-platform integration. The name "Manis Aren" was chosen to convey the impression of a natural, healthy product suitable for various food and beverage sweetener needs. The logo is designed in the shape of a round palm sugar named "Aren." The mascot is depicted with a friendly expression, open arms, and cheerful eyes, creating the impression of a friendly and approachable product for various consumer segments, including families and teenagers.

- 1) Facebook was chosen because of its very broad user reach, including the productive age segment, which is the primary target market. Furthermore, the Facebook Ads feature allows sellers to target ads based on location, interests, and user habits, with a flexible budget.
- 2) TikTok is used to reach a wider audience through creative videos containing product introductions, manufacturing processes, and usage tips, complete with popular music and hashtags, as well as direct interaction via DM.
- 3) The Instagram account @manis_aren emphasizes visual branding through a logo, a short bio with a Shopee link, and consistent content featuring product photos, testimonials, field activities, and Reels storytelling. This account utilizes Stories, Highlights, and an effective content strategy to achieve 28,76 thousand views in 30 days.

Table 1. Result of Design Social Media Account

Social Media	Account Profile
Facebook	@manish_arenn
Instagram	Manis Aren
Tiktok	@manisaren

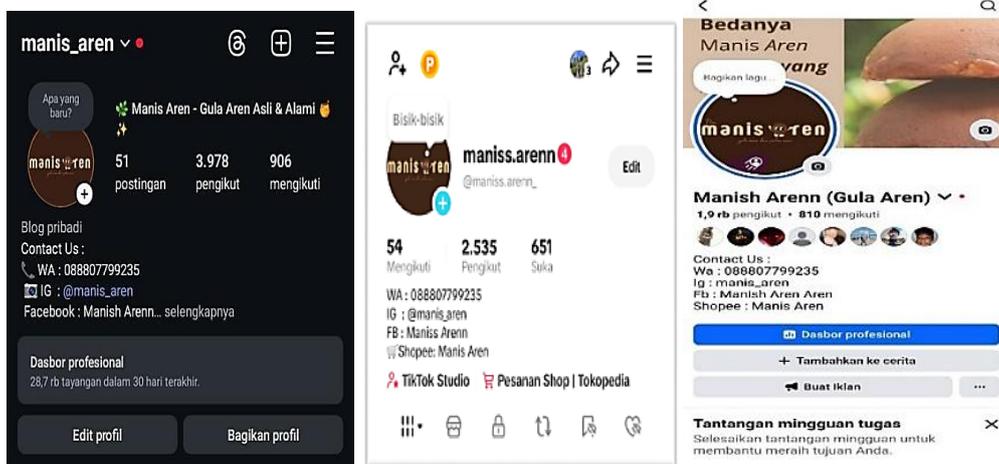


Figure 2. Account Profile Instagram, Tiktok and Facebook Manis Aren

b. Creating E-commerce Account

Aren Palm Sugar MSME in Dalig Raya utilizes various digital platforms, including Facebook, TikTok, Shopee, and Instagram, to expand the marketing of its local aren palm sugar. Shopee serves as the official e-commerce channel for “Manis Aren”, offering a professional visual identity, detailed product descriptions, high-quality photos, and promotional features such as Shop Vouchers, Free Shipping, Flash Sales, Shopee Live, Feeds, Videos, and Shopee Ads. Competitive pricing strategies and influencer partnerships are used to boost trust and sales.



Figure 3. Shopee Account Profile

c. Digital Marketing Content Design

The content is designed to be concise, relevant, informative, and attractively packaged to maintain audience engagement. The material includes TikTok and Instagram Reels videos, 60 seconds or less, educational content about the benefits of aren palm sugar, the production process, customer testimonials, and the advantages of local products. Each piece of content is accompanied by a clear call-to-action (CTA) to encourage interaction and purchases. This strategy aims to build brand awareness, increase audience interaction, and guide consumers through the customer journey, from awareness to purchase. With this approach, the aren palm sugar MSME in Dalig Raya is expected to be able to compete in the digital market through creative, relevant, and trend-driven content. This content serves as visual education for consumers, so they can understand and appreciate traditional processes that still uphold hygiene and quality standards, product type and varian content, product advantage content, benefit product content.



Figure 4. Content on Facebook and Instagram

Design content on Tiktok like production stages, packing, delivery process and education content. This educational content is designed to highlight the importance of consuming liquid palm sugar, specifically that produced by Manis Aren. With an attractive visual design, we showcase the various key health benefits of liquid palm sugar.

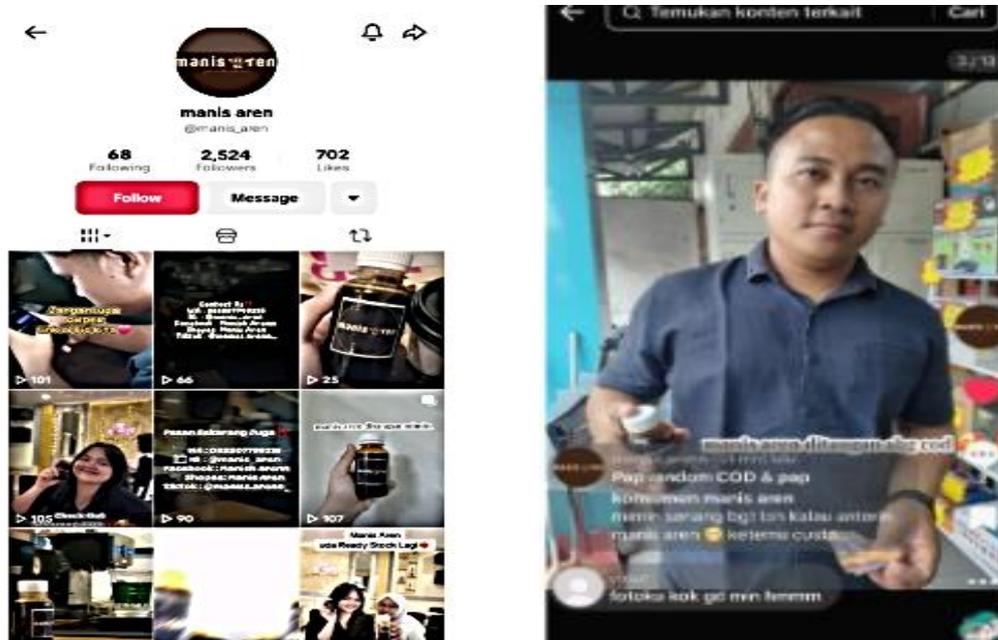


Figure 5. Content on Tiktok

Content On Shopee

The designed content consists of aesthetic product photos and cinematic videos. The content developed can cover the production process, packaging, product advantages, benefits, presentation methods, and customer testimonials about aren palm sugar from Dalig Raya. The product photos are designed to be as attractive as possible using professional photography techniques and adequate lighting.

d. Selection of Local Influencers

In its marketing strategy, Aren Palm Sugar MSME in Dalig Raya products have chosen to focus on collaborative strategies that are based on real partnerships in the field, especially with relevant local food and beverage industry players who already have their own consumers. In this collaboration, Aren Palm Sugar MSME in Dalig Raya is used as the main ingredient in bread-making, replacing artificial sweeteners with natural palm sugar.

Stage 3 Development

a. Development of Social Media and E-commerce Accounts

Social media development is actively carried out by managing the Facebook account through regular information and content updates. The account is updated daily with posts containing information about the product, the benefits of aren palm sugar, the production process, and purchase recommendations. This consistent updating aims to maintain high engagement and expand audience reach on the Facebook platform. Account development is carried out through account management, namely updating the latest information about the business and products. Each social media account must be updated daily. This is done to increase account engagement, which can help achieve a wider reach among its entire audience. This increase indicates that the content successfully attracted attention, sparked interaction, and boosted organic reach. Furthermore, innovations were made in the design of aren palm sugar packaging to make it more attractive, safe, and able to maintain product quality during storage and delivery.

b. Development of Content

Content development is carried out through a validation process with influencers to ensure message suitability, visual quality, and content suitability, so that perceptions between business actors and promoters are aligned. After validation, content revisions are made based on input from the supervisor. The types of content developed include Product Cinema Content, which displays products cinematically with storytelling to evoke audience emotions; Packaging Content, which emphasizes packaging design and materials to form a first impression; Promotional Content, which includes marketing strategies such as discounts, giveaways, and influencer collaborations; Deliver to Courier Content, which displays transparency in the shipping process to build trust; and Educational Content, which provides relevant information, tutorials, or tips to increase audience knowledge and loyalty. This approach is designed so that each piece of content is not only visually appealing, but also effective in conveying value and building relationships with the target market. At this stage, the content is validated to ensure that the narrative, visuals and messages are consistent with the product identity and acceptable to the general public.

Table 2. Result of Content Validation

No	Valid ator	Aspect				Average	Description
		Content Validity	Language Validity	Content Display	Outlook of Content		
1	Val 1	90,0%	86,7%	87,7%	88,3%	82,2%	Highly Feasible
2	Val 2	94,0%	86,7%	84,6%	93,3%	89,7%	Highly Feasible
3	Val 3	86,0%	90,0%	89,2%	93,3%	89,6%	Highly Feasible
Average		90,0%	87,8%	87,2%	91,7%	89,2%	Highly Feasible

All the aspects of feasibility that were considered in this study were judged to be highly feasible. As demonstrated in the table 2, the average overall assessment of the validators was 89.2%, categorising them as highly feasible. The mean material feasibility assessment score was 90.0%, indicating that the material is highly feasible. Similarly, the mean language feasibility score was 87.8%, suggesting that the material is also highly feasible. The mean content display feasibility score was 87.2%, and the mean presentation feasibility score was 91.7%, both of which also indicate highly feasibility.

c. Development of Product

Aren Palm Sugar MSME in Dalig Raya developed a liquid palm sugar product based on local ingredients, featuring innovative modern packaging that strengthens the brandimage. The clear bottle with a white cap and a professional, contrasting label are designed to highlight the product's authenticity while conveying a clean and elegant impression. This change not only enhances the aesthetic value but also builds consumer confidence in the product's quality and safety. The new packaging design is then utilized in promotional content on social media to expand market reach and attract buyers, enabling it to compete in the modern market without abandoning its traditional identity

d. Development of Marketing with Endorser

At this stage, the primary action to be taken is the selection of an influencer to promote the palm sugar product of Dalig Raya. The selected account is @mnrsggolivia. The account in question boasts a following of 167,800 individuals and has received 4,100,000 likes. This account is considered to be of considerable size, and based on reviews of previous posts, it is known that the account owner is a coffee lover. The collaborative process entails the evaluation of the product and the subsequent upload of a video. Furthermore, the video that has been uploaded to the business account will be reposted. The preliminary stage of this design process entails the provision of a concise guideline or briefing to the influencer, encompassing the salient points that are to be communicated, such as the benefits of palm sugar, the authenticity of the product, the appeal of the packaging, and ongoing special promotions. Subsequent to content creation, the influencer will dispatch a preliminary version in the form of a video or visual material for evaluation. This validation process is instrumental in ensuring that the presentation style remains authentic to the influencer's character, while aligning with the branding and objectives of the palm sugar product campaign from Dalig Raya.

Stage 4 Disseminate

a. Marketing through Social Media, E-commerce, and Digital Content

This activity involves the optimisation of various features available on social media platforms such as Instagram, TikTok, and Facebook. On a daily basis, the store's social media accounts are meticulously updated with engaging content, including image feeds, short video clips and reels, Instagram stories, and live streams. These updates are strategically designed to capture the audience's attention and foster direct engagement with potential consumers. The Manis Aren business social media account focuses on promoting authentic and natural palm sugar products, with its flagship product being a liquid form. There are two variants of the product: Brown sugar liquid in a small size of 150 ml and brown sugar liquid in a large size of 700 grams. Over the past three months, there have been a total of 50 content posts on the Manis Aren social media account. The account has attracted 3,981 followers and follows 909 other accounts on Instagram. The TikTok account has 2,524 followers, follows 68 other accounts, and has received 702 likes. On Facebook, the account has 1,900 followers and follows 810 other accounts. Manis Aren utilises various digital channels, including Instagram, Facebook, TikTok, and Shopee, which are interconnected across each social media platform. The WhatsApp app is used to facilitate interaction and transactions with potential customers and existing customers.

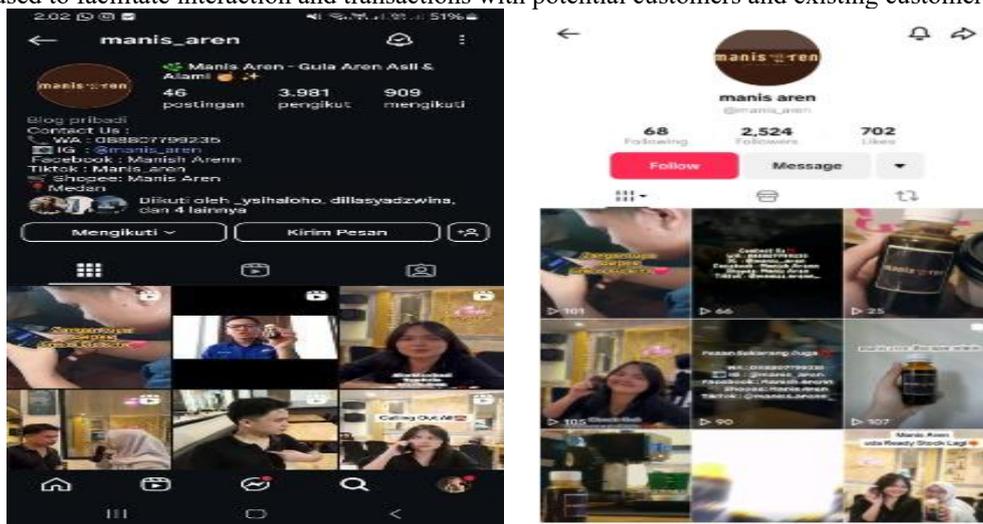


Figure 6. Activities on Social Media Account Aren Palm Sugar MSME in Dalig Raya

During the digital marketing implementation process, Palm Sugar MSME in Dalig Raya successfully established partnerships with other MSME engaged in the food and beverage sector. The collaborative partnerships that have been successfully established are with two business partners that already have networks and regular customers, namely the “YES bakery” located at Pukat VII Street Number 6, Medan. In this collaboration, aren palm sugar from Dalig Raya products are used as the main ingredient in the bread-making process, replacing artificial sweeteners with natural palm sugar. The second collaboration is with a beverage shop named Nolih Café, located at Tuamang Street Number 6, Medan. Palm Sugar MSME in Dalig Raya used as the preferred sweetener for various types of beverages, particularly coffee and milk based drinks. This expands the product's application while introducing palm sugar as a natural

sweetener to younger audiences and coffee enthusiasts increasingly aware of the importance of a healthy lifestyle.



Figure 7. Collaborating with Local MSME

In addition to managing social media accounts, Aren Palm Sugar MSME in Dalig Raya also manages every customer response and feedback received on these social media accounts.

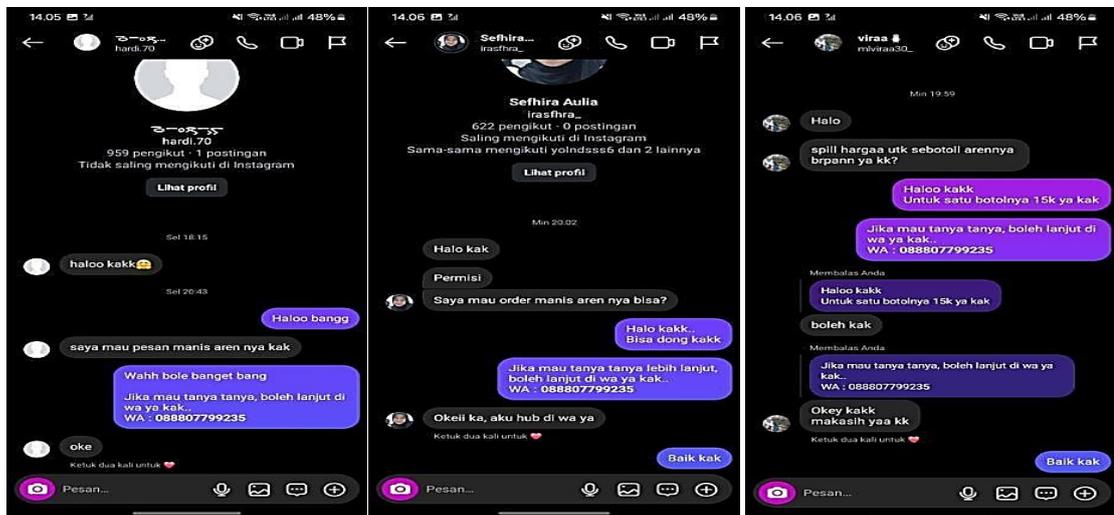


Figure 8. Interactions Occurring on Social Media Accounts

On its Shopee account, regularly updates with visual content and informative product descriptions, complete with special promotions and vouchers to attract buyers. Through this consistent and interactive approach, the store not only displays products as ordinary commodities, but also builds a strong, educational, and trustworthy brand narrative, thereby expanding its market reach and increasing

customer loyalty. The focus on the Manis Aren Shopee account is as an online sales channel for Dalig Raya aren palm sugar products. Account management is not limited to displaying products and prices but also includes routine activities such as updating the product catalogue, posting regular promotions on Shopee Feed, monitoring customer reviews, and responding quickly to customer messages. These activities are designed to build consumer trust and loyalty while maintaining active performance on the platform's algorithm. The team regularly updates product information, including descriptions, prices, stock availability, and product photos. Shopee Feed is also used as an additional promotional channel to share information such as discounts, collaborations with MSME, and brief educational content about the benefits of palm sugar. The Shopee Manis Aren account has 730 followers with 139 product views.

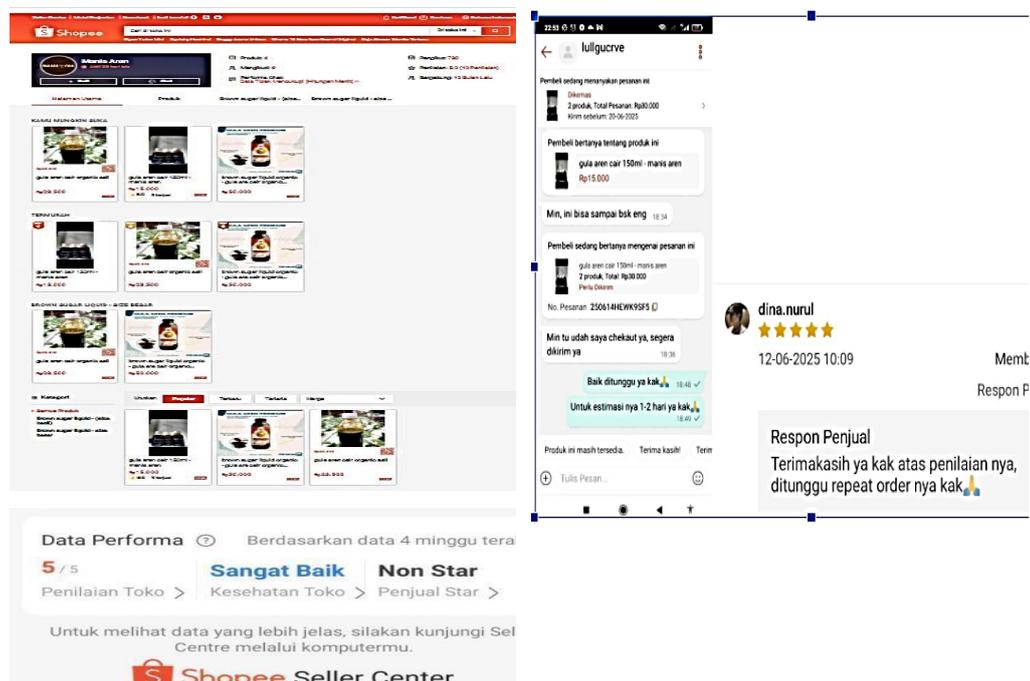


Figure 9. Marketing Activities on the Shopee Account

b. Evaluation Of Result

The following is an evaluation of the four social media/digital marketing platforms used by the Aren Palm Sugar MSME in Dalig Raya. After three months of implementing the digital marketing strategy through Facebook, Instagram, Tiktok, and Shopee, the MSME Manis Aren successfully has successfully gained a large number of followers.

Table 3. Performance of the Aren Palm Sugar MSME in Dalig Raya Digital Platform Account

Nb	Description	Facebook	Instagram	Tiktok	Shopee
1	Followers	1.900	3.973	2.535	730
2	Content	51	51	47	47
3	Number of Viewers	1.200	1.674	295	500

The following presents complete data on the performance of Manis Aren Dalig Raya's social media and e-commerce accounts. Manis Aren Dalig Raya has the most followers on Instagram, with 3,973 followers, and the most views on Instagram, with 1,674 views and then TikTok with 2,535 followers and Facebook accounts with 1,900 followers and 1,200 number of viewers. Based on the table above, it can be seen that in terms of the highest number of views on each business's social media accounts, Instagram and Facebook dominate. Considering the above evaluation results, Instagram and Facebook emerge as the most effective platforms for digital marketing of aren palm sugar in Dalig Raya. These two platforms enable businesses to build stronger engagement with customers through attractive digital content and more dynamic interactions. With its strong visual features, Instagram enables palm sugar businesses to convey marketing messages through engaging images and videos, as well as build engagement through comments and other interactive features. Facebook can reach a wider audience with its professional programme, thereby increasing the reach of business accounts that can enhance the virality of Dalig Raya's palm sugar products, especially with the rapidly evolving trends in content.

The effectiveness of the implementation of the development was evaluated using a quantitative approach by comparing income data before and after the implementation of digital marketing. The evaluation was conducted by comparing the average monthly income of each MSME actor in two periods: before the implementation of digital marketing (January–March 2025) and after the implementation of digital marketing (April–June 2025). Sales data was collected through direct interviews with business owners via direct sales and simultaneously through a recap of sales across all social media platforms and Shopee. To determine the impact of the implementation, a comparative descriptive analysis (before vs. after) was used, along with a paired sample t-test to assess the significance of income changes.

Table 4. Sales Data Before and After the Implementation of Digital Marketing at Aren Palm Sugar MSME in Dalig Raya

Month	Before (Rp)	After (Rp)
Jan	3.200.000	
Feb	2.800.000	
March	3.040.000	
Apr		3.900.000
May		4.350.000
Jun		4.810.000
Average	3.013.333	4.353.333
%	4.353.333 -3.013.333=1.340.000 (44, 47%)	

The following table shows the percentage change in income for the MSME Aren Palm Sugar before and after the implementation of digital marketing for palm sugar in Dalig Raya. The results of this study indicate that there has been an increase in the income of MSME Aren Palm Sugar in Dalig Raya following the implementation of digital marketing development through social media, digital content, endorsers, and Shopee e-commerce. It can be concluded that the target of increasing income within three months after the implementation of digitalisation has been successfully achieved by MSME Aren Palm Sugar in Dalig Raya, which were the subject of this study.

To ensure that the increase in income was not merely a random fluctuation, but rather the actual result of the intervention, a paired T-test was conducted after the data was tested for normal distribution.

Table 5. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Before & After	12	.865	.003

Based on the data in the Paired Sample Correlations table, it is known that the correlation coefficient value before and after the implementation of digital marketing is 0.865 at a significance level of 0.003. This means that since the significance level of 0.003 is less than the probability level of 0.005, it can be concluded that there is a very significant correlation or relationship between the changes in the two income levels, namely income before and after the implementation of digital marketing development through social media, digital content, endorsers, and e-commerce, amounting to 86.5%.

Table 6. Paired Samples Test

		Paired Differences							Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	
					Lower	Upper			
Pair 1	Before - After	-1.12262	249937.18	83312.396	-131474.8284	930510.827	-13.475	11	.000

Based on the data in the paired sample test table, it is known that the calculated t-value is -13.475. This result indicates that the average income of MSME Aren Palm Sugar actors in Dalig Raya before implementing digital marketing was lower than after implementing digital marketing. With a significance level (Sig) of 0.000 and degrees of freedom (df) of 11, since the significance level is less than 0.05, it can be concluded that there is a significant difference in income before and after the implementation of digital marketing using social media, digital content, endorsers, and e-commerce for the MSME Aren Palm Sugar in Dalig Raya, Simalungun District.

3.2. Discussion

Evaluations show that each platform contributes differently depending on its audience characteristics, content format, and ability to generate sales conversions. Instagram and Facebook emerge as the most effective platforms for digital marketing of aren palm sugar MSME in Dalig Raya. These two platforms enable businesses to build stronger engagement with customers through attractive digital content and more dynamic interactions. With its strong visual features, Instagram enables palm sugar businesses to convey marketing messages through engaging images and videos, as well as build engagement through comments and other interactive features. Facebook can reach a wider audience with its professional programme, thereby increasing the reach of business accounts that can enhance the virality of Dalig Raya palm sugar products, especially with the rapidly evolving trends in content. Research by Ni Putu

Nita Anggraini et al. (2022), who stated that as many as 54% of MSME are increasingly adapting to using social media to increase sales [8]. Furthermore, the study also revealed that Facebook is the most powerful medium in business practices because it provides various promotional facilities that are easy to use by MSME [9][10] This finding is very relevant to the conditions experienced by Manis Aren, where utilizing Facebook as the main marketing platform provides tangible results in reaching a wider audience [11].

The evaluation of the community's response to the Palm Sugar product in Dalig Raya can be seen through the responses given by the community in product reviews on social media. In general, the community has given a positive response to the Palm Sugar product content in Dalig Raya that has been uploaded, with many comments and reviews showing consumer satisfaction. As explained by [12], positive reviews from consumers can build trust among new customers and directly influence purchasing decisions. A similar point was made by [13], who stated that product reviews and customer ratings on TikTok Shop significantly influence consumer behaviour when purchasing a product. Instagram, with its engaging short-form video format, allows Aren Palm Sugar MSME in Dalig Raya to creatively and interactively showcase their products, thereby capturing audience attention more quickly ([9], [14], [15]). Instagram is also a key focus in developing palm sugar digital marketing strategy MSME in Dalig Raya, particularly in terms of content. This is evident from the performance results of the second platform, which performed well in this study. The Palm Sugar MSME in Dalig Raya received the most interactions using Instagram. Various formats such as videos, photos, and posters were used to convey. The effectiveness of Instagram as a digital marketing platform has been supported by various studies. Research conducted by [10], [16] shows that Instagram advertising is highly effective in supporting digital marketing strategies. This research reveals that Instagram has advantages in building customer interaction, increasing brand awareness, and driving purchasing decisions through engaging and interactive content.

This study found that the Shopee platform is an effective sales channel. This can be seen from the number of sales on Shopee and the performance graph of the Manis Aren Dalig Raya Shopee account, which continues to increase. This shows that Shopee is the most effective platform in terms of direct sales conversion [17]. The development of Aren Palm Sugar MSME from Dalig Raya marketing on the Shopee platform shows a growth trend, both in terms of store visit traffic, purchase frequency, and positive reviews provided by customers. Shopee simplifies the payment and delivery process, thereby providing a more complete and secure shopping experience for consumers [18], [19]. Product reviews and ratings play a significant role in influencing potential new buyers. This aligns with the findings of [20], [21] who noted that platforms like Shopee, which provide statistical data on product performance, help MSME evaluate their sales strategies accurately and measurably.

Additionally, another study by [16] compared the effectiveness of marketing between Facebook and Instagram, finding that Instagram is more effective in terms of brand engagement and sales conversion. Firmansyah & Pratama [22], platforms that have a direct transaction system and can be integrated with visual content promotions will be superior in the context of MSME because they are able to reach and complete the purchasing process in a single system. The implementation of a digital marketing strategy through the Shopee platform for the MSME palm sugar brand Manis Aren from Dalig Raya showed significant results in increasing sales and strengthening the brand. Before the implementation of digital marketing, sales were still conventional and limited to the surrounding area. However, after the Shopee account was activated and professionally managed, there was a significant increase in sales volume. This is in line with the finding that a professionally managed e-commerce account can increase buyer trust and directly influence purchasing decisions [23].

The results of this study indicate that there is a difference in income before and after the implementation of digital marketing using social media, digital content, endorsers, and e-commerce in MSME Aren Palm Sugar business in Dalig Raya, Simalungun Regency. Based on the data analysis in this study, it was found that TikTok is the most effective platform for reaching a wide audience, Instagram excels in building brand image and customer relationships, and Shopee is the most effective platform for generating direct sales. Therefore, the ideal digital marketing strategy for Aren Palm Sugar MSME in Dalig Raya is to synergistically combine these three platforms: building awareness on TikTok, strengthening branding and communication on Instagram, and directing transactions to Shopee [10], [24], [25]. This means that Aren Palm Sugar from Dalig Raya businesses need to adopt a more integrated marketing strategy by combining various digital platforms. In addition to TikTok, using Instagram and Facebook to reach a broader and more diverse audience can enhance product visibility. The use of paid advertising on these platforms can also help reach more specific target markets, including international consumers [26], [27]. In other words, a multi-channel approach in digital marketing can enhance campaign effectiveness and expand reach. The use of paid advertising on these platforms can also help reach more specific target markets, including international consumers [19], [28], [29]. Educational content packaged in an engaging manner can build brand credibility and increase consumer loyalty [30]. Expanding collaboration with more local MSME such as cafes, cake shops, or other healthy food/drink producers, to create jointly processed products or cross-promote. Product innovation is crucial to maintaining relevance in a competitive market [31]. Implement a more structured customer relationship management system, for example, by utilizing direct messaging features on social media or WhatsApp Business for fast responses and personalized interactions [32]. One of the main challenges faced is how to build strong branding so that the product is better known to the wider public and able to compete in the international market [33]. To achieve this goal, a more focused and innovative digital marketing strategy is needed, including optimizing the use of social media, improving content quality, and utilizing e-commerce as a distribution channel.

4. Conclusion and Recommendation

4.1. Conclusion

Based on the results of the development and implementation of digital marketing strategies through Facebook, Instagram, TikTok, and Shopee, and Endorser it can be concluded that the transformation from conventional to digital marketing methods significantly increased product visibility, interaction, and sales. Facebook played a crucial role in establishing two-way communication, providing education, and strengthening customer trust, although its sales contribution was still small compared to other platforms. Instagram was effective in building a visual brand image and emotional connection with consumers through interactive visual content. TikTok served as the medium with the widest audience reach, generating high brand awareness through creative content, music trends, and storytelling, although the majority of sales conversions still occurred on Shopee. Shopee was the most effective direct sales channel, contributing the most revenue thanks to its promotional features, positive reviews, and ease of transactions.

4.2. Recommendation

These four platforms complement each other. Instagram and Facebook excel at attracting attention and building interest, Tiktok supports consumer communication and education, and Shopee ensures sales transactions occur. This integrated approach demonstrates that a consistent, creative, and responsive digital marketing strategy can be key to MSME growth. By strengthening content quality, utilizing consumer data, and innovating products and packaging, Aren Palm Sugar MSME in Dalig Raya product has the opportunity to expand its market, increase competitiveness, and develop to the national and even international level.

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