

## ***Trends and Digital Innovation: Analyzing the Impact of E-Commerce and Social Media on the Growth of Handicraft MSMEs***

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### **Abstract**

*Handicraft MSMEs in Belitung Regency face challenges in adopting digital technology, even though their products have high cultural value. This study analyzes the use of e-commerce and social media by MSMEs to market their products and explores support that can increase digital capacity, such as digital literacy training and infrastructure improvements. The methods used include interviews with local handicraft MSME practitioners and a systematic review using PRISMA analysis. The results show that digitalization opens up opportunities to expand markets and increase income, but obstacles such as low digital literacy, limited internet connectivity, and global competition are still significant. Therefore, a strategy is needed that integrates the use of technology with increasing human resource capacity and infrastructure. These findings provide input for stakeholders, entrepreneurs, and policy makers to support the growth of handicraft MSMEs through sustainable and inclusive digital transformation.*

**Keywords:** *Micro Small and Medium Enterprises; Handicrafts; E-commerce; Social media; Digital innovation.*

### **Abstrak**

Usaha Mikro Kecil dan Menengah (UMKM) kerajinan tangan di Kabupaten Belitung menghadapi tantangan dalam mengadopsi teknologi digital, meskipun produk mereka memiliki nilai budaya tinggi. Penelitian ini menganalisis pemanfaatan *e-commerce* dan media sosial oleh UMKM untuk memasarkan produk serta mengeksplorasi dukungan yang dapat meningkatkan kapasitas digital, seperti pelatihan literasi digital dan perbaikan infrastruktur. Metode yang digunakan meliputi wawancara dengan pelaku UMKM lokal dan kajian sistematis menggunakan analisis PRISMA. Hasil menunjukkan bahwa digitalisasi membuka peluang memperluas pasar dan meningkatkan pendapatan, namun hambatan seperti rendahnya literasi digital, konektivitas internet yang terbatas, dan persaingan global masih signifikan, sehingga diperlukan strategi yang mengintegrasikan pemanfaatan teknologi dengan peningkatan kapasitas sumber daya manusia dan infrastruktur. Temuan penelitian ini memberikan masukan bagi pemangku kepentingan, pengusaha, dan pembuat kebijakan untuk mendukung pertumbuhan UMKM kerajinan tangan melalui transformasi digital yang berkelanjutan dan inklusif.

**Kata Kunci:** *Usaha Mikro Kecil dan Menengah; Kerajinan Tangan; E-commerce; Media Sosial; Inovasi Digital.*

### **1. Introduction**

The rapid growth of digital technologies has changed how enterprises, especially Micro, Small, and Medium Enterprises (MSMEs) in function and interact with customers. This is particularly true for the handicraft industry, where established enterprises are increasingly investigating new digital platforms for marketing, operation [1]. It is impossible to overstate the role that digital technologies play in the expansion of MSMEs, particularly in areas like Belitung, which are renowned for their traditional crafts and rich cultural legacy. Handicraft MSMEs in Belitung Regency may reach a wider audience, interact with local and worldwide markets, and display their distinctive products thanks to the incorporation of digital technologies. Understanding how MSMEs in the handicraft industry use social media and e-commerce platforms is essential in this digital age to guarantee their long terms growth and market presence.

Many handicraft MSMEs in Belitung Regency were mostly limited to selling locally or through conventional retail channels prior to the internet era. Small-scale artists found it challenging to compete with larger manufacturers or mass-produced goods as a result of this limitation on their customer base and growth potential [2]. The marketing dynamics for these enterprises have changed significantly as a result of the rise of social networking sites like facebook, tiktok, and instagram, international marketplaces like etsy, and e-commerce sites like tokopedia and bukalapak [3]. These platforms allow handicraft business owners a previously unheard of opportunity to promote their distinctive goods without having to make large infrastructure investments. These businesses can tell their brand stories, communicate with customers directly, and get over geographic restrictions by utilizing digital marketing techniques, opening up previously unreachable growth prospects.

Previous studies have explored the role of digital technologies in handicraft MSMEs, with a focus on how e-commerce and social media can provide market expansion opportunities. Research has indicated that these platforms have transformed marketing strategies and improved customer reach for businesses worldwide [1, 4, 5]. However, many handicraft MSMEs in the region confront major obstacles to successful adoption, despite the enormous potential that digital marketing offers. One of the main issues is low digital literacy, as many local MSME craftworkers and small business owners are not familiar with digital marketing techniques or e-commerce software [6]. Furthermore, access to technology and unstable internet infrastructure continue to be problems, particularly in more rural places. Additionally, small enterprises frequently find it difficult to maintain competitive pricing and quality control, especially when up against imported or mass produced goods. Online market saturation presents another difficulty, making it more difficult for smaller enterprises to differentiate themselves from a crowded field of rivals [5]. Many handicraft MSMEs run the risk of being eclipsed by bigger, more well-known brands or enterprises with more extensive marketing expenditures if they do not receive the proper direction and assistance. Although most of these issues have been addressed in prior research, there are still gaps, especially in terms of understanding the unique challenges faced by MSMEs in the Belitung craft industry and how local support systems can improve their digital capabilities.

Through interviews and systematic review of the PRISMA analysis, this study aims to fill this gap by offering a thorough analysis of how MSMEs in Belitung Regency's handicraft industry currently use social media and e-commerce platforms for marketing and sales. In order to contribute MSMEs succeed in the digital economy, the study will also look at the support systems that can be put in place to raise digital literacy, remove technological obstacles, and upgrade infrastructure. The study will also look at how local handicraft MSMEs may get past obstacles like global competition and market saturation.

In addition to highlighting the main challenges these handicraft MSMEs encounter while implementing and using digital tools, the primary objective of this study is to offer insights into the tactics that have been effective in raising the sales and visibility of handicraft MSMEs in Belitung. In an increasingly digitalized global economy, this study will add to the continuing conversation about how MSMEs may use digital technology to boost competitiveness and sustain growth. The following research questions are represented:

- 1) How do MSMEs in the handicraft sector of Belitung Regency utilize e-commerce platforms and social media to market and sell their products?
- 2) What support mechanisms, such as digital literacy training and infrastructure improvements, can be implemented to improve the digital capabilities of handicraft MSMEs in Belitung Regency?
- 3) What are the main challenges faced by handicraft MSMEs in adopting and utilizing digital tools for marketing and sales?

## **2. Methodology**

The study used a mixed approach that combines interviews, and systematic reviews using the PRISMA analysis [7] to achieve comprehensive results. Of course, we conducted interviews with local handicraft MSME practitioners and the MSMEs office in Belitung Regency to understand how to market and sell their products through e-commerce platforms and social media, supporting mechanisms to improve the digital capabilities of handicraft MSMEs in Belitung Regency, and their main challenges. Meanwhile, the systematic review provides a broader perspective by synthesizing the findings of related studies, offering valuable

recommendations for stakeholders, local MSMEs entrepreneurs, and policymakers in Belitung Regency.

These articles are collected through acquisition from the scopus database with a special focus on handicrafts, here is the query string from Scopus in searching: Step 1: (TITLE-ABS-KEY (digital trends) OR TITLE-ABS-KEY (digital) OR TITLE-ABS-KEY (innovation)) AND (TITLE-ABS-KEY(e-commerce) OR TITLE-ABS-KEY(social media) OR TITLE-ABS-KEY (handicraft marketing) OR TITLE-ABS-KEY(handicraft)). Step 2: (TITLE-ABS-KEY(digital trends) OR TITLE-ABS-KEY (digital) OR TITLE-ABS-KEY (innovation)) AND (TITLE-ABS-KEY (e-commerce) OR TITLE-ABS-KEY (social media)) AND (TITLE-ABS-KEY (handicraft marketing) OR TITLE-ABS-KEY (handicraft)). Through the scopus query string, Figure 1 shows that in step 1 we obtained 41231 research articles. Then in step 2 for articles that were considered unrelated to digital innovation focusing on handicrafts in the research focus were removed, and only those included in our research criteria were finally analyzed with full text which included 26 articles according to the research needs.

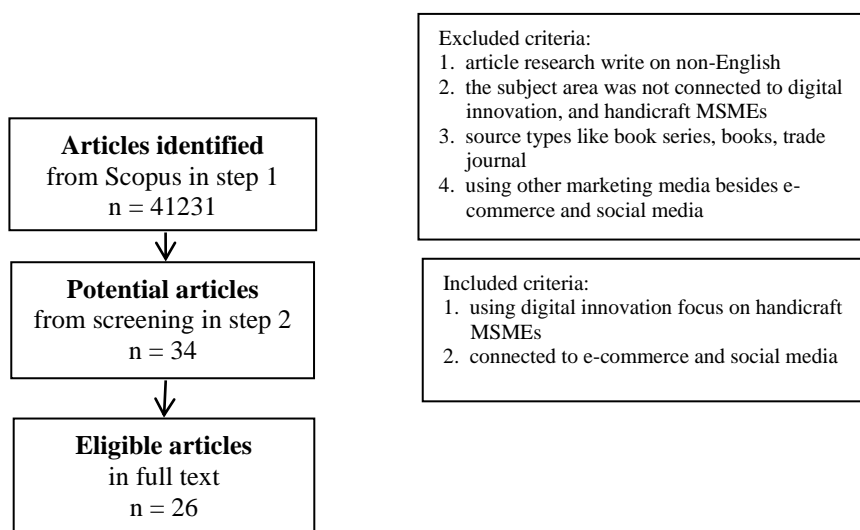


Figure 1. PRISMA flowchart diagram

The combination of interviews and systematic review will provide a strong framework in ensuring that research findings are based on reliable and high quality sources. This approach allows the research to answer the reality that occurs with a high level of insight and trustworthiness, offering valuable perspectives on the effectiveness of digital marketing strategies for handicraft MSMEs in Belitung Regency.

### 3. Results

Interviews conducted with local handicraft MSME practitioners and MSMEs office in Belitung Regency, which revealed the important role of e-commerce platforms and social media in increasing sales and expanding the reach of the local handicraft market. These platforms have proven to be important in promoting products to a global consumers for handicraft MSMEs in Belitung Regency, such as Galeri KUMKM Belitung, Arsyanda craft, Bepulin Belitung, Sepiak Belitong, Homemade Buatanque, Batu Satam Belitong, and others, have effectively utilized digital tools to reach new consumers or customers. One prominent case is Bepulin Belitong which we interviewed with Mrs. Nurul, a local handicraft MSME practitioners known for its typical Belitung batik clothing, which has succeeded in marketing its products to international clients. Handicraft MSMEs in Belitung Regency were able to exhibit their products internationally through a number of events, including the G20 Development Ministerial Meeting in 2022, the 7<sup>th</sup> High-Level Task Force on ASEAN Community Post 2025 Vision (HLTF-ACV) in 2023, and Belitung EXPO 2024. Despite this, a lot of overseas buyers kept purchasing products after the international show because online shopping was so convenient. This demonstrates how social media and e-commerce may offer ongoing access to global markets, highlighting the necessity of a robust online presence in the regional craft industry.

Thus, despite the positive impacts of e-commerce and social media, there are several challenges faced by local handicraft MSME practitioners in Belitung Regency in maximizing the use of these platforms. Interviews with officials from the MSMEs office, highlighted the need for further support mechanisms to improve the digital capabilities of these handicraft MSMEs. One of the main recommendations is the provision of digital literacy training tailored to the specific needs of local MSME craftworkers. This will help them understand how to use online platforms effectively for marketing, managing transactions, and increasing their online visibility. In addition, improving infrastructure is essential to facilitate better access to technology, including internet connectivity and digital devices. Training programs and infrastructure improvements are important steps in empowering local MSME craftworkers to take full advantage of digital tools and expand their market presence. These mechanisms are critical to the sustainable growth of handicraft MSMEs in Belitung Regency, ensuring they can remain competitive in the growing digital economy.

Handicraft MSMEs in Belitung Regency should not be limited to digital skills and infrastructure. Many local handicraft MSME practitioners, one of whom is Mr. Firman who has dedicated himself for more than 30 years, market and sell Batu Satam (a typical stone from Belitung) to local and national communities and even internationally traditionally through his gallery by relying on traditional sales methods rather than digital platforms. In addition to Satam stone, he also sells other products such as batu satam, kayu simpur laki, and kayu cendana, directly from his gallery. Here we see that although these products have significant cultural value, the lack of technological expertise and digital marketing strategies limits their ability to reach a wider market. These challenges underscore the gap between the valuable knowledge of local handicraft MSME practitioners and the digital tools needed to scale their businesses. Interview findings underscore the need for strategies to address these barriers, including practical solutions to equip local handicraft MSME practitioners with the digital skills they need and increase their access to digital markets.

Hence, to meet the needs of local, national, and international markets, the PRISMA analysis shown in Table 1, Table 2, and Table 3 will systematically analyze trends in the handicraft MSMEs sector, mechanisms for improving digital capabilities, and the main challenges faced by local handicraft MSMEs.

### **3.1. How do MSMEs in the handicraft sector of Belitung Regency utilize e-commerce platforms and social media to market and sell their products?**

The use of e-commerce platforms provides a great opportunity for Belitung MSMEs to sell their handicraft products globally. Belitung woven textiles, which are famous for their beautiful motifs and manufacturing techniques, can be easily sold through platforms such as etsy, amazon handmade, or even personal online stores managed through shopify or WooCommerce [8]. In setting up an online store, it is important for handicraft MSMEs to ensure that the product description is clear, includes information about the material, size, and manufacturing process, and provides high-resolution product images that show the details of the beautiful weave. MSMEs must also set competitive prices to attract buyers, both in the domestic and international markets [9, 10]. Optimizing product listings with relevant keywords, such as "Handwoven Textiles Indonesia" or "Traditional Indonesian Weaving", will help improve search engine rankings on e-commerce platforms, making products easier to find by customers looking for similar items. E-commerce allows handicraft MSMEs to reach international markets without having to have a physical store, and to organize efficient international payment and shipping systems.

One of the best ways to advertise handicrafts from Belitung MSMEs, like wood carvings, is through social media marketing, where entrepreneurs may showcase their items' features and distinctiveness with high-quality product photos and videos on social media sites like facebook, instagram, and pinterest [4]. Because social media platforms are so widely used, they also offer a chance to reach a global audience and employing pertinent hashtags, such #Handcrafted, #IndonesianArt, or #WoodenCarvings, can boost exposure and assist prospective buyers in locating the goods they want. Handicraft MSMEs can also interact with their audience by holding competitions, live streaming, or showcasing behind-the-scenes videos that demonstrate the wood carving process. According to [11] that handicraft MSMEs may improve brand image, foster more intimate relationships with consumers, and boost loyalty by interacting directly with their followers. MSMEs may increase their visibility and offer their

products to both domestic and foreign markets by using consistent and well-planned social media marketing.

The digital marketing strategy used includes storytelling about Belitung's local traditions, as well as the use of hashtag campaigns that help reach a wider and more segmented audience. Digital advertising that emphasizes the sustainability and creativity of art products is an effective strategy to attract consumers who care about environmental issues, also includes collaboration with fashion influencers, as well as exclusive offers or discounts for social media followers and sharing cultural stories and the process of making products also includes the use of customer testimonials, unboxing videos, and seasonal offers that attract the attention of potential buyers [6].

The following is the information we obtained from the local handicraft MSME practitioners and MSMEs office in Belitung Regency that has made innovation through products made by hand which describes their local skills and creativity:

### **1) Woodcraft**

Belitung Regency has a high artistic value of wooden craft products and this reflects the extraordinary richness of local culture, because MSMEs in this sector makes various items such as wood carvings, furniture, and decorative items such as key chains inspired by local flora, fauna, and cultural symbols. By using raw wood materials sourced from the surrounding nature, this product is an attraction for both domestic and international markets [3, 4]. So we believe that unique works that include nature will add value to wood craft lovers, especially our opportunities to see not only local consumers but also foreign tourists through e-commerce and social media platforms to facilitate and reach wider buyers. In addition, exhibiting unique designs through high-quality photos that depict the details and beauty of the brand's work is very important in wood art and can be conveyed appropriately to buyers.

### **2) Weaving and Textiles**

Belitung woven crafts such as mats, bags, clothing, and accessories, are made from natural materials such as rattan, palm leaves, and cotton, where these products combine traditional and contemporary designs, which often contain deep cultural meanings. Belitung woven crafts, such as mats, bags, clothing, and accessories, are made from natural materials such as rattan, palm leaves, and cotton, where these products combine traditional and contemporary designs, which often contain deep cultural meanings. Each strand of weaving not only reflects the handicraft skills of local handicraft MSME practitioners, but also depicts Belitung's rich cultural heritage. Through each work, the local handicraft MSME practitioners convey local values, such as wisdom in utilizing natural resources sustainably. In addition, revealed [12] that these products are increasingly popular because of their unique and functional appeal, fitting the needs of the modern market without sacrificing tradition.

### **3) Bamboo Crafts**

Bamboo craft products in Belitung, which include bamboo baskets, furniture, lamps, and other home decorations, demonstrate how local materials can be processed into environmentally friendly and sustainable products. Bamboo is a strong, lightweight, and easily available material, making it the primary choice in making these craft products. In addition, bamboo has the advantage of growing quickly, making it a rapidly renewable resource that does not damage the environment [13]. The process of making bamboo crafts also involves traditional techniques that have been passed down from generation to generation, maintaining a balance between cultural preservation and modern innovation. These bamboo craft products not only offer aesthetic value, but also provide practical and eco-friendly solutions to everyday needs, making them increasingly popular in both domestic and international markets.

### **4) Pottery and Ceramics**

Pottery and ceramic crafts in Belitung have their own uniqueness, using traditional techniques in making products such as pots, vases, bowls, mugs, and statues. Each pottery product is made by hand, through a process of selecting quality clay which is then manually shaped before being heated in the oven to get perfect results. This technique not only maintains the quality and strength of the product, but also produces a distinctive texture and pattern, reflecting the local culture of Belitung. The motifs on ceramics are often inspired by the

surrounding nature, such as flora, fauna, and deep cultural symbols [4]. Potters also combine modern elements in their designs, creating an interesting blend of tradition and innovation. These pottery products are increasingly in demand because of their beauty which can be used as decorative elements or everyday functions. These crafts not only offer aesthetic value, but also contain strong historical and identity values, making them an attraction for tourists and collectors.

### 5) Shell and Coral Crafts

Craft products from shells and corals in Belitung include jewelry such as earrings, necklaces, bracelets, and other decorative items made from natural materials found in the surrounding sea. These products not only offer visual beauty but also illustrate the depth of Belitung's maritime culture. These crafts illustrate the close relationship between the Belitung people and the sea, which has been a source of life and inspiration for many generations. Each piece of jewelry and decoration is often decorated with details that reflect marine life, such as the shape of shells, starfish, or corals that are valued in local culture [2]. Local shell and coral craft MSME practitioners in Belitung utilize high hand skills to produce elegant works, while still maintaining the natural essence of the materials used. These products are also increasingly in demand as a symbol of sustainability and love for the marine environment, as well as being a typical souvenir that is much sought after by tourists visiting Belitung.

### 6) Stone and Metalwork

Stone and metal crafts in Belitung include products such as metal statues, stone carvings, jewelry, and tableware. We can see the appearance of Belitung city in the middle of the city with "Satam Stone" which is the icon of the Regency Capital. Each product is made with high skills, using local materials that reflect Belitung's cultural heritage. Stone and metal local handicraft MSME practitioners in Belitung often utilize materials such as granite, natural stone, and metal that are easily found around the island. With techniques that have been passed down from generation to generation, they create works of art that are not only functional but also full of aesthetic meaning. The resulting metal carvings and statues often depict themes of nature, daily life, or local myths that reflect local cultural wisdom. Jewelry and tableware made of metal also show long-lasting quality and beauty, making them a popular choice in both local and international markets [5, 14]. To their artistic value, these stone and metal craft products are also considered symbols of the resilience and strength of Belitung's nature. With attention to detail and authenticity, stone and metal crafts in Belitung continue to develop and are known as unique and valuable works of art.

Meanwhile, here is the MSMEs handicraft trend that strengthens it in Table 1:

**Tabel 1. Local handicraft MSMEs trends**

Category	Products	Description	References
Woodcraft	Wooden carvings, keychains, furniture, decorative goods	Carved wood pieces are inspired by local flora, fauna, or cultural symbols. Including home decorations and functional goods such as chairs or tables made of wood that originate locally.	[3, 4]
Weaving and Textiles	Woven mats, bags, clothes, hats, scarves	Handwoven products made from natural fibers like rattan, cotton, and palm leaves. These items often have traditional or contemporary designs that serve both functional and decorative purposes.	[2, 12]
Bamboo Crafts	Bamboo baskets, furniture, lamps, home décor	Eco-friendly and durable products made from bamboo. Including baskets, storages, and home furnishings, highlighting the use of sustainable local materials.	[13, 15]

Category	Products	Description	References
Pottery and Ceramics	Clay pots, vases, bowls, mugs, figurines	Handmade pottery designed using traditional techniques. These items serve both practical and aesthetic purposes, showcasing the skills of local MSME craftworkers	[4, 14]
Shell and Coral Crafts	Jewelry (earrings, necklaces, bracelets), decorative items	Handmade jewelry and decorative items made from corals, shells, and stones found in the area. These items usually reflect Belitung's maritime culture.	[2, 15]
Stone and Metalwork	Stone carvings, metal sculptures, jewelry, eating utensils	Artwork and jewelry made from locally available metals and stones. This includes jewelry with intricate designs, as well as decorative figurines.	[5, 14]

### **3.2. What support mechanisms, such as digital literacy training and infrastructure improvements, can be implemented to improve the digital capabilities of handicraft MSMEs in Belitung Regency?**

#### **1) Digital Literacy Training**

Digital literacy training is very important for handicraft MSMEs in Belitung Regency so that they can utilize digital technology to market their products. In this training, MSMEs will be taught how to manage e-commerce platforms such as etsy and amazon, which can expand their market reach. In addition, they will also learn how to use social media, such as instagram and facebook, to promote products effectively. Digital content creation training is also very useful, considering that attractive visuals greatly influence online consumer purchasing decisions [11, 16]. Through content such as product photos and videos, it can more easily attract customers' attention. Therefore, training that focuses on the use of digital platforms and the creation of attractive content is very necessary to support the success of handicraft MSMEs in this digital era.

The benefits of utilizing digital marketing for handicraft MSMEs in Belitung Regency are very important, including increasing product sales through more effective and efficient marketing. By using digital platforms, MSMEs can reach a wider and more targeted audience, increasing the visibility of their products in local and global markets. Additionally, digital technology also provides opportunities for MSMEs to build confidence in managing their businesses, especially in aspects of marketing management, transactions, and communication with customers [6, 17, 18]. The use of social media and e-commerce helps MSMEs expand their market reach digitally, allowing them to sell products to various regions, even to international markets, which previously may not have been reached by traditional marketing methods.

#### **2) Internet Access Program**

Fast and stable internet access is a basic need for handicraft MSMEs in Belitung Regency to be able to run their business operations online. This internet access program aims to provide reliable connections in strategic locations, such as MSMEs centers and business community meeting areas. With free WIFI, they can access e-commerce and social media platforms without interruption, which is very important for processing transactions and interacting with customers. In addition, building a training center with a fast internet connection will support digital learning for handicraft MSMEs, allowing them to take online training or courses on digital marketing or online store management. Thus, this internet access program serves as a foundation for MSMEs to develop their businesses in the digital world. The benefits of using digital technology including 5G mobile for them also include the ability to ensure that online business operations run smoothly [19]. With the support of e-commerce and social media platforms, it can manage inventory, process orders, and ship products efficiently without any obstacles. In addition, digitalization accelerates the product registration process on various online platforms, allowing their products to be immediately available to consumers [4, 20]. This

convenience also speeds up interaction with customers, both in terms of responding to questions, providing information about products, and handling complaints, which in turn can increase customer satisfaction and strengthen long-term relationships with the market.

### 3) Digital Marketing Training

Digital marketing training is essential to help handicraft MSMEs optimize the use of online marketing tools such as Search Engine Optimization (SEO), paid advertising, and email marketing. In SEO training for e-commerce, local handicraft MSME practitioners will learn how to optimize their online stores to be more easily found on google search engines. Training on paid advertising on platforms such as google ads and face book ads will provide them with knowledge on how to target the right audience and increase the visibility of their products [6]. Moreover, training on email marketing allows them to build relationships with customers by sending relevant emails, such as special offers and product updates. All of these trainings provide the skills needed to reach a wider market and increase sales of handicraft products effectively.

The benefits of utilizing digital marketing for handicraft MSMEs in Belitung are very pronounced in terms of increasing the online visibility of their products [21]. By utilizing e-commerce platforms and social media, unique handicraft products can be more easily found by consumers, both in local and international markets. This not only increases brand awareness but also accelerates the market penetration process, allowing handicraft MSMEs to reach a wider and more diverse audience. Additionally, digital marketing can attract new customers that were previously unreachable through conventional marketing methods, opening up new opportunities for faster business growth and expansion.

### 4) Technology Infrastructure Improvement

To support the progress of handicraft MSMEs in Belitung Regency in using digital technology, it is important to provide the right technological infrastructure, including hardware and software. Providing better hardware such as computers or smartphones will help handicraft MSMEs that previously had difficulty purchasing their own devices. With more sophisticated devices, they can manage their businesses more efficiently, including in terms of bookkeeping and inventory management [1]. Then, providing access to management software for inventory, bookkeeping, and digital marketing will greatly assist them in running their businesses in a more organized manner. This technological infrastructure also includes cloud-based software that allows them to manage their online stores and business transactions without geographical limitations. By improving this infrastructure, handicraft MSMEs in Belitung Regency will be better prepared to face digital challenges and can significantly increase their productivity [22].

The benefits of utilizing digital technology for handicraft MSMEs in Belitung Regency are increased operational efficiency through the use of more sophisticated tools. By adopting various digital platforms, such as inventory management systems, accounting software, and order monitoring applications, it can optimize their business processes, reduce manual errors, and speed up workflows. In addition, digitalization makes it easier to manage business and transactions in a more organized manner. The process of recording transactions, managing stock, and communicating with customers becomes more structured, allowing MSMEs owners to focus on product development under the security and marketing strategies, as well as increasing overall business productivity [19]. We can analyze the mechanism to improve digital capabilities of handicraft MSMEs in Belitung Regency in Table 2:

**Tabel 2. Mechanism to improve digital capabilities of handicraft MSMEs**

Category		Description	Implementation	References
Digital Training	Literacy	Training to improve the understanding and skills of MSMEs in using digital technology, e-commerce platforms, social media, and other digital marketing tools.	1. E-commerce Platform Usage Training: Training to understand how to manage an online store on etsy, amazon, or other e-commerce platforms.	[6, 11, 16-18]
			2. Social Media Training:	



Category	Description	Implementation	References
Internet Program	Access	Teaching the use of social media for marketing, such as instagram and facebook.	[19, 20]
		3. Digital Content Creation Training: Helping MSMEs create attractive visual content (photos, videos) for their products.	
Digital Training	Marketing	1. Free WIFI at handicraft MSMEs Locations: Provide high speed internet connections in strategic areas such as MSME centers or business community meeting places.	[6, 21]
		2. Training Centers with Fast Internet Connections: Build digital training centers with fast internet facilities to support MSME learning.	
Technology Infrastructure Improvement		1. SEO Training for E-Commerce: Teaches MSMEs how to optimize their online stores to be more easily found through google searches.	[1, 19, 22, 23]
		2. Paid Advertising Workshop: Helps MSMEs understand how to use paid advertising on platforms such as google ads or facebook ads to reach a wider market.	
		1. Hardware Provision: Providing better computer or smartphone devices for MSMEs that are less able to afford such equipment.	
		2. Access to Management Software: Providing software for inventory management, bookkeeping, and digital marketing that can be accessed by MSMEs.	

### **3.3. What are the main challenges faced by handicraft MSMEs in adopting and utilizing digital tools for marketing and sales?**

#### **1) Digital Access and Infrastructure**

Many handicraft MSMEs in Belitung face challenges related to limited digital access and infrastructure. Unstable or slow internet connections are the main obstacles in accessing e-commerce platforms or social media that can expand the market. Although most handicraft MSMEs are beginning to understand the importance of digitalization, they often struggle to take advantage of this potential due to limited internet access [19]. The existence of this inadequate network is an obstacle in carrying out online marketing or sales activities, such as uploading products, interacting with customers, or managing transactions efficiently. This also slows down the ability of local MSME entrepreneurs to compete with entrepreneurs who have better access to technology. As a solution, the development of better digital infrastructure in isolated areas is urgently needed. Without reliable connectivity, it will continue to struggle to take full advantage of digital opportunities such as metaverse, virtual reality interactive design [22]. Therefore, collaboration is needed between the government, internet service providers, and local handicraft MSME practitioners to improve technology accessibility in these areas.

#### **2) Digital Skills**

Most MSME entrepreneurs in Belitung Regency still lack sufficient skills or knowledge in using various digital platforms for marketing and sales purposes. Many of them are not yet familiar with how to operate social media effectively or use e-commerce sites to sell their products. The lack of training in using these digital tools prevents them from taking advantage of the potential of the ever growing online market. In fact, with adequate digital skills, they can reach a wider market and increase sales significantly [6]. Therefore, digital skills training for MSMEs needs to be introduced more widely, so that they can adapt more easily to technological developments [19]. More structured and practical learning, such as digital marketing tutorials and online store management, can help local handicraft MSME practitioners understand and utilize technology. It's not just about learning to use digital tools, but also understanding effective marketing strategies in the digital world.

#### **3) Digital Content and Branding**

One of the major challenges faced by handicraft MSMEs in Belitung Regency is the difficulty in creating attractive and consistent content to build strong branding in the digital world. Effective content is essential to attract potential customers on social media or e-commerce platforms [6]. Without the skills or resources to produce quality content that suits the needs of the digital market, local handicraft MSME practitioners often have difficulty maintaining branding consistency, making marketing efforts less effective. Hence, need to learn how to display their products in a more creative and attractive way, such as using quality photos, attractive product descriptions, or even promotional videos. Thus, developing a clear and consistent branding strategy is essential for Handicraft MSMEs to build a strong identity in the online market, with training and guidance in creating relevant and professional content, it can significantly increase the appeal of their products. Improving the quality of content and branding can have a major impact on attracting consumers and expanding market reach.

#### **4) Understanding the Digital Market**

Many handicraft MSMEs do not have a deep understanding of consumer behavior in the digital market, which can affect their marketing and sales strategies. Consumer behavior in the virtual world is very different from the physical world, and it also must understand various digital aspects such as social media algorithms, consumer trends, and how to attract the right audience. Without a good understanding of digital consumer behavior, local handicraft MSME practitioners will struggle to create effective and targeted marketing strategies, for example they may not know when is the best time to post on social media or how to attract the attention of an audience that is truly interested in their products [6]. Moreover, local handicraft MSME practitioners also need to learn how to segment the market digitally so that they can offer more relevant products to certain consumers. With a better understanding of the digital market, they can be smarter in making marketing decisions and optimizing existing opportunities [24].

### 5) Capital for Digital Investment

Another major challenge faced by handicraft MSMEs in Belitung Regency is the limited capital to invest in digital tools and devices. Although digitalization offers many opportunities to develop businesses, the cost of building and maintaining an effective digital system can be a heavy burden for MSMEs. Many handicraft MSMEs still rely on traditional ways of doing business and are not ready to switch to digitalization due to cost reasons. To be able to compete in the digital market, investment is needed to develop websites, use an e-commerce platform, or run online marketing campaigns. Without sufficient capital support, these businesses can be hampered and unable to compete with big players who are more advanced in terms of digital [8, 23]. Therefore, it is important for the government or financial institutions to provide affordable financing access for those who want to switch to digital platforms. So, training programs that focus on how to use digital tools at low cost can also be very helpful for local handicraft MSME practitioners in utilizing technology without having to spend a lot of money. Table 3 shows the challenges for local handicraft MSMEs:

**Tabel 3. Challenges for local handicrafts MSMEs**

Category	Description	References
Digital Access and Infrastructure	Many MSMEs in Belitung still have limited access to the internet and adequate digital infrastructure, such as slow or unstable networks.	[12, 19, 22]
Digital Skills	Some MSME entrepreneurs lack the skills or knowledge to use digital platforms effectively, such as social media and e-commerce.	[6, 19, 25, 26]
Digital Content and Branding	MSMEs often have difficulty in creating interesting and consistent content to build a brand on digital platforms, such as social media or e-commerce sites.	[6, 14]
Understanding Digital Markets	Many MSMEs do not have a deep understanding of consumer behavior in the digital market, including how to reach the right audience.	[6, 23, 24]
Capital for Digital Investment	MSMEs have difficulty allocating budget to invest in digital tools and devices, such as websites, applications, or online marketing campaigns.	[8, 23, 27]

### 4. Conclusions

This study reveals that handicraft MSMEs in Belitung Regency have utilized e-commerce and social media platforms to expand their product marketing. Through platforms such as instagram, facebook, and online markets such as shopee and tokopedia, although they have not maximized global e-commerce, there is a desire for MSME entrepreneurs to be able to reach a wider market. Although there is great potential in using this digital platform to increase sales and brand awareness, many handicraft MSMEs face difficulties in creating interesting content that can attract the attention of digital consumers. This shows the importance of digital training that focuses on creating interesting content and marketing on social media to help them interact more effectively with their audiences.

The main challenges faced by MSMEs in the Belitung handicraft sector are limited digital infrastructure and skills in using technology. Many MSME entrepreneurs are not yet accustomed to using e-commerce or social media for marketing, which hinders their potential to develop digitally. In addition, slow and unstable internet access is also friendly to this condition, especially in more remote areas in Belitung. Therefore, comprehensive digital training programs and infrastructure improvements such as providing free WIFI in MSMEs centers and training centers with fast internet connections are essential to support technology adaptation.

Digitalization provides many opportunities for Belitung handicraft MSMEs, challenges in terms of understanding the digital market and limited capital for digital investment are still major obstacles. Many MSMEs do not yet understand consumer behavior in the digital market, as well as the right way to optimize their presence on digital platforms. Coupled with limited funds to invest in hardware, software, or online marketing campaigns, many local handicraft MSME practitioners struggle to harness the full potential of the digital world. Therefore, it is important for policy makers and stakeholders to provide further support in the form of more targeted training and provision of resources that can help handicraft MSMEs overcome these obstacles.

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