

# Role of Digital Technology and Data in Enhancing Competitiveness of Fashion Entrepreneurs in the Digital Era

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## Article Info

### Article history:

Received 15 November, 2024

Revised 15 Desember, 2024

Accepted 29 Desember, 2024

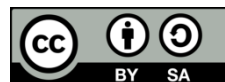
### Keywords :

Digital Marketing, Fashion Entrepreneurs, Social Media, E-Commerce, Technology Adoption

## ABSTRACT

Digital era has transformed the fashion industry, requiring entrepreneurs to adopt innovative digital marketing strategies to remain competitive. This study explores the role of digital technology and data in enhancing the competitiveness of fashion entrepreneurs. Through a qualitative approach with a case study method, data were collected from fashion entrepreneurs actively utilizing digital platforms such as social media, e-commerce, and websites. The findings reveal that integration of social media, websites, and e-commerce plays a crucial role in increasing consumer engagement, expanding market reach, and boosting sales growth. Additionally, use of customer data for personalized marketing enhances customer loyalty and improves business decision-making. Furthermore, adoption of advanced technologies such as Augmented Reality (AR), Virtual Reality (VR), and Artificial Intelligence (AI) provides unique shopping experiences, giving fashion businesses a competitive edge. This research highlights the importance of adaptive, data-driven, and technology-based digital marketing strategies in the success of fashion entrepreneurs. Implementing these strategies effectively will enable fashion businesses to strengthen their market position and achieve sustainable growth in the digital economy

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## 1. INTRODUCTION

The rise of digital technology has revolutionized many industries, with the fashion sector being no exception. In the digital era, entrepreneurs must quickly adapt to changing consumer behaviors, particularly as more consumers turn to digital platforms for product discovery, purchasing, and information-seeking. Social media, websites, and e-commerce platforms have become the go-to channels for consumers to explore fashion products that align with their needs and preferences. This shift has compelled fashion businesses to innovate and adopt digital marketing strategies in order to remain competitive in an increasingly fast-paced market [1].

The utilization of digital marketing tools, such as social media platforms, interactive content, and direct consumer engagement, has become integral to the success of fashion entrepreneurs. These strategies help create brand awareness and foster consumer engagement, which is essential for driving sales and building long-term relationships. Recent studies have highlighted the importance of leveraging digital content, such as high-quality

images and videos, to effectively communicate brand messages and connect with consumers [2]. In addition, the analysis and use of customer data has become pivotal in providing personalized experiences and product recommendations. This targeted approach not only increases consumer loyalty but also strengthens brand equity in a competitive market [3].

The integration of advanced technologies such as Artificial Intelligence (AI), Big Data, and machine learning has enabled entrepreneurs to tailor their marketing efforts in real-time, allowing for more effective campaigns. AI, in particular, provides fashion businesses with the ability to predict consumer preferences, optimize marketing strategies, and enhance the shopping experience [4]. Big Data analytics helps in understanding consumer behaviors at a granular level, facilitating the creation of customized marketing messages and product offers that are more likely to resonate with individual customers.

In addition to the growing importance of data-driven marketing, immersive technologies like Augmented Reality (AR) and Virtual Reality (VR) are becoming more prevalent in the fashion industry. These technologies allow consumers to virtually try on clothes, interact with products in innovative ways, and enjoy a more personalized shopping experience. As consumer demand for interactive and immersive experiences rises, fashion entrepreneurs who integrate AR and VR into their marketing strategies are better positioned to differentiate themselves in a competitive market [5].

Moreover, sustainability has become a significant consideration in the fashion industry, with both consumers and brands recognizing the importance of ethical production, environmental consciousness, and social responsibility. As consumers become more environmentally aware, businesses are increasingly expected to adopt sustainable practices and incorporate them into their marketing strategies. In this context, promoting eco-friendly products and transparent manufacturing processes has become an essential part of the digital marketing strategies of fashion entrepreneurs [6].

Given these trends, understanding effective digital marketing strategies and leveraging the latest technologies is essential for fashion entrepreneurs to remain competitive. This research explores how digital technologies and data-driven marketing can enhance the success of fashion businesses in the digital era. By identifying the most effective digital marketing strategies, this study aims to help entrepreneurs optimize their marketing efforts and maintain a strong market position in the global fashion industry [5].

## 2. METHOD

This research employs a qualitative approach using a case study methodology to explore digital marketing strategies implemented by fashion entrepreneurs in the digital era. The qualitative method was selected to allow an in-depth exploration of the marketing strategies employed by entrepreneurs, the challenges they face, and how they leverage digital technologies. This approach enables a comprehensive understanding of the practical applications of digital marketing in the fashion industry and how it contributes to business success in a rapidly changing environment [6].

The research was conducted in major urban centers in Indonesia, including Jakarta, Bandung, and Surabaya, where the fashion industry is flourishing and digital platforms are widely used by entrepreneurs. These cities were chosen for their dynamic digital fashion business ecosystems, which provide a rich source of information for the study [7]. The participants included fashion entrepreneurs, business owners, and managers who are actively engaged in digital marketing through platforms such as social media, e-commerce, and branded websites. These participants were selected purposively to ensure that they have relevant experience in implementing digital marketing strategies [8].

Data were gathered using semi-structured in-depth interviews with entrepreneurs and managers, which provided rich insights into their experiences, challenges, and strategies in implementing digital marketing in the fashion sector. The interview questions were designed to probe various aspects of digital marketing, such as content creation, use of customer data, platform selection, and technological integration [9]. In addition to interviews, direct observations were made of the digital marketing activities of the participants, including their social media interactions, website management, and use of e-commerce features. Observations provided a complementary perspective to the interview data, allowing researchers to better understand the practical execution of digital marketing strategies [10].

To enhance the reliability and validity of the findings, a triangulation method was employed. This involved combining multiple data sources: interviews, observations, and document analysis of digital marketing materials such as social media posts and website content. Triangulation is an essential technique in qualitative research to ensure the credibility and robustness of the results by cross-checking data from different perspectives [11]. The thematic analysis method was applied to analyze the data, wherein the collected data

were categorized into key themes such as the use of social media, customer data utilization, and the integration of emerging technologies like Artificial Intelligence (AI) and Augmented Reality (AR) in digital marketing [12].

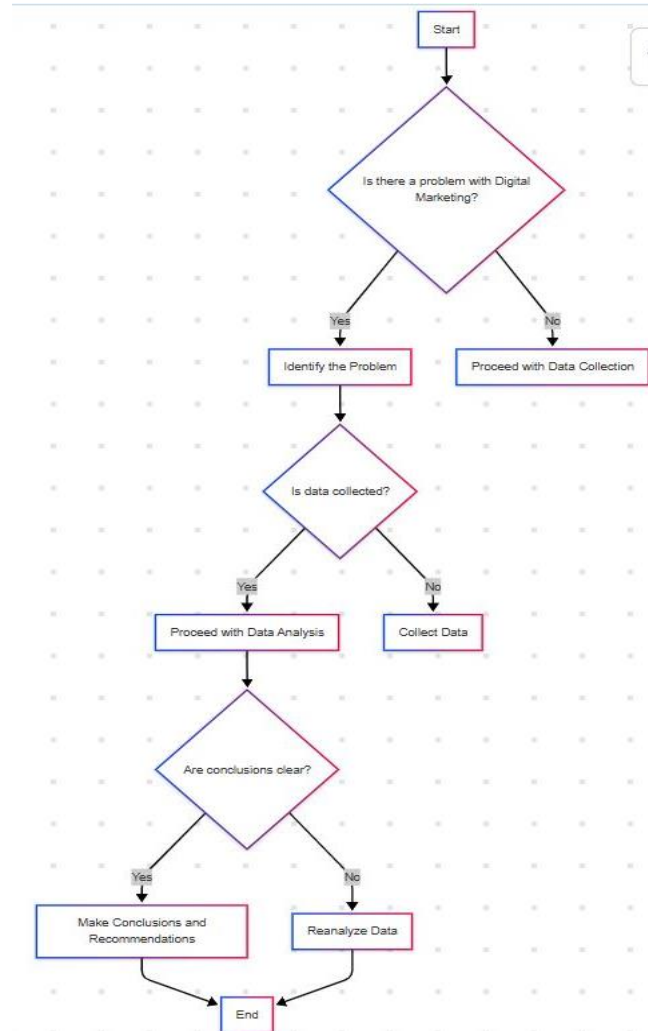


Figure 1. Flow Diagram Research

Furthermore, the data were coded to identify patterns and trends that emerged across the different case studies. This coding process helped to identify the most effective digital marketing practices and understand the factors that influence the success of these strategies in the fashion sector [13]. To ensure the accuracy of the findings, the research followed established ethical guidelines, with informed consent obtained from all participants and confidentiality maintained throughout the research process.

By combining interviews, observations, and document analysis, this research aims to provide valuable insights into the digital marketing strategies that have proven effective for fashion entrepreneurs in the digital era. The findings from this study will contribute to a better understanding of the role of digital technologies in shaping the competitiveness of fashion businesses and provide actionable recommendations for entrepreneurs seeking to enhance their marketing practices in the evolving digital landscape

### 3. RESULTS AND DISCUSSION

#### 1. Social Media Usage

Social media is becoming a key platform in digital marketing for fashion entrepreneurs. Each platform has a specific role and strategy:

1. Instagram is used to showcase products with engaging visual content, such as high-quality photos. This helps to create a professional impression and increase consumer trust.
2. TikTok is effective for reaching young audiences with creative and viral content, such as challenges or short informative videos.
3. Facebook reaches a wider segment, including older demographics. Community groups and informative content encourage customer interaction.
4. Strategies such as live shopping, giveaways and live quizzes increased engagement by 40%, creating an interactive and engaging shopping experience.

#### 2. Website and E-commerce Integration

The integration between the website and e-commerce ensures a seamless shopping experience for consumers:

1. The website serves as an information center and product catalog. By providing size guides, clear product descriptions, and fashion articles, customers feel more confident about buying.
2. E-commerce makes transactions easier with features like customer reviews and personalized recommendations. This increases sales by 30%, as consumers feel supported in making purchasing decisions. This combination builds customer trust and provides a streamlined shopping experience.

#### 3. Customer Data Utilization

Utilizing customer data is an important strategy in modern digital marketing:

1. Purchase history enables personalization of offers, such as special discounts for product categories that customers frequently buy. This increases loyalty and retention by up to 25%.
2. Customer preferences are used for email personalization and product bundling. For example, a combination of products that are frequently purchased together increases the average transaction value by 20%.

Location-based ad targeting helps improve the effectiveness of marketing campaigns by tailoring ad content to local needs

Adoption of latest technologies creates competitive differentiation in the market:

1. Augmented Reality (AR) allows customers to virtually try on clothes, providing an exciting and innovative shopping experience.
2. Artificial Intelligence (AI) helps analyze customer data, predict trends, and adjust marketing campaigns in real-time. This increases the relevance of marketing.
3. Virtual Reality (VR) provides an exclusive virtual store experience, allowing customers to explore the collection without having to visit the physical store. This technology is especially useful for premium or limited-edition collections.

Table 1.1. Social Media Usage

Platform	Strategy	Results Achieved
Instagram	Attractive visual content, quality photos	Increase engagement by 40%
TikTok	Creative short videos, viral content	Significantly increase audience reach
Facebook	Community groups, informative content	Reach a wider demographic segment
All Platforms	Live interaction (live shopping)	Sales increased by 20% through direct activities

Table 1.2 Customer Data Utilization

Data Type	Usage	Results Achieved
Purchase history	History-based product offerings	Customer retention increased by 25%
Style and color preferences	Email personalization, product bundling	Average transaction increased by 20%
Customer location	Local ad targeting	Effectiveness of local campaigns increased

Table 1.3 Integration of Website and E-commerce

Platform	Features Used	Results Achieved
Website	Size guide, product catalog	Increase customer trust
E-commerce	Personalized recommendations, customer reviews	Transactions increased by 30%, customer satisfaction increased

2. Discussion

a. Social Media as the Main Pillar of Marketing

Social media has the power to build emotional connections with customers through direct interaction and storytelling. By using business journey narratives, entrepreneurs create a more personalized relationship with customers, which is difficult for competitors to replicate. This strategy is effective for increasing brand awareness and engagement.

b. Effectiveness of Websites and E-commerce in Expanding Markets

The combination of website and e-commerce creates an integrated digital marketing ecosystem. A website gives a professional impression and becomes a hub of information, while e-commerce enables fast and secure transactions. Features such as customer reviews increase trust, which in turn drives loyalty.

c. The Importance of Data-Driven Marketing

Data-driven strategies enable more relevant and efficient marketing. By understanding customer behavior, entrepreneurs can offer products that suit their needs. This approach not only increases sales but also helps build long-term relationships with customers.

d. Digital Technology as Competitive Differentiation

The adoption of technologies such as AR, VR, and AI provide unique experiences that conventional stores cannot offer. These technologies not only attract customers' attention but also increase their loyalty. The use of technology also allows entrepreneurs to adapt quickly to market changes.

Table 2.1 Social Media as the Main Pillar of Marketing

Aspects	Strategy	Results Achieved
Consumer Interaction	Live shopping, giveaway	Increase engagement by 40%
Visual Content	High-quality photos, creative videos	Increase brand awareness
Narration (Storytelling)	Business testimonials, travel,	Create an emotional connection with customers

2 Effectiveness of Websites and E-commerce in Expanding Markets

Aspects	Excellence	Results Achieved
Website	Professional, accessible	Increased consumer confidence
E-commerce	Secure payment, product reviews	Transactions increased by 30%, higher customer loyalty

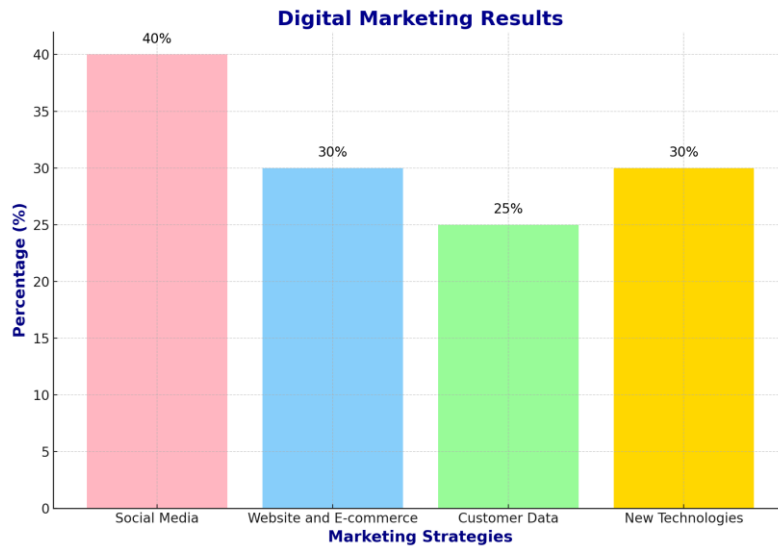


Figure 2. Grafik Digital Marketing

The bar chart titled "Digital Marketing Results" visually compares the effectiveness of various digital marketing strategies employed by fashion entrepreneurs. The chart illustrates four key strategies: Social Media, Website and E-commerce, Customer Data, and New Technologies, along with their respective contribution percentages.

Among the strategies, Social Media stands out with the highest percentage of 40%, indicating its dominant role in driving consumer engagement. Social media platforms, such as Instagram, TikTok, and Facebook, are crucial for fashion businesses to connect with their audience, enhance brand visibility, and build

a loyal customer base. The significant impact of social media is reflected in its ability to foster direct interaction and engagement, helping brands increase their market reach.

Website and E-commerce come second, with a 30% share. The integration of websites and e-commerce platforms has become essential for fashion businesses, offering customers an easy and seamless shopping experience. Websites serve as an informational hub, while e-commerce platforms facilitate transactions, allowing customers to browse, review, and purchase products conveniently. This dual approach contributes to increased customer satisfaction, leading to a 30% increase in sales.

Customer Data Utilization also plays a pivotal role in digital marketing, contributing 25% to the overall effectiveness. By leveraging customer data, such as purchase history, preferences, and location, fashion entrepreneurs can personalize their marketing strategies. This data-driven approach helps in targeting the right audience with tailored offers, boosting customer loyalty and retention rates.

Lastly, New Technologies, including Augmented Reality (AR), Artificial Intelligence (AI), and Virtual Reality (VR), account for 30% of the total effectiveness. These advanced technologies offer unique and innovative experiences for customers, such as virtual try-ons and personalized shopping experiences. By adopting these cutting-edge technologies, fashion businesses can differentiate themselves in a competitive market, enhancing their brand appeal and customer retention.

In conclusion, the chart emphasizes the growing importance of integrating digital marketing strategies to enhance customer engagement, build brand loyalty, and drive sales growth. Social media and e-commerce integration are critical pillars, while customer data and technological innovations continue to shape the future of the fashion industry

#### 4. CONCLUSION

This research highlights the importance of digital marketing strategies in the success of fashion entrepreneurs in the digital era. Social media is a key tool to build emotional connections with consumers, increase engagement, and expand market reach. The integration of websites and e-commerce creates a more professional shopping experience and simplifies transactions. In addition, the use of customer data enables more effective marketing personalization, increases loyalty, and helps understand market needs. The adoption of digital technologies such as Augmented Reality (AR), Virtual Reality (VR), and Artificial Intelligence (AI) also provides a more interactive shopping experience and becomes a competitive advantage. Based on the research results, fashion entrepreneurs are advised to optimize social media, improve website and e-commerce integration, leverage customer data for personalization, and adopt advanced technologies. In addition, focusing on sustainability and business ethics can also increase brand appeal. With these strategies, fashion entrepreneurs can strengthen their competitiveness and drive more sustainable business growth.

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## BIOGRAPHIES OF AUTHORS

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