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Digital Marketing in Agribusiness: The Role of Digital Platforms in Expanding Market Access and Improving Agricultural Business Performance

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ABSTRACT

The development of digital technology creates new opportunities for agribusinesses to expand market access and improve business performance. This study aims to examine the role of digital marketing and digital platform utilization in supporting the marketing of agricultural products. A narrative literature review approach was employed, examining publications from 2015 to 2026 through Scopus and Google Scholar. The analysis used thematic synthesis covering the development of digital marketing, platform utilization, market access expansion, business performance, and implementation barriers. The findings indicate that social media, e-commerce, and digital marketplaces have the potential to expand buyer networks, improve marketing communication, and support income growth. However, these benefits are not equally distributed due to differences in digital literacy, infrastructure, platform costs, and distribution capabilities. This study proposes an integrative framework linking digital marketing, digital platform utilization, market access, and agricultural business performance. The findings emphasize the importance of business readiness and a supportive digital ecosystem in achieving sustainable marketing benefits in the agribusiness sector.

ABSTRAK

Perkembangan teknologi digital membuka peluang baru bagi pelaku agribisnis untuk memperluas akses pasar dan meningkatkan kinerja usaha. Penelitian ini bertujuan mengkaji peran digital marketing dan pemanfaatan platform digital dalam mendukung pemasaran produk pertanian. Penelitian menggunakan pendekatan narrative literature review dengan menelaah publikasi periode 2015–2026 melalui Scopus dan Google Scholar. Analisis dilakukan melalui sintesis tematik yang mencakup perkembangan pemasaran digital, pemanfaatan platform, perluasan akses pasar, kinerja usaha, serta hambatan penerapannya. Hasil kajian menunjukkan bahwa media sosial, e-commerce, dan marketplace berpotensi memperluas jaringan pembeli, meningkatkan komunikasi pemasaran, dan mendukung pertumbuhan pendapatan. Namun, manfaat tersebut tidak selalu merata karena dipengaruhi literasi digital, infrastruktur, biaya platform, dan kemampuan distribusi. Kajian ini menawarkan kerangka integratif yang menghubungkan pemasaran digital, pemanfaatan platform, akses pasar, dan kinerja usaha pertanian. Temuan ini menegaskan pentingnya kesiapan pelaku usaha dan dukungan ekosistem digital untuk mewujudkan manfaat pemasaran yang berkelanjutan bagi sektor agribisnis.

1. INTRODUCTION

Marketing remains a significant challenge for agricultural businesses. Farmers may produce high-quality products, yet they do not necessarily have equal opportunities to sell them to consumers at profitable prices. Some producers continue to depend on direct buyers, intermediaries, or established marketing networks. Although these channels help agricultural products reach the market, farmers may still have limited choices of buyers and insufficient access to price information. These challenges become more pronounced when harvested products must be sold quickly because of their short shelf life. Under such conditions, the ability to produce agricultural commodities does not always translate into the ability to generate profits. Therefore,

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agribusiness challenges cannot be examined solely from a production perspective. Attention must also be given to how products are marketed, which consumers can be reached, and how much economic value agricultural producers receive.

The development of digital technology has begun to provide new opportunities for agricultural marketing. While relationships between sellers and buyers previously depended largely on face-to-face interactions, some of these activities can now be conducted through smartphones and the internet. Farmers and agribusiness operators can promote their products through WhatsApp, Instagram, Facebook, and online marketplaces without having to wait for buyers to visit their business locations. Information about products, prices, availability, and ordering procedures can be communicated to consumers more quickly. The Food and Agriculture Organization explains that digital technologies create opportunities to improve access to information, reduce transaction costs, and strengthen relationships among actors in agricultural value chains (FAO, 2019). These opportunities deserve attention because digital marketing can provide alternative sales channels that were previously difficult for some agricultural producers to access.

These changes are taking place alongside the continued growth of internet-based commercial activities in Indonesia. Statistics Indonesia reported that the value of e-commerce transactions in Indonesia reached approximately IDR 1,100.87 trillion in 2023 (BPS, 2025). This figure illustrates how digital commerce has become part of everyday economic activity. Consumers are increasingly accustomed to searching for information, comparing products, and making purchases online. For agribusiness operators, these changing consumer habits may create opportunities to offer products to buyers beyond traditional markets and production areas. However, the growth of digital commerce at the national level does not mean that all agricultural businesses have gained equal opportunities. Some may already be familiar with digital platforms, while others continue to face limitations in internet connectivity, marketing skills, and supporting facilities.

In agribusiness, the use of digital platforms involves challenges that differ from those encountered in marketing products in general. Agricultural commodities, particularly fresh produce, often require special handling because their quality can deteriorate during storage and transportation. Selling vegetables through social media, for example, involves more than uploading product photographs and displaying prices. Sellers must also ensure product availability, fulfill orders, and deliver vegetables to consumers in good condition. Similar challenges arise in marketing fruits, livestock products, and processed foods that require specific storage conditions. Therefore, successful digital marketing in agribusiness depends not only on attracting consumer attention but also on production readiness, packaging, distribution, and customer service. These operational factors influence whether digital transactions can generate meaningful benefits for agricultural businesses.

This is where a distinction must be made between using digital platforms and effectively implementing digital marketing. Having a social media account or joining an online marketplace does not necessarily indicate that an agribusiness has developed an effective digital marketing strategy. Platforms provide a space where products and potential buyers can interact, whereas marketing activities require an understanding of consumers, clear product information, appropriate pricing, communication, and customer retention efforts. Kannan & Li (2017) explain that digital marketing involves marketing processes that utilize digital technologies to facilitate interactions and create value for consumers and businesses. In agribusiness, this understanding is particularly important because producers need more than a digital presence. They must also understand how technology can be used to develop stronger market relationships.

Several studies have examined how digital technologies are increasingly being used in agricultural activities. Aker et al. (2016) demonstrate that developments in information and communication technologies create new opportunities for agriculture, particularly by improving access to information and connections among market participants. Trendov et al. (2019) similarly explain that agricultural digitalization can improve access to information, services, and markets, although its implementation remains influenced by infrastructure conditions and users' capabilities. Meanwhile, Klerkx et al. (2019) show that the development of digital agriculture involves not only technological advances but also changes in social relationships, organizational structures, and the ways agricultural actors conduct their activities. Together, these studies suggest that digital technologies offer new possibilities for agribusiness, but their effective utilization remains closely related to the circumstances and capabilities of agricultural producers.

Another important issue concerns the ability of agricultural businesses to obtain tangible benefits from the technologies they adopt. Not all farmers possess sufficient digital skills, financial resources, or infrastructure support. Some producers may own smartphones but remain unfamiliar with creating attractive

product information, managing online orders, or using sales data to support business decisions. At the same time, digital platforms may generate additional costs, including packaging, paid advertising, platform service fees, and product delivery expenses. Trendov et al. (2019) emphasize that the benefits of agricultural digitalization depend on infrastructure availability, human resource capabilities, and a supportive environment. This indicates that access to technology is an important starting point, but it is not sufficient to ensure that technology contributes meaningfully to business activities.

Discussions of digital marketing also draw attention to market access. In agriculture, market access involves more than having a place to sell products. It also concerns the ability to identify buyers, obtain price information, reach wider geographical markets, and establish sustainable trading relationships. Digital platforms have the potential to reduce dependence on a single sales channel by allowing product information to reach a broader range of prospective buyers. However, these opportunities may not be equally accessible to all producers. Businesses with stronger communication skills, distribution networks, and order management capabilities may be better positioned to benefit than those facing operational constraints. Accordingly, market access expansion through digital technologies should be understood as a process involving marketing capabilities and business readiness rather than simply an increase in the number of platforms used.

Expanding market access does not necessarily lead directly to improved agricultural business performance. Businesses may reach more consumers through the internet, but the economic benefits still depend on transaction volumes, marketing costs, service quality, and their ability to meet demand. Increased sales, for example, may not generate higher profits if distribution and operating costs also rise. Conversely, digital platforms may provide benefits through stronger customer relationships, faster access to demand information, or lower costs of identifying potential buyers. Agricultural business performance should therefore be assessed through several dimensions, including sales growth, income, marketing efficiency, customer expansion, and the ability to maintain market relationships. This distinction is important because digital marketing success should not be measured solely by how actively businesses use social media or online marketplaces, but also by the benefits they actually obtain from their operations.

Research on agricultural digitalization developed considerably between 2015 and 2026, addressing a range of related issues. Some studies examine the use of information technologies in agricultural activities, while others focus on digital readiness, changes in value chain relationships, and opportunities to improve market access through technology. Klerkx et al. (2019), for example, discuss social and institutional changes associated with digital agriculture, while Trendov et al. (2019) highlight the opportunities and conditions required to support digital transformation in the agricultural sector. From a marketing perspective, Kannan & Li (2017) provide a foundation for understanding how digital technologies can facilitate relationships with consumers. Although these studies address different aspects of digitalization, they can collectively contribute to understanding how technologies are utilized in business activities and how their use may generate economic benefits.

These discussions reveal an opportunity to examine the relationships among digital marketing, digital platform utilization, market access, and agricultural business performance more comprehensively. Studies on agricultural technology help explain the opportunities and barriers associated with digitalization, but they do not always specifically address the marketing strategies implemented by agricultural businesses. Conversely, digital marketing studies explain relationships between technology and consumers, while the distinctive characteristics of agricultural products and their distribution challenges require additional consideration. Similar concerns arise in discussions of market access and business performance. An increase in marketing channels does not necessarily indicate that businesses have achieved higher income or greater efficiency. The issue is not that relationships between digital technologies and agribusiness activities have never been examined. Rather, different elements of these relationships have already been discussed in the literature, but they need to be considered together to provide a clearer understanding of the benefits and limitations of digital marketing in agricultural businesses.

Based on these considerations, this article adopts a narrative literature review approach to examine studies on digital marketing in agribusiness published between 2015 and 2026. The review focuses on four main areas: digital marketing practices, digital platform utilization, market access expansion, and agricultural business performance. Barriers related to digital capabilities, infrastructure, costs, and agricultural product characteristics are also considered because they may explain why technological benefits vary among businesses. This study does not aim to calculate the magnitude of relationships between variables. Instead, it seeks to understand patterns of findings, differences across previous studies, and the relationships among

issues identified in the literature. The central research question is: How can the utilization of digital platforms in agribusiness marketing expand market access and contribute to improving agricultural business performance? By addressing this question, the review seeks to understand digital marketing not merely as a change in how products are sold, but also as part of broader efforts by agribusiness operators to access wider markets and improve their business outcomes.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1 Digital Marketing in Agribusiness

Marketing in agribusiness involves more than simply selling agricultural products. It includes identifying market needs, setting prices, communicating product information, selecting distribution channels, and maintaining relationships with buyers. Traditionally, many of these activities have relied on trading networks familiar to farmers and agribusiness operators. The emergence of digital technology has introduced alternative ways of managing marketing activities. Product information can now be shared online, communication with buyers can take place without face-to-face meetings, and promotional activities can reach consumers beyond production areas. These changes have made digital marketing increasingly relevant to agribusiness, particularly for businesses seeking more diverse marketing channels.

Kannan & Li (2017) explain that digital marketing involves the use of digital technologies in marketing processes, including interactions between businesses and consumers and value creation through various digital channels. This perspective suggests that digital marketing should not be understood merely as using social media to promote products. It also involves how information is communicated, how customer relationships are developed, and how marketing decisions respond to market needs. In agribusiness, these capabilities can be observed when businesses use digital media to communicate product quality, provide pricing information, receive orders, or maintain contact with customers. Thus, digital marketing is better understood as a technology-supported approach to managing market relationships rather than simply changing where products are sold.

The characteristics of agricultural businesses require particular attention when implementing digital marketing. Products may include fresh agricultural commodities, livestock products, and processed foods, each with different storage and distribution requirements. Information about freshness, quality, availability, and delivery schedules becomes an essential part of marketing communication. Kannan & Li (2017) emphasize customer interactions and experiences as important elements of digital marketing. In agribusiness, this can be understood through the ability of businesses to provide reliable product information and meet buyers' expectations. Therefore, digital marketing success depends not only on the reach of promotional activities but also on the consistency between advertised information, actual product quality, and the services received by consumers.

These considerations indicate that digital marketing in agribusiness requires a combination of technological capabilities and an understanding of business operations. Agribusiness operators may use the same digital platforms but achieve different results because their abilities to manage promotion, communication, pricing, and customer service vary. Digital skills can support marketing activities, but knowledge of products and consumer needs remains equally important. Accordingly, this review defines digital marketing as marketing activities that utilize digital technologies to communicate information, establish customer relationships, manage transactions, and support the sale of agribusiness products. This definition provides a foundation for examining how digital platforms are utilized and what benefits agricultural businesses may obtain.

2.2 Digital Platforms and the Transformation of Agricultural Marketing

Digital platforms provide online spaces where businesses can conduct marketing activities. Social media, online marketplaces, and e-commerce applications serve different functions, but all can facilitate connections between sellers and potential buyers. Social media primarily supports communication, promotion, and interaction, whereas online marketplaces generally provide features for product searches, ordering, payments, and transaction management. In agribusiness, these platforms create opportunities for businesses to introduce their products without relying entirely on conventional marketing channels. However, each platform has distinct characteristics and requirements that must be aligned with business needs.

Aker et al. (2016) explain that information and communication technologies can support agricultural activities by improving access to information, communication, and connections among market participants. These technologies make previously difficult-to-obtain information more accessible. Trendov et al. (2019)

also demonstrate that agricultural digitalization has the potential to strengthen relationships within agricultural value chains by improving access to information, services, and markets. Together, these studies provide a foundation for understanding why digital platforms can contribute to the transformation of agricultural marketing. Their benefits extend beyond enabling online product sales to providing information that helps businesses make better marketing decisions.

The transformation of agricultural marketing through digital platforms also involves changes in relationships among participants in agricultural value chains. Klerkx et al. (2019) explain that digital agriculture brings changes that are not merely technical but also social, institutional, and organizational. In marketing activities, these changes may become evident when businesses communicate directly with consumers, establish relationships with new buyers, or use digital services to support transactions and distribution. Nevertheless, such developments do not necessarily eliminate the roles of collectors, distributors, or other intermediaries. Some agricultural businesses may instead use digital platforms to strengthen existing trading relationships. Therefore, the transformation of agricultural marketing is better understood as a change in how businesses access and manage market networks rather than a complete replacement of conventional trading channels.

Effective digital platform utilization still requires adequate support. Trendov et al. (2019) explain that limitations in infrastructure, digital capabilities, and supporting environments can influence agricultural digitalization. In marketing practice, these barriers may arise when businesses experience difficulties accessing the internet, managing product information, receiving digital payments, or fulfilling orders from consumers outside production areas. Platform service fees and distribution costs may also become important considerations, particularly for businesses with limited production capacity. Consequently, the availability of digital platforms alone does not demonstrate successful marketing transformation. What matters is whether these platforms can be effectively utilized according to the capabilities and needs of agricultural businesses.

2.3 Market Access in Agricultural Businesses

Market access is an essential component of agribusiness because agricultural products must reach buyers to generate income for producers. Market access involves more than the availability of selling locations. It also includes obtaining price information, identifying buyers, selecting marketing channels, and maintaining trading relationships. Farmers with relatively high production volumes may not necessarily earn satisfactory profits if their buyer options are limited or the costs of reaching markets are excessively high. Under such circumstances, market access can influence the bargaining position of agricultural businesses when setting prices and making sales decisions. Therefore, discussions of agricultural marketing must consider the relationship between market availability and the ability of businesses to take advantage of market opportunities.

Aker et al. (2016) demonstrate that information and communication technologies have the potential to reduce information-related challenges in agriculture. Information about prices, demand, and market conditions can help businesses understand available marketing alternatives. Trendov et al. (2019) also explain that digital technologies can create opportunities to access markets and services that were previously difficult to reach. In agribusiness marketing, digital platforms can serve as a means of expanding relationships between sellers and buyers. Businesses no longer need to depend entirely on buyers visiting their locations or on information obtained through a single trading network. Instead, they have opportunities to introduce products to additional consumers and compare available marketing alternatives.

Nevertheless, broader marketing reach does not necessarily translate into improved market access in practice. Products may be visible to consumers across different regions, but transactions may not occur if prices, quality, shipping costs, or delivery times fail to meet buyers' expectations. These challenges are particularly important in agribusiness because some agricultural products have limited shelf lives and require special handling. Businesses must also consider their ability to fulfill demand consistently. Therefore, market access through digital platforms should not be evaluated solely by the number of consumers who can view a product. Attention must also be given to the ability to convert this reach into sustainable trading relationships and actual transactions.

In this review, market access expansion is understood through several dimensions: an increase in buyer options, broader geographical market coverage, improved availability of market information, stronger trading networks, and new transaction opportunities. These dimensions help distinguish between a busi-

ness's presence on digital platforms and the marketing benefits it actually obtains. Digital platforms can create opportunities to reach wider markets, but the ability to capitalize on these opportunities remains influenced by business capabilities, product characteristics, and distribution support. Accordingly, market access is positioned as a connecting element between digital platform utilization and potential improvements in agricultural business performance.

2.4 Agricultural Business Performance

Agricultural business performance reflects the outcomes achieved by businesses through their economic activities. In marketing discussions, performance is commonly associated with sales, income, profitability, efficiency, and customer retention. However, performance assessment in agriculture must consider the distinctive characteristics of agricultural production. Harvest volumes may fluctuate due to seasonal conditions, weather, input availability, and changes in market prices. In addition, storage and distribution costs can influence the profits generated from sales. Therefore, an increase in the number of buyers or transactions does not necessarily provide a complete picture of improvements in business performance.

The relationship between digital marketing and business performance can be understood through the ability of technology to support marketing activities. Kannan & Li (2017) explain that digital technologies provide opportunities for businesses to develop consumer interactions and create value through marketing processes. In agribusiness, these benefits may arise when businesses acquire new customers, accelerate communication, or manage orders more effectively. Digital platforms can also help businesses identify market needs through consumer feedback and transaction information. However, these benefits remain dependent on the ability of businesses to meet demand and manage the costs associated with marketing activities.

The distinction between sales growth and increased profitability deserves particular attention. An agricultural business may experience higher sales after joining an online marketplace, but its profits may not increase proportionally. Advertising, packaging, shipping, and platform service fees can reduce the financial benefits of additional sales. Conversely, digital technologies may improve efficiency by reducing the costs of finding buyers, accelerating communication, or improving order management. Therefore, the benefits of digital marketing should be assessed through broader economic outcomes rather than increases in online sales activity alone.

In this review, agricultural business performance is understood through sales growth, income development, marketing efficiency, customer base expansion, and business sustainability. These five dimensions provide a basis for interpreting findings from previous studies rather than serving as statistical indicators to be directly tested. This approach is necessary because studies examining agricultural business performance may employ different measures and research contexts. By considering these differences, the review can identify which benefits are most frequently associated with digital marketing, which benefits remain limited, and which conditions may explain variations in outcomes across agricultural businesses.

2.5 Integration of Digital Marketing, Digital Platforms, Market Access, and Agricultural Business Performance

Digital marketing, digital platform utilization, market access, and agricultural business performance are closely related but conceptually distinct. Digital marketing refers to the planning and implementation of marketing activities using digital technologies, while digital platforms provide the channels through which these activities are conducted. Market access reflects opportunities to reach buyers and establish trading relationships, whereas business performance represents the economic outcomes of these activities. Kannan & Li (2017) emphasize the role of digital marketing in facilitating consumer interactions and value creation. Similarly, Aker et al. (2016) and Trendov et al. (2019) highlight the potential of digital technologies to improve information access and market connections in agriculture. Klerkx et al. (2019) further explain that agricultural digitalization involves broader organizational, social, and institutional changes. Together, these perspectives suggest that the benefits of digital marketing depend not only on technological availability but also on how businesses utilize technology within their marketing activities.

The integration of these perspectives provides a conceptual basis for understanding the relationships among digital marketing, digital platform utilization, market access expansion, and agricultural business performance. Digital marketing strategies can be implemented through social media, e-commerce, and online marketplaces to improve buyer reach, market information, and trading networks. These opportunities may

subsequently contribute to sales growth, higher income, marketing efficiency, and sustainable customer relationships. However, these relationships should not be interpreted as automatic or necessarily causal. Rather, they represent potential connections identified in the existing literature. This distinction is important because adopting digital platforms does not necessarily indicate effective marketing practices, and broader market access does not always translate into improved profitability. Therefore, digital marketing effectiveness should be understood through the interaction between marketing strategies, platform utilization, market opportunities, and business capabilities rather than technological adoption alone.

Several barriers may influence these relationships, including limited infrastructure, inadequate digital skills, product quality requirements, marketing and operational costs, business management capabilities, and distribution constraints. Agricultural businesses may successfully promote their products online but still encounter difficulties fulfilling orders or maintaining product quality during delivery. Similarly, increased sales may not generate higher profits when additional operating costs outweigh the benefits. These conditions indicate that the contribution of digital marketing to agricultural business performance depends on technological utilization, business readiness, product characteristics, and market conditions. Accordingly, integrating these four concepts provides an analytical foundation for organizing and synthesizing the findings of the narrative literature review covering publications from 2015 to 2026. This perspective supports a more comprehensive understanding of how digital marketing can expand market access and potentially improve agricultural business performance while recognizing the organizational and market-related conditions that may influence these outcomes.

3. RESEARCH METHOD

3.1 Research Design

This study adopts a narrative literature review approach to examine the role of digital marketing in expanding market access and improving agricultural business performance. This approach was selected because the study does not aim to calculate effect sizes or statistically test relationships between variables through meta-analysis. Instead, it seeks to understand patterns of findings and differences across previous studies. Snyder (2019) explains that literature reviews can be used to integrate existing knowledge, identify research gaps, and develop conceptual understanding. Although narrative in nature, the literature search and selection processes are designed to follow a structured procedure, as emphasized by Green et al. (2006) and Baethge et al. (2019). This study is organized into four stages: literature identification, literature screening and selection, thematic categorization, and narrative synthesis.

3.2 Literature Search Strategy

The literature search focuses on publications from 2015 to 2026 indexed in Scopus and Google Scholar. This period was selected to examine the development of digital marketing in agribusiness, from the use of information technologies to the growing utilization of social media and e-commerce. The search keywords include "digital marketing", "social media marketing", "digital platform", "e-commerce", "agribusiness", "agriculture", "farmers", "market access", and "business performance". The search strategy employs combinations of the Boolean operators AND and OR, including "digital marketing" AND "agribusiness" and "e-commerce" AND "agriculture" AND "market access". This study targets 20 core articles as the basis for the thematic narrative synthesis. In addition, five benchmark/supporting articles are planned to be used separately to provide comparative context. Methodological and conceptual references, such as Snyder (2019), Kannan & Li (2017), and Klerkx et al. (2019), are used to strengthen the discussion but are not counted as core articles when they serve only as theoretical foundations. This distinction is intended to separate the main sources of synthesis from supporting references.

3.3 Inclusion and Exclusion Criteria

Articles are selected based on their relevance to digital marketing, digital platform utilization, market access, and agricultural business performance. Empirical studies, conceptual papers, and review articles are eligible for inclusion if they were published between 2015 and 2026 and provide relevant information. Publications focusing exclusively on agricultural production technologies without any connection to marketing, as well as nonacademic sources or articles containing insufficient information, are excluded from the selection process. The selection criteria are summarized in Table 1.

Table 1. Literature Inclusion and Exclusion Criteria

Aspect	Inclusion Criteria	Exclusion Criteria
Publication period	Publications from 2015–2026	Publications outside the specified period
Sources	Scopus and Google Scholar	Sources that cannot be verified
Publication type	Empirical, conceptual, and review articles	News articles, opinion pieces, and nonacademic sources
Research focus	Digital marketing and digital platforms in agribusiness	Studies unrelated to agribusiness marketing
Substantive relevance	Market access, sales, income, efficiency, or business performance	Studies unrelated to the review objectives
Research context	Farmers, farmer groups, and agribusiness operators	Studies outside the agribusiness sector
Information availability	Sufficient scientific information	Insufficient information

Note: Supporting articles and methodological or conceptual references are treated separately from the core articles

3.4 Literature Selection Process

The literature selection process followed four stages: identification, screening, eligibility assessment, and final inclusion. The review covered publications from 2015 to 2026, with a total of 85 records identified through Scopus (n = 25) and Google Scholar (n = 60). After removing 15 duplicate records, 70 publications remained for title and abstract screening. During this stage, 30 publications were excluded because they did not sufficiently address digital marketing in agribusiness, particularly its role in expanding market access and improving business performance. The remaining 40 publications underwent full-text eligibility assessment. Of these, 20 articles were excluded because they did not meet the established inclusion criteria, including insufficient relevance to the research objectives or inadequate information for thematic analysis. Consequently, 20 core articles were included in the final narrative synthesis, representing 23.53% of the initially identified publications. An additional five benchmark articles, together with relevant methodological and conceptual references, were used to strengthen the theoretical discussion and interpretation of findings. These supporting sources were considered separately and were not included in the primary literature selection flow. Figure 1 illustrates the literature selection process, from initial identification to final inclusion.

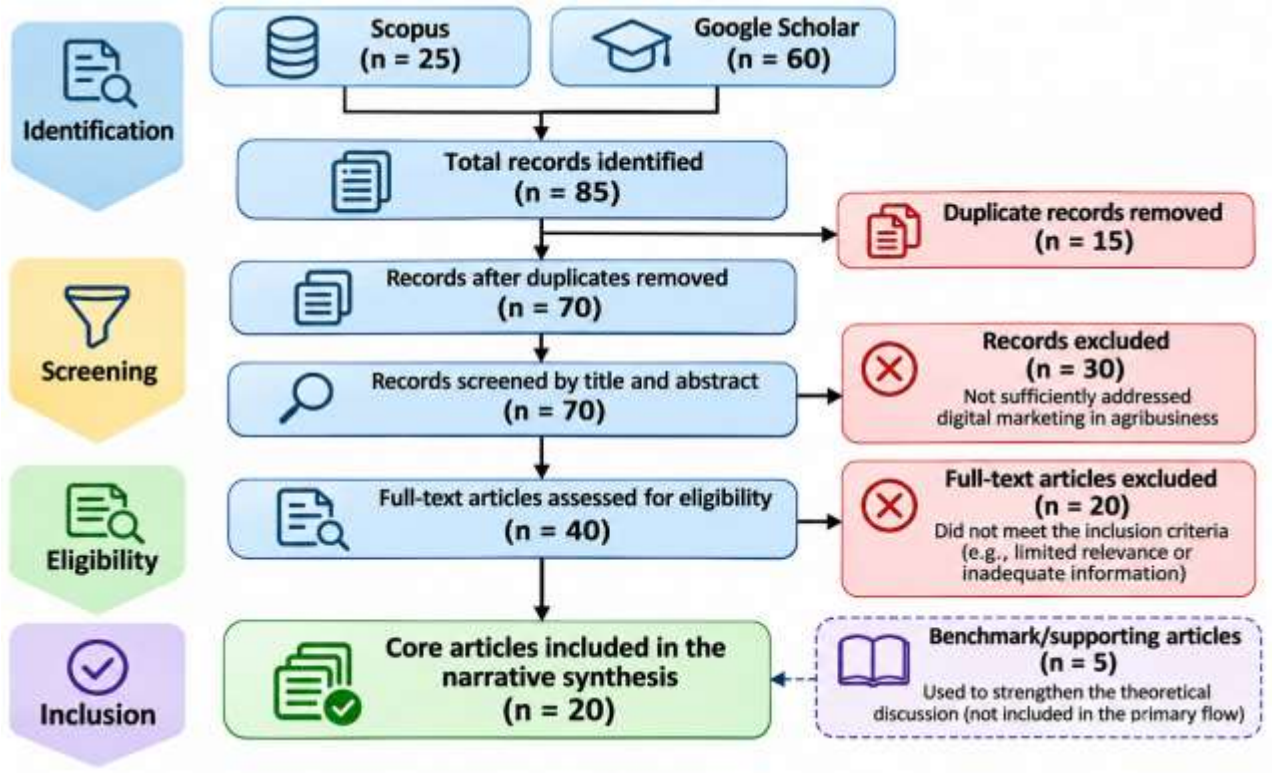


Figure 1. Literature Selection Process

3.5 Literature Analysis and Synthesis

A total of 20 core articles are targeted for analysis using a thematic narrative synthesis approach. The articles are compared based on their research focus, methodology, agribusiness context, types of digital platforms, and findings related to market access and business performance. The analysis aims to identify similarities, differences, and contextual conditions that explain variations in research findings rather than calculate the magnitude of relationships between variables. The synthesis is organized into five themes: the development of Digital Marketing in agribusiness, Digital Platform Utilization, Market Access Expansion, contributions to Agricultural Business Performance, and barriers to digital marketing implementation. These themes are used to understand the relationships among marketing strategies, platform utilization, buyer reach, business outcomes, and the challenges faced by agribusiness operators. The synthesis findings are subsequently integrated through a conceptual sequence comprising Digital Marketing, Digital Platform Utilization, Market Access Expansion, and Agricultural Business Performance. This framework is used to connect research findings while considering factors such as digital skills, infrastructure, costs, and distribution capabilities. The proposed sequence serves as an analytical framework rather than a statistically tested causal model.

4. DATA ANALYSIS AND DISCUSSION

4.1 Overview of the Reviewed Literature

The literature on digital marketing in agribusiness indicates that the development of digital technologies has changed how agricultural businesses obtain information, reach buyers, and manage marketing activities. Aker et al. (2016) explain that information and communication technologies have the potential to reduce information barriers in agriculture. Klerkx et al. (2019) further demonstrate that agricultural digitalization involves not only the use of technology but also changes in social relationships, organizations, and institutions. These perspectives provide a foundation for understanding that the benefits of digital marketing should be examined alongside business characteristics and market conditions.

Empirical studies present more diverse findings. Li et al. (2021) found that farmers who adopted e-commerce earned higher incomes than those who did not. Chen et al. (2023) demonstrated that cooperative membership can support e-commerce adoption and income growth among farming households. Meanwhile, Pesci et al. (2023) revealed that online marketing adoption is unevenly distributed among farmers due to differences in resources and business characteristics. These findings suggest that digital technologies can create economic opportunities, although the ability to benefit from them varies across agricultural businesses. Recent research has also paid increasing attention to both the benefits and risks of digital platform utilization. Feng (2024) found that e-commerce can expand the customer base of small-scale farmers but may also create dependence on digital platforms. Zhu et al. (2026) showed that e-commerce participation can increase agricultural business income, although the benefits do not necessarily continue to grow as the proportion of online sales increases. Based on these findings, the discussion is organized into five main themes, as presented in Table 2.

Table 2. Synthesis of the Main Themes Identified in the Reviewed Literature

Main Theme	Relevant Studies	Synthesis of Key Findings	Implications
Digital Marketing in Agribusiness	Aker et al. (2016); Pesci et al. (2023); Zhang (2025)	Digital marketing expands communication, promotional opportunities, and customer relationships. Its utilization varies according to business capabilities.	Marketing strategies and digital skills are needed to support effective technology utilization.
Digital Platform Utilization	Chen et al. (2023); Cimino et al. (2024); Prado et al. (2024); He et al. (2024)	Platform adoption is influenced by perceived benefits, ease of use, business networks, and user readiness.	Platform development should consider farmers' needs and capabilities.
Market Access Expansion	Li et al. (2021); Chen et al. (2023); Li & He (2024); Marion et al. (2024)	Digital technologies and institutional support can expand transaction opportunities, buyer networks, and market integration.	Market access should be evaluated through actual transactions and the ability to maintain trading relationships.
Agricultural Business Performance	Yi et al. (2023); Li & He (2024); Guan et al. (2024); Ye et al. (2024); Zhu et al. (2026)	E-commerce is associated with increased income in several contexts, although its benefits vary and may exhibit nonlinear relationships.	Business performance should be assessed through income, sales, costs, and profitability.

Digital Barriers and Gaps	Pesci et al. (2023); Feng (2024); He et al. (2024); Njuguna et al. (2025)	Digital skills, infrastructure, risks, platform costs, and technological dependence may limit the benefits of digitalization.	Marketing transformation requires training, infrastructure development, and distribution support.

Note: The synthesis groups findings into five analytical themes. A study may contribute to more than one theme. The findings are interpreted narratively rather than through statistical meta-analysis.

4.2 Development of Digital Marketing in Agribusiness

The development of digital marketing has created new opportunities for agribusiness operators to introduce and market their products. Marketing activities that previously relied heavily on direct relationships with buyers can now be complemented by social media, messaging applications, and e-commerce. Kannan & Li (2017) explain that digital marketing involves not only the use of technology as a communication channel but also value creation through consumer interactions. This perspective is particularly relevant to agribusiness because marketing success depends not merely on product availability on digital platforms but also on the ability of businesses to understand buyers' needs. Pesci et al. (2023) provide empirical evidence from a study involving 364 direct-market farmers in California. Their findings indicate that online sales and marketing helped some farmers maintain market access during the COVID-19 pandemic. Farmers with an existing online presence or those who began selling online tended to have better opportunities to increase sales and profitability than farmers who did not use these channels. However, these benefits were not evenly distributed, as business characteristics and resource availability influenced technology adoption.

Zhang (2025) also demonstrates that social media can help connect rural farmers with urban consumers. Through social media, agricultural businesses have opportunities to introduce products, communicate information, and establish relationships with buyers who were previously difficult to reach. Nevertheless, infrastructure limitations and insufficient digital knowledge remain significant barriers. These findings indicate that technology can expand marketing communication, but its effective utilization still requires information management and customer relationship capabilities. Therefore, the development of digital marketing in agribusiness should not be understood simply as a shift from physical markets to digital environments. More importantly, it involves the ability of businesses to manage product information, establish trust, and maintain relationships with buyers. Technology utilization becomes more meaningful when it forms part of a marketing strategy aligned with product characteristics and market needs.

4.3 The Role of Digital Platforms in Expanding Market Access

Digital platforms create opportunities for farmers to expand buyer networks and overcome some limitations of conventional marketing. Li et al. (2021), in a study involving 1,030 farming households in China, found that e-commerce adoption was associated with increased household income, particularly through growth in sales revenue. However, these benefits varied according to geographical location and household characteristics. This finding suggests that digital platforms can expand trading opportunities, although not all farmers benefit to the same extent. Chen et al. (2023) found that cooperative membership supports e-commerce adoption and increases farming household income in China. Their findings indicate that market access expansion does not depend solely on individual capabilities. Cooperatives can strengthen relationships among agricultural businesses and support the utilization of marketing technologies. In agribusiness, organizational support is particularly important because farmers frequently face limitations in production capacity, financial resources, information, and buyer networks. Cimino et al. (2024) examined 192 small-scale farmers in Italy and found that performance expectancy, effort expectancy, social influence, environmental uncertainty, and network position were positively associated with intentions to adopt digital platforms. Their study indicates that platform adoption decisions are influenced not only by technological availability but also by farmers' perceptions of its benefits and ease of use. Similarly, He et al. (2024), in a study involving 301 farmers in Wuchang, China, found that e-commerce adoption decisions were influenced by farmer characteristics, policy perceptions, perceived risks, and infrastructure conditions.

From a platform management perspective, Prado et al. (2024) found that the success of an agricultural marketplace in Brazil was associated with management support, responsiveness to market needs, customer relationships, resource availability, and organizational learning and adaptation capabilities. These findings suggest that platform sustainability depends not only on the technologies employed but also on the ability of platform operators to maintain value for producers and consumers. Marion et al. (2024) provide a broader perspective through a review of agricultural market access interventions in low- and middle-income

countries. Their findings suggest that improved market access can be associated with greater market participation, agricultural production, and farmer welfare. However, outcomes vary according to intervention types and implementation conditions. Therefore, digital platforms should be understood as one mechanism for expanding market access, supported by information, transportation, organizational arrangements, and trading facilities.

4.4 Contribution of Digital Marketing to Agricultural Business Performance

The contribution of digital marketing to business performance is an important concern because technology adoption should generate economic benefits rather than merely introduce new marketing activities. Li & He (2024) found that the development of rural e-commerce in China was positively associated with farmers' income. These improvements occurred through market integration and the development of economic activities that supported employment opportunities. Their study also demonstrated that transportation infrastructure and human capital influenced the magnitude of the benefits obtained. Ye et al. (2024) found that the development of rural e-commerce ecosystems had a positive effect on farmers' income. However, their findings also revealed differences in benefits according to educational conditions and regional characteristics. These results indicate that regional e-commerce development can create economic opportunities, although the outcomes remain dependent on community capabilities and local conditions.

Guan et al. (2024) examined the relationship between rural e-commerce, farmers' income, and income inequality. Their study suggests that e-commerce development should be evaluated not only in terms of income growth but also in relation to how its benefits are distributed among household groups. Accordingly, digital marketing success should not be assessed solely through increases in average income when some agricultural businesses continue to face barriers to participation. More complex findings were reported by Yi et al. (2023), who identified an inverted U-shaped relationship between e-commerce participation and farmers' income. This suggests that economic benefits may increase up to a certain level of participation but decline at higher levels. Their study also showed that digital financial services can help mitigate diminishing marginal benefits by supporting financing and business activities.

Zhu et al. (2026) further contribute to this discussion through an analysis of 10,282 agricultural businesses in China. Their findings indicate that e-commerce participation increases business income, but the relationship between the proportion of online sales and income follows an inverted U-shaped pattern. The benefits are greater during the initial stages of adoption and vary according to managerial characteristics, organizational forms, and regional conditions. Income improvements primarily result from broader market reach and increased sales volume rather than higher product prices. Collectively, these findings suggest that digital marketing can contribute to agricultural business performance, but its benefits do not necessarily increase proportionally with the intensity of technology utilization. Businesses may attract more buyers and increase sales while simultaneously facing additional advertising, packaging, distribution, and platform management costs. Therefore, business performance should be assessed through sales, income, profitability, marketing efficiency, and customer retention. This distinction is necessary to avoid treating digital activity itself as evidence of economic success.

4.5 Barriers and Gaps in Digital Marketing Implementation

Although digital platforms create new opportunities, agribusiness operators do not possess equal capabilities to utilize them. Pesci et al. (2023) found that online marketing adoption among California farmers was influenced by business characteristics and resource availability. Farmers with higher business income were more likely to engage in online sales. Their study also emphasized the importance of internet access, financial support, and training for farmers seeking to develop digital marketing activities. He et al. (2024) demonstrated that the factors influencing e-commerce adoption decisions are not necessarily identical to those affecting the intensity of platform utilization. Risk perceptions, infrastructure readiness, household characteristics, and understanding of government policies can influence farmers' decisions. These findings indicate that digitalization challenges do not disappear once farmers begin using digital platforms. The next challenge concerns how these technologies can be utilized more intensively and sustainably.

Feng (2024) identified additional challenges related to relationships between small-scale farmers and platform operators. Although e-commerce provides alternative marketing channels, expands customer bases, and improves distribution efficiency, farmers may also experience platform dependence and incur addi-

tional costs to attract consumer attention. This study suggests that digitalization does not necessarily eliminate inequalities in trading relationships. Instead, certain forms of dependence may change as digital market structures develop. Njuguna et al. (2025) also indicate that the development of digital technologies in African agriculture has generated various new services, but evidence regarding their long-term impacts remains limited. Differences in technological characteristics, regional contexts, and research methodologies make it difficult to assess benefits uniformly. These findings suggest that technological success in one region cannot automatically be generalized to all agribusiness activities. Beyond digital skills and infrastructure, the characteristics of agricultural products must also be considered. Fresh produce requires different handling and delivery arrangements compared with processed products with longer shelf lives. Expanding buyer reach through digital platforms may not generate additional profits if distribution costs increase or product quality deteriorates during transportation. Therefore, digital marketing implementation requires logistics support, production readiness, and cost management capabilities to translate market opportunities into economic benefits.

4.6 Integration of Digital Marketing, Digital Platforms, Market Access, and Agricultural Business Performance

The findings indicate that digital marketing, digital platforms, market access, and agricultural business performance are interconnected but serve different functions. Kannan & Li (2017) provide a foundation for understanding digital marketing as a process involving interaction and value creation. Cimino et al. (2024) and He et al. (2024) demonstrate that platform utilization is influenced by user readiness and perceptions. Meanwhile, Li et al. (2021), Chen et al. (2023), and Li & He (2024) show that e-commerce adoption can be associated with expanded market relationships and increased farmers' income. However, these relationships do not always operate directly. Pesci et al. (2023) show that the ability to use online marketing differs across agricultural businesses. Feng (2024) demonstrates that broader market access may be accompanied by dependence on digital platforms. Yi et al. (2023) and Zhu et al. (2026) further reveal that the economic benefits of e-commerce participation may follow nonlinear patterns. These differences indicate that more intensive platform utilization does not necessarily result in higher profitability.

Based on this synthesis, the review integrates four main components: Digital Marketing, Digital Platform Utilization, Market Access Expansion, and Agricultural Business Performance. Digital Marketing represents marketing strategies that utilize technology. Digital Platform Utilization refers to the channels used to communicate information, interact with consumers, and manage transactions. Market Access Expansion reflects broader buyer networks and trading opportunities. Agricultural Business Performance captures the economic outcomes achieved by agricultural businesses.

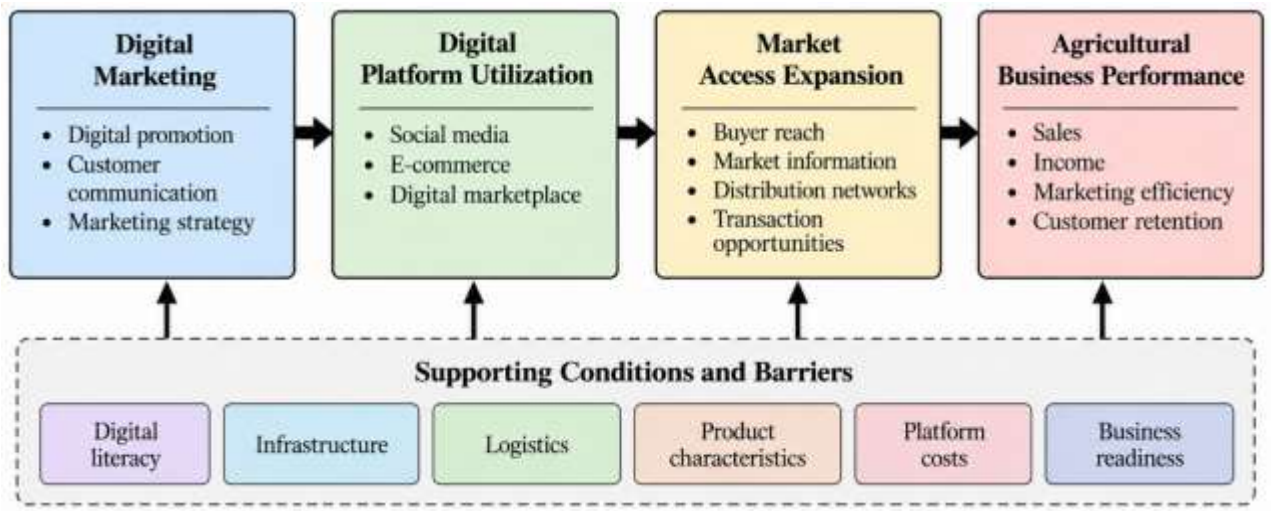


Figure 2. Integrated Framework of Digital Marketing, Market Access, and Agricultural Performance

The framework demonstrates that digital marketing success in agribusiness cannot be assessed solely through the use of social media or online marketplaces. The benefits of technology must be evaluated through the ability of businesses to attract buyers, maintain trading relationships, and improve economic outcomes

after accounting for associated costs. The findings also indicate that digital skills, infrastructure, distribution capabilities, and business readiness are important conditions that may strengthen or limit the benefits of digital marketing. Accordingly, digital marketing should be understood as part of agricultural business management that connects marketing strategies, technology utilization, market access, and operational capabilities.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

This review demonstrates that digital marketing plays an important role in creating opportunities to expand market access and improve agricultural business performance. The utilization of social media, e-commerce, and online marketplaces enables agribusiness operators to promote their products, reach new buyers, and establish broader trading relationships. However, the literature synthesis indicates that digital technology adoption does not always lead directly to increased income and profitability. The benefits obtained depend on digital skills, business readiness, infrastructure, marketing costs, and distribution capabilities. Therefore, the main contribution of this review lies in demonstrating that digital marketing, digital platform utilization, market access expansion, and agricultural business performance are interconnected processes, but their success depends on the ability of agricultural businesses to translate digital opportunities into transactions and sustainable economic benefits.

The findings of this review provide theoretical and practical implications for the development of digital marketing in agribusiness. From a theoretical perspective, this review proposes an integrative framework linking digital marketing, digital platform utilization, market access expansion, and agricultural business performance while considering conditions that may strengthen or constrain these relationships. From a practical perspective, agribusiness operators should view digital technology as part of their marketing strategies rather than merely as a promotional tool. Platform utilization should be accompanied by the ability to manage product information, build consumer trust, retain customers, and account for transaction costs. For governments, cooperatives, and agricultural support institutions, these findings emphasize the importance of strengthening digital literacy, internet infrastructure, logistics services, and marketing assistance to ensure that the benefits of digital transformation can reach agricultural businesses with varying levels of capacity.

This review has several limitations that should be considered when interpreting its findings. First, the narrative literature review approach emphasizes the synthesis and interpretation of existing findings and therefore does not provide statistical effect estimates comparable to those generated through meta-analysis. Second, the literature coverage is limited to publications from 2015 to 2026 identified through Scopus and Google Scholar, meaning that relevant studies from other sources may not have been included. Third, differences in geographical contexts, business characteristics, platform types, and performance indicators limit the generalizability of the findings. Furthermore, this review does not employ primary data to test the relationships among variables within the proposed integrative framework. Accordingly, the framework should be understood as a conceptual synthesis that requires further empirical validation rather than an established causal model.

Future research is recommended to empirically examine the relationships among digital marketing, digital platform utilization, market access expansion, and agricultural business performance using quantitative, qualitative, or mixed-methods approaches. Particular attention should be given to the mediating role of market access and the factors influencing digital marketing success, including digital literacy, organizational readiness, platform costs, and logistics capabilities. Business performance measurement should also extend beyond sales growth to include net profitability, marketing efficiency, and the sustainability of customer relationships. Furthermore, research involving small-scale farmers, farmer groups, cooperatives, and agribusiness enterprises in Indonesia is needed to determine whether the benefits of digital platforms differ according to business scale, product characteristics, and regional conditions. Such findings are expected to provide a foundation for developing digital marketing strategies and agribusiness support policies that better reflect the needs of agricultural businesses.

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