



Digital Marketing in a Context of Digital Transformation: A Conceptual Model Integrating Digital Entrepreneurship to Revolutionize Digital Practices

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Abstract: In a context of growing digital transformation, this theoretical article explores the role of digital entrepreneurship in revolutionizing digital marketing practices. By integrating the dimensions of digital transformation, digital entrepreneurship, and digital marketing, the study aims to understand the complex interactions between these domains. The central issue of the article focuses on how digital transformation and digital entrepreneurship influence digital marketing practices, with particular attention to underlying mechanisms and implications for businesses. Research objectives include identifying key success factors for digital entrepreneurship in a rapidly evolving digital environment and proposing a conceptual model to explain these dynamics, to illuminate digital marketing practices in a context of digital transformation. The methodology adopted involves a thorough literature review and a critical analysis of previous work, followed by conceptualization of relationships between key variables. Results highlight the importance of digitizing operations, modernizing IT infrastructures, and managing change in the digital transformation of businesses and their impact on digital marketing. In conclusion, this article underscores the increasing importance of digital entrepreneurship in a changing digital landscape, while highlighting implications for digital marketing practices. Additionally, it offers avenues for future research and practical implications for businesses.

Keywords: Digital transformation; Digital entrepreneurship; Digital marketing; Digitization; Conceptual model.

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1 Introduction

The digital revolution has profoundly transformed the business landscape, reshaping traditional business practices and opening new avenues for innovation and growth. At the core of this revolution are three interconnected dimensions: digital transformation, digital entrepreneurship, and digital marketing. Digital transformation, characterized by the increasing adoption of digital technologies by businesses, redefines operational processes and business models (Aithal, 2023; Butt, 2020). Concurrently, digital entrepreneurship emerges as a key driver of innovation and value creation in the digital economy, fueled by a dynamic ecosystem of startups and innovative entrepreneurs (Centobelli & al., 2022; Yadav & al., 2023). Finally, digital marketing, in constant evolution, relies on the strategic use of digital channels to target, engage, and convert consumers in an increasingly connected world (Chowdhury, 2024; Makovoz & Lysenko, 2024).

The convergence of these three dimensions creates an environment conducive to the evolution of digital marketing practices. While digital transformation redefines infrastructures and business processes, digital entrepreneurship stimulates innovation and creates new business opportunities. In this dynamic context, digital marketing evolves to adapt to the new realities of the digital market, leveraging technological advances to better target consumers and enhance engagement (Franzè & al., 2024; Jaish & al., 2023). Thus, understanding the interactions between digital transformation, digital entrepreneurship, and digital marketing is crucial for businesses seeking to capitalize on the opportunities offered by the digital economy.

Within this framework, the central issue of our research revolves around the following question: To what extent do digital transformation and digital entrepreneurship influence digital marketing practices? To answer this question, we propose to explore the following sub-questions:

QR1: How does digital transformation influence digital marketing practices?

QR2: How does digital entrepreneurship contribute to shaping digital marketing?

QR3: What are the mechanisms through which digital transformation and digital entrepreneurship interact to influence digital marketing practices?

The objectives of this research are manifold. Firstly, we aim to deeply understand the dynamics of digital transformation, digital entrepreneurship, and digital marketing. Secondly, we seek to identify the key determinants and mechanisms underlying their interactions. Finally, we propose to develop a conceptual model integrating these dimensions to enlighten digital marketing practices in a context of digital transformation.

This study adopts a theoretical and conceptual approach, relying on a thorough literature review to explore key concepts and relationships between digital transformation, digital entrepreneurship, and digital marketing. By integrating existing theoretical perspectives with relevant empirical studies, we will develop a conceptual model to illuminate digital marketing practices in a context of digital transformation.

This article will be structured around the following sections: an in-depth literature review to establish the conceptual framework of the research, the presentation of the conceptual model integrating digital transformation, digital entrepreneurship, and digital marketing, and a conclusion articulated around the recapitulation of the main results, the critical analysis of the model, the limitations of the conceptual approach, the contributions of the research, the managerial and scientific implications, the perspectives for improving and extending the model, and recommendations for future research.

2 Literature Review

Digital transformation and digital entrepreneurship are two rapidly expanding fields that directly influence digital marketing practices. While digital transformation revolutionizes traditional business models through the adoption of digital technologies, digital entrepreneurship fosters innovation and the creation of disruptive enterprises in this evolving environment. This literature review explores the connections between these domains and digital marketing, highlighting their synergies and their impacts on contemporary marketing strategies.

2.1 Digital Transformation of Businesses

The digital transformation of businesses is a complex and multifaceted process that impacts all aspects of their operations, from strategy to organizational culture, operations, and customer relations. This process involves the adoption and integration of digital technologies such as the Internet of Things (IoT), artificial intelligence (AI), Big Data, Cloud Computing, and Blockchain to rethink traditional business models and create added value for stakeholders. One key dimension of business digital transformation is process digitization. Companies seek to automate and optimize their operations using digital solutions to streamline workflows, improve operational efficiency, and reduce costs. Integrated management systems (ERP), customer relationship management (CRM) tools, and online collaboration platforms are among the most commonly used technologies for this purpose (Balabanov, 2022; Chatterjee & Chaudhuri, 2023; Chaudhuri & al., 2022; Fernando & al., 2023; Kabachenko & al., 2023; Wang, 2022).

Moreover, digital transformation often involves reinventing traditional business models to adapt to the digital economy. Companies aim to explore new market segments, develop innovative products and services, and create digital ecosystems to interact with customers and partners more collaboratively and transparently (Casciani & al., 2022; Elia & al., 2024; Jabeen & al., 2023; Rogers, 2023; Taherdoost, 2024).

Customer relations are also at the heart of business digital transformation. Companies strive to personalize the customer experience using data and analytics to understand individual customer needs and preferences, and by providing smoother and more consistent interactions across all digital channels (Corsaro & Anzivino, 2021; Do Vale & al., 2021; Hayes & Kelliher, 2022; Mele & al., 2024; Singh & Kaunert, 2024).

Finally, organizational culture plays a crucial role in the success of digital transformation. Companies must adopt a mindset focused on innovation, agility, and continuous learning to adapt to a constantly evolving environment and capitalize on the opportunities offered by digitization (Appio & al., 2024; Djavanshir, 2023; Ghosh & al., 2022; Raza & Wang, 2023; Warner & Wäger, 2019).

This subsection has provided a comprehensive overview of the digital transformation of businesses, highlighting the various dimensions of this process and underscoring its importance in the contemporary business landscape.

2.2 Digital Entrepreneurship

Digital entrepreneurship represents a form of entrepreneurship that leverages digital technologies to create, develop, and manage innovative and disruptive businesses. This field of activity is characterized by a strong focus on innovation, speed of execution, and creative exploitation of opportunities offered by the digital realm (Eliakis & al., 2020; Gala & al., 2024; Gudi & al., 2024; Han & al., 2024; Li & Long, 2023; Nicholls-Nixon & al., 2024).

One of the distinctive features of digital entrepreneurship is the ease of access to resources and global markets through the Internet and digital platforms. Digital entrepreneurs can start

and grow businesses with relatively low initial investments, using online tools and services for product design, marketing, distribution, and management (Gomes & Lopes, 2023; Naudé & Liebrechts, 2023; Purbasari & al., 2021; Steininger & al., 2022; Taura, 2022).

Moreover, digital entrepreneurship is closely linked to the emergence of new business models based on digital technologies. Digital companies often adopt platform, marketplace, or network models to create ecosystems where users can interact, share resources, and collaboratively create value (Calderon-Monge & Ribeiro-Soriano, 2024; Daniels & al., 2023; Khandelwal & al., 2022; Kopalle & al., 2020; Roundy, 2022).

Innovation lies at the heart of digital entrepreneurship, with many entrepreneurs seeking to introduce innovative products and services that disrupt established industries. Digital startups are often pioneers in adopting emerging technologies such as artificial intelligence, virtual reality, and Blockchain to create innovative solutions that meet consumer needs (Elia & al., 2020; Mariusz & al., 2021; Modgil & al., 2022; Nadi & al., 2024; Soltanifar & al., 2021; Udhaty & al., 2024).

Finally, digital entrepreneurship presents unique challenges, including intense competition in digital markets, intellectual property protection in an online environment, and managing risks related to cybersecurity and data privacy (Elgharbawy & al., 2023; Gallego-Arrufat & al., 2023; Kyriakopoulos, 2022; Meyer & al., 2023; Moh'd Anwer, 2024; Song, 2019).

This subsection has provided a comprehensive overview of digital entrepreneurship, highlighting its distinctive features, opportunities, and challenges in the context of the digital economy.

2.3 Digital Marketing

Digital marketing encompasses all marketing activities that utilize digital channels and technologies to promote products and services, as well as to engage with customers and prospects. In an era of increasing digitization, digital marketing has become an essential element of any business's marketing strategy, offering efficient and targeted ways to reach audiences and drive engagement (Aghazadeh & Khoshnevis, 2024; Alhalwachi & al., 2024; Kaufman & al., 2023; Prasajo & Sudarmiatin, 2024; Wang & al., 2024).

One key dimension of digital marketing is online advertising. Companies use a variety of digital advertising channels such as social media, search engines, partner websites, and video platforms to deliver targeted advertising to relevant audiences. Advanced targeting technologies enable advertisers to personalize their messages based on demographic data, interests, and online behavior of consumers (Aghazadeh & Khoshnevis, 2024; Aminul, 2024; Bajaja, 2024; Chowdhury & al., 2024; Jakka & al., 2024; Lee & al., 2020; Tarabasz, 2024).

Additionally, digital marketing also encompasses efforts to optimize a company's online visibility and presence through search engine optimization (SEO) and content marketing. SEO aims to improve a website's ranking in search engine results, while content marketing involves creating and distributing relevant, high-quality content to attract, engage, and retain audiences (Baneva & al., 2023; Bhalla & al., 2024; Edge & al., 2023; George, 2021; Modi & al., 2024).

Digital marketing also offers opportunities for engagement and interaction with customers on social media platforms. Companies use social networks to share content, respond to customer comments and questions, and establish more personalized relationships with their audience (Agarwal & Sharma, 2024; Hanandeh & al., 2024; Noorymotlagh, 2023; Shymanska & al., 2024; Yuniarti & al., 2024).

Finally, digital marketing includes data analysis and performance measurement to assess the effectiveness of marketing efforts and optimize future strategies. Companies use web analytics tools and key performance indicators (KPIs) to track user interactions, measure conversions, and evaluate the return on investment (ROI) of their marketing campaigns

(Adeleye & al., 2024; Al Adwan & al., 2023; Feroz & al., 2024; Taherdoost, 2023; Згурська & al., 2024).

This subsection has provided a comprehensive overview of digital marketing, highlighting its various dimensions and underscoring its importance in the contemporary marketing landscape.

2.4 Synthesis of Key Concepts

The synthesis of key concepts in the literature review highlights the main points of convergence and divergence between digital transformation of businesses, digital entrepreneurship, and digital marketing. This comparative analysis helps to better understand the interrelationships between these domains and identify emerging trends and common challenges.

Firstly, it's important to note that the digital transformation of businesses, digital entrepreneurship, and digital marketing are all closely linked to the rapid evolution of digital technologies and the impact of digitization on organizations and markets. These domains share a focus on innovation, adaptability, and the pursuit of new opportunities in a constantly evolving environment (Amorim & al., 2023; Balta & al., 2024; Elia & al., 2020; Kaufman & al., 2023; Schallmo & al., 2023; Yang & Torkkeli, 2023; Yazeer & Sachithra, 2024).

Additionally, the digital transformation of businesses and digital entrepreneurship are often interconnected, with many traditional companies seeking to adopt entrepreneurial approaches to drive innovation and accelerate the implementation of new technologies (Bansal & al., 2024; Bican & Brem, 2020; Felicetti & al., 2024; Gavrilă Gavrilă & De Lucas Ancillo, 2022; Lungu & al., 2024; Shamsrizi & al., 2021; Sitaridis & Kitsios, 2024). Similarly, digital marketing plays a crucial role in the digital transformation of businesses by providing tools and strategies to reach and engage customers in an ever-changing digital environment (Hosur & Satish, 2023; Khan & al., 2024; Mapila & Moloi, 2024; Nesterenko & al., 2023; Melović & al., 2020; Ziółkowska, 2021).

However, despite their synergies, these domains also present significant differences. For example, digital entrepreneurship often focuses on creating new ventures and disrupting established industries, while the digital transformation of businesses may involve modernization and digitization initiatives within existing organizations (Antonizzi & Smuts, 2020; Balli, 2020; Bican & Brem, 2020; Jafari-Sadeghi & al., 2021; Jawad & al., 2021; Mpofo, 2023; Usman & al., 2024).

Regarding digital marketing, it emphasizes the promotion and marketing of products and services through digital channels, with a particular focus on personalization, engagement, and measuring the effectiveness of campaigns (Bajeja, 2024; Cevher, 2024; Konoplyannikova & al., 2024; Okorie & al., 2024; Priyanka & al., 2024; Taherdoost, 2023; Tarabasz, 2024).

In summary, the synthesis of key concepts highlights the growing importance of digitization in all aspects of modern business, as well as the opportunities and challenges associated with the digital transformation of businesses, digital entrepreneurship, and digital marketing.

3 Conceptual Framework of the Research

This section focuses on developing an integrative conceptual framework to explore the complex dynamics between digital transformation of businesses, digital entrepreneurship, and digital marketing. We approach this analysis by following a precise structure, beginning with the development of the integrative conceptual framework, followed by the proposal of a detailed conceptual model.

Within the development of the integrative conceptual framework, we examine the key concepts, theories, and models associated with each of the dimensions under study. We

highlight points of convergence and divergence between the digital transformation of businesses, digital entrepreneurship, and digital marketing to identify the key elements to be integrated into our conceptual model.

Next, in the subsection dedicated to the proposed conceptual model, we articulate the dimensions of the digital transformation of businesses, digital entrepreneurship, and digital marketing around specific concepts. We also detail the sub-dimensions of each domain, including the dimension of digital transformation, the dimension of digital entrepreneurship, and the dimension of digital marketing.

Finally, we explore key constructs and inter-dimensional relationships to better understand the underlying mechanisms of these interactions. We analyze how these dimensions interact and influence each other, highlighting crucial elements for understanding digital marketing practices in an ever-evolving digital environment. We also examine their impact on value creation, exploring the underlying mechanisms that shape companies' strategies and processes in this dynamic context.

3.1 Development of the Integrative Conceptual Framework

The development of the integrative conceptual framework requires a thorough exploration of the concepts, theories, and models associated with the digital transformation of businesses, digital entrepreneurship, and digital marketing. This approach will enable us to understand the key dimensions of each domain and their interactions within the context of the digital economy.

Digital transformation of businesses is a complex process involving the adoption and integration of digital technologies to enhance business operations, internal processes, and customer relationships (Butt, 2020; Kao & al., 2024; Martínez-Peláez & al., 2023; Muniz-Rodriguez & al., 2024; Rana & al., 2024; Taherdoost, 2024). Companies seek to leverage new technologies such as artificial intelligence, the Internet of Things, and data analytics to innovate and remain competitive in the market (Makovoz & Lysenko, 2024; Mathew & al., 2023; Ochuba & al., 2024; Stadnicka & al., 2022; Teh & Rana, 2023; Ullah & al., 2024).

Digital entrepreneurship refers to the use of digital technologies to create and develop new businesses and commercial opportunities (Elshaiekh & al., 2023; Isensee & al., 2022; Jovanovic & al., 2024; Sahut & al., 2021; Wulanda & al., 2024). Digital entrepreneurs leverage online platforms, social networks, and digital marketing tools to reach their target audience and grow their businesses (Dzingirai & al., 2024; Elia & al., 2023; Hu & al., 2024; Satjharuthai & Lakkhongkha, 2023; Singh & al., 2024).

Digital marketing encompasses the strategies and tactics used by companies to promote their products and services on digital channels such as search engines, social media, and websites (Aswani Thampi, 2024; Dhore & al., 2024; Harshini & al., 2024; Sahoo & Raghu, 2023; Salhab, 2024). Companies deploy targeted advertising campaigns, engaging content, and data analytics to optimize their marketing efforts and achieve their business goals (Adwan, 2024; Babatunde & al., 2024; Kaperonis, 2024; Kumar, 2024; Okorie & al., 2024; Raji & al., 2024). The convergence of these domains presents new opportunities as well as unique challenges for businesses. Understanding the interactions between the digital transformation of businesses, digital entrepreneurship, and digital marketing is essential for formulating effective strategies and remaining competitive in the evolving global digital market.

3.2 Proposed Conceptual Model

In this subsection, we describe the methodology used to develop the research conceptual model, identifying the explanatory dimensions and the dimension to be explained along with their key constructs.

To identify the explanatory dimensions, namely digital transformation of businesses and digital entrepreneurship, we adopt an iterative approach based on a comprehensive review of academic literature. This review allows us to identify the main concepts, theories, and models associated with each dimension, as well as the key constructs that define them. We also examine existing research on the relationship between digital transformation, digital entrepreneurship, and digital marketing to determine their relevance in the context of our study.

Regarding the dimension to be explained, digital marketing, we adopt a similar approach to identify relevant key constructs. We focus on studies that examine practices, trends, and challenges in digital marketing in an ever-evolving digital environment. We select the most relevant key constructs that may be influenced by the explanatory dimensions and are likely to explain the observed variations in digital marketing.

By integrating these dimensions into our conceptual model, we aim to provide a robust theoretical framework for understanding the dynamics between digital transformation of businesses, digital entrepreneurship, and digital marketing. This conceptual model will serve as the basis for our theoretical analysis and contribute to illuminating practices and strategies in a digital context.

3.2.1 Dimension of Digital Transformation

The dimension of digital transformation of businesses is a crucial research area in the context of the ever-evolving digital economy. This dimension encompasses a wide range of processes, strategies, and technologies used by organizations to adapt to the requirements of the digital world.

In this step, we explore in detail the key constructs of digital transformation, focusing on the following aspects:

❖ Digitalization of Operations

The digitalization of operations involves the integration of digital technologies into the business and operational processes of a company (Broccardo & al., 2024; Holmström & al., 2019; Maleki Vishkai & De Giovanni, 2024; Prashar, 2024; Rossini & al., 2024). This includes task automation, the use of integrated management software, and workflow optimization to increase efficiency and productivity. Digitalizing operations is crucial for enabling businesses to remain competitive in a rapidly changing economic environment (Jaish & al., 2023; Makovoz & Lysenko, 2024; Mishra & al., 2023; Vartiainen, 2023). By adopting technologies such as the Internet of Things (IoT) and artificial intelligence (AI), companies can enhance their operational agility and their ability to respond to changing customer needs (Aithal, 2023; Masenya, 2023; Sharma & al., 2024; Wong & al., 2022).

❖ Modernization of IT Infrastructure

Modernizing IT infrastructure is essential for enabling digital transformation. This involves adopting cloud solutions, server virtualization, implementing integrated information systems, and securing data (Butt, 2020; Möller, 2023; Raj & al., 2022; Stefan, 2023). A modern and flexible IT infrastructure is necessary to support long-term digital transformation initiatives. Modernizing IT infrastructure enables companies to leverage the latest technological advancements and optimize their business processes (Arifdianto, 2023; George, 2024; Marks & Al-Ali, 2022). By investing in emerging technologies such as blockchain and edge computing, companies can enhance their digital resilience and ability to innovate rapidly (Aithal, 2023; Gill & al., 2019; Iyer, 2022; Sodiya & al., 2024).

❖ Change Management

Digital transformation often requires significant organizational change to succeed. Change management involves stakeholder engagement, staff training, effective communication, and creating a culture of innovation and adaptability (Ba & al., 2023; Kala Kamdjoug, 2024; Khilji & Nolic, 2024; Kolasani, 2023; Malik & al., 2024; Ojji, 2024; Sabaruddin & al., 2024). Effective change management is crucial for overcoming internal resistance and fostering the adoption of new technologies and ways of working. Change management is an essential component of digital transformation as it mobilizes the human and organizational resources needed for success (Bellantuono & al., 2021; Hanelt & al., 2021; Sobczak, 2022; Weber & al., 2022). By involving employees at all levels of the organization and providing them with the necessary skills and tools, companies can foster a culture of innovation and adaptability (Ajayi & Udeh, 2024; Chimakati & Macharia, 2024; Gui & al., 2024; Ones-Ozigun & al., 2024).

Examining these key constructs helps us understand how companies undertake their digital transformation, the challenges they face, and best practices for success in an ever-evolving digital environment.

3.2.2 Digital Entrepreneurship Dimension

Digital entrepreneurship has become an increasingly important area of study in the rapidly evolving digital economy context. This dimension focuses on entrepreneurial strategies, processes, and behaviors in a digital environment.

In this phase, we delve deeply into the key constructs of digital entrepreneurship, considering their coherence with the other dimensions of the proposed conceptual model.

❖ Digital Innovation

Digital innovation lies at the heart of digital entrepreneurship. Digital entrepreneurs are constantly seeking new ways to create value through the innovative use of technology (Centobelli & al., 2022; Mohammed-Nasir & al., 2023; Ongo Nkoa & Song, 2023; Si & al., 2023; Yadav & al., 2023). This can include developing innovative digital products or services, leveraging new technological platforms, or creating disruptive business models. Digital innovation plays a crucial role in business growth in a rapidly changing digital environment (Baig & al., 2022; Felicetti & al., 2024; Hidajat & al., 2023). By adopting an innovation-centric approach, digital entrepreneurs can identify and capitalize on new market opportunities, enabling them to remain competitive and stand out from the competition (Bansal & al., 2024; Gala & al., 2024; Gomes & Lopes, 2023; Lungu & al., 2024; Moh'd Anwer, 2024).

❖ Agility and Adaptability

Agility and adaptability are key characteristics of successful digital entrepreneurs. In a constantly evolving digital environment, it is essential for entrepreneurs to be able to quickly adapt to changes in the market, new technologies, and customer demands (Butt, 2020; Guo & al., 2023; Kolasani, 2023; Martínez-Peláez & al., 2023). This requires an agile approach to business management and the ability to pivot rapidly in response to challenges and opportunities. Organizational agility has become imperative for businesses seeking to thrive in a rapidly changing digital environment (Chowdhury, 2024; Groenewald & al., 2024; Karimi & Walter, 2021; Ramadan & al., 2023). Digital entrepreneurs must be prepared to challenge established conventions, experiment with new ideas, and adjust their strategy based on market feedback (Felicetti & al., 2024; González-Padilla & Saura, 2024; Steininger & al., 2022).

❖ **Connectivité et réseau**

Digital entrepreneurship is often characterized by strong connectivity and effective use of social networks and online platforms (Lungu & al., 2024; Modgil & al., 2022; Purbasari & al., 2021; Taura, 2022; Yadav & al., 2023). Digital entrepreneurs leverage digital communication technologies to establish relationships with customers, partners, and other stakeholders in the entrepreneurial ecosystem. This connectivity can facilitate collaboration, mutual learning, and access to new business opportunities. Digital connectivity has become a major competitive advantage in the global digital economy (Dzingirai & al., 2024; Franzè & al., 2024; Putri & al., 2023; Xu & al., 2022).

By using social networks, online forums, and collaboration platforms, digital entrepreneurs can expand their reach, build their brand, and establish strategic partnerships to drive business growth (Baig & al., 2022; Bican & Brem, 2020; Dzingirai & al., 2024; Purbasari & al., 2021; Sahut & al., 2021; Si & al., 2023; Song, 2019).

By examining these key constructs, we aim to understand how digital entrepreneurship influences the digital transformation of businesses and how it interacts with other dimensions such as the dimension of digital transformation and digital marketing.

3.2.3 Digital Marketing Dimension

Digital marketing is a crucial component of business strategy in today's digital economy. This dimension encompasses the practices, tools, and techniques used by companies to promote their products and services through digital channels.

At this stage, we will delve deeply into the key constructs of digital marketing, focusing on their integration with other dimensions of the proposed conceptual model.

❖ **Content Strategies**

Content strategies play a central role in digital marketing. Companies utilize content in the form of blogs, videos, infographics, and social media to attract, engage, and convert prospects into customers (Aminul, 2024; Dhore & al., 2024; George, 2021; Taherdoost, 2023; Wang & al., 2024; Yuniarti & al., 2024). An effective content strategy involves creating relevant, high-quality content, optimized for search engines, and tailored to the needs and interests of the target audience. Content strategies are essential for establishing brand authority and credibility, enhancing customer engagement, and driving conversions (Baneva & al., 2023; Bhalla & al., 2024; George, 2021). By providing valuable content that addresses customer questions and concerns, companies can build lasting relationships and foster customer loyalty.

❖ **Social Media Marketing**

Social media marketing has become a cornerstone of modern digital marketing. Social media platforms such as Facebook, Twitter, LinkedIn, and Instagram provide businesses with unique opportunities to promote their brand, engage with their audience, and generate leads and sales (Aminul, 2024; Bajaja, 2024; Noorymotlagh, 2023; Prasojo & Sudarmiatin, 2024; Sahoo & Raghu, 2023; Ullah & al., 2024). Social media marketing strategies can include organic content posting, paid advertising, influencer marketing, and community management. Social media marketing enables companies to reach specific audiences, gather real-time feedback, and measure the effectiveness of their campaigns (Adeleye & al., 2024; Al Adwan & al., 2023; Dhore & al., 2024; Harshini & al., 2024; Kumar, 2024; Okorie & al., 2024; Tarabasz, 2024; Yuniarti & al., 2024; Згурьська & al., 2024). By developing an active presence on social media and creating compelling, engaging content, companies can enhance their brand awareness and increase their online visibility.

❖ **Email Marketing**

Email marketing remains one of the most powerful and cost-effective channels in digital marketing. Companies use email marketing to communicate with their audience, promote their products and services, and nurture lasting customer relationships (Aghazadeh & Khoshnevis, 2024; Alhalwachi & al., 2024; George, 2021; Tarabasz, 2024). Email marketing campaigns can include newsletters, special offers, event invitations, and product notifications. Email marketing provides businesses with a direct way to communicate with their target audience, personalize their message based on individual preferences, and track the performance of their campaigns (Al Adwan & al., 2023; Babatunde & al., 2024; Nesterenko & al., 2023; Yuniarti & al., 2024). By employing strategies such as list segmentation, email automation, and delivery rate optimization, companies can maximize the impact of their email marketing campaigns.

By examining these key constructs, we seek to understand how digital marketing contributes to the digital transformation of businesses and how it interacts with other dimensions such as the dimension of digital transformation and that of digital entrepreneurship.

Thus, by integrating these dimensions and key variables, the conceptual model provides a comprehensive analytical framework for studying the interactions between digital transformation, digital entrepreneurship, and digital marketing in the organizational context. Table 1 below details the main dimensions and variables of this conceptual research model, providing an overview of the elements explored in our study.

Table 1: Dimensions & Variables of the Research Conceptual Model

Dimension	Key construct	Source
Independent factors & variables		
Digital Transformation	▪ Operation digitization	▪Aithal (2023) ; Broccardo & al. (2024) ; Holmström & al. (2019) ; Jaish & al. (2023) ; Makovoz et Lysenko (2024) ; Masenya (2023) ; Mishra & al. (2023) ; Prashar (2024) ; Rossini & al. (2024) ; Sharma & al. (2024) ; Vartiainen (2023) ; Wong & al. (2022)
	▪ IT infrastructure modernization	▪Arifidianto (2023) ; Butt (2020) ; George (2024) ; Gillet & al. (2019) ; Iyer (2022) ; Marks et Al-Ali (2022) ; Möller (2023) ; Raj & al. (2022) ; Sodiya & al. (2024) ; Stefan (2023)
	▪ Change management	▪Ajayi et Udeh (2024) ; Ba & al. (2023) ; Bellantuono & al. (2021) ; Chimakati et Macharia 2024 ; Gui & al. (2024) ; Hanelt & al. (2021) ; Kala Kamdjoug (2024) ; Khilji et Nicolic (2024) ; Kolasani (2023) ; Malik & al. (2024) ; Ojjii (2024) ; Onesi-Ozigagun & al. (2024) ; Sabaruddin & al. (2024) ; Sobczak (2022) ; Weber & al. (2022)
Digital Entrepreneurship	▪ Digital innovation	▪Baig & al. (2022; Centobelli & al. (2022) ; Felicetti & al. (2024) ; Hidajat & al. (2023) ; Mohammed-Nasir & al. (2023) ; Ongo Nkoa et Song (2023) ; Si & al. (2023) ; Steininger & al. (2022) ; Yadav & al. (2023)
	▪ Agility and adaptability	▪Butt (2020) ; Chowdhury (2024) ; Felicetti & al. (2024); González-Padilla et Saura (2024) ; Groenewald & al. (2024) ; Guo & al. (2023) ; Karimi et Walter (2021) ; Kolasani (2023) ; Martínez-Peláez & al. (2023) ; Ramadan & al. (2023)
	▪ Connectivity and network	▪Baig & al. (2022) ; Bican et Brem (2020) ; Dzingirai & al. (2024) ; Franzè & al. (2024) ; Lungu & al. (2024) ; Modgil & al. (2022) ; Purbasari & al. (2021)

Dimension	Key construct	Source
Independent factors & variables		
		; Putri & al. (2023) ; Sahut & al. (2021) ; Si & al. (2023) ; Song (2019) ; Taura (2022) ; Xu & al. (2022) ; Yadav & al. (2023)
Dependent factors & variables		
Digital Marketing	<ul style="list-style-type: none"> ▪ Content strategies ▪ Social media marketing ▪ Email marketing 	<ul style="list-style-type: none"> ▪ Aminul (2024) ; Baneva & al. (2023) ; Bhalla & al. (2024) ; Dhore & al. (2024) ; George (2021) ; Taherdoost (2023) ; Wang & al. (2024) ; Yuniarti & al.(2024) ▪ Adeleye & al. (2024) ; Aminul (2024) ; Al Adwan & al. (2023) ; Bajaja (2024) ; Harshini & al. (2024) ; Kumar (2024) ; Noorymotlagh (2023) ; Okorie & al. (2024) ; Prasojo et Sudarmiati (2024) ; Sahoo et Raghu (2023) ; Tarabasz (2024) ; Ullah & al. (2024) ; Згурська & al. (2024) ▪ Aghazadeh et Khoshnevis (2024) ; Al Adwan & al. (2023) ; Alhalwachi & al. (2024) ; Babatunde & al. (2024) ; George (2021) ; Nesterenko & al. (2023); Tarabasz (2024) ; Yuniarti & al. (2024)

3.2.4 Potential Interactions in the Research Conceptual Model

❖ Influence of Digital Transformation on Digital Entrepreneurship

Digital transformation within businesses, considering its three key constructs, positively influences digital entrepreneurship practices. By adopting digital technologies such as artificial intelligence, the Internet of Things, and data analytics, companies enhance their operational agility and ability to meet changing customer needs (Aithal, 2023; Makovoz & Lysenko, 2024; Masenya, 2023). This transformation also fosters innovation and the creation of new business models, thereby encouraging the emergence of digital entrepreneurs (Centobelli & al., 2022; Yadav & al., 2023). Consequently, digital transformation within businesses stimulates digital entrepreneurship by providing an environment conducive to exploring and exploiting new market opportunities (Bican & Brem, 2020; Elia & al., 2023).

Main Hypothesis 1: Digital transformation, considering its three key constructs, would positively influence digital entrepreneurship practices.

▪ Digitization of operations → Digital Entrepreneurship

Digitization of operations, a fundamental element of digital transformation for businesses, has a close connection with digital entrepreneurship. By adopting digital technologies such as task automation, companies can optimize their operational processes, reduce inefficiencies, and enhance their agility. This transformation also facilitates the emergence of new business models and opens opportunities for digital entrepreneurs to innovate and create value (Jaish & al., 2023; Makovoz & Lysenko, 2024; Vartiainen, 2023).

The successful integration of operations digitization can have a significant impact on digital entrepreneurship. By streamlining business processes and reducing startup costs, it can encourage the emergence of new entrepreneurs and foster their success in the digital market (Jaish & al., 2023; Makovoz & Lysenko, 2024). Moreover, by enabling better operations management, it frees up time and resources to focus on innovation and business growth.

Sub-hypothesis 1a: Digitization of operations would positively influence digital entrepreneurship practices by facilitating innovation and reducing entry barriers to the digital market.

▪ **Modernization of IT Infrastructure → Digital Entrepreneurship**

The modernization of IT infrastructure, a cornerstone of digital transformation for businesses, exerts a significant influence on digital entrepreneurship. By adopting Cloud solutions, virtualizing servers, and securing data, companies can enhance their agility and innovation capabilities (Arifdianto, 2023; Butt, 2020; Raj & al., 2022). This modernization also facilitates access to the latest technologies, enabling digital entrepreneurs to develop innovative solutions and address changing market needs (George, 2024; Hidajat & al., 2023). The direct impact of modernizing IT infrastructure on digital entrepreneurship is evident in reducing barriers to entry in the digital market and increasing the competitiveness of new ventures (George, 2024; Möller, 2023). By providing a technological environment conducive to innovation, it stimulates the creation of startups and encourages the expansion of existing businesses.

Sub-hypothesis 1b: Modernizing IT infrastructure would positively impact digital entrepreneurship practices by reducing technological barriers and fostering innovation in the digital entrepreneurial ecosystem.

▪ **Change Management → Digital Entrepreneurship**

Change management, a crucial aspect of business digital transformation, also influences digital entrepreneurship. By fostering stakeholder engagement, staff training, and creating a culture of innovation, change management prepares businesses to adapt to technological and organizational shifts (Ba & al., 2023; Kolasani, 2023; Ojjii, 2024). This approach promotes the flexibility and agility needed to respond to rapid market changes and seize emerging opportunities (Chowdhury, 2024; Groenewald & al., 2024).

In the context of digital entrepreneurship, effective change management can lead to faster adoption of new technologies and a greater propensity for innovation among entrepreneurs (Ajayi & Udeh, 2024; Gui & al., 2024). By fostering a culture of adaptability and responsiveness within the entrepreneurial ecosystem, it creates an environment conducive to the creation and growth of digital startups.

Sub-hypothesis 1c: Change management would positively influence digital entrepreneurship practices by promoting the adoption of new technologies and fostering a culture of innovation within the digital entrepreneurial ecosystem.

❖ **Influence of Digital Entrepreneurship on Digital Marketing**

In the context of digital entrepreneurship, several aspects directly influence digital marketing. Firstly, the agility and adaptability of digital entrepreneurs enable them to react quickly to market trends and changes in consumer behavior, resulting in an increased ability to innovate in their marketing strategies (Chowdhury, 2024; Groenewald & al., 2024; Karimi & Walter, 2021; Ramadan & al., 2023). Moreover, the strong connectivity and effective use of social networks by digital entrepreneurs allow them to develop close relationships with their target audience, thereby fostering customer engagement and loyalty (Dzingirai & al., 2024; Franzè & al., 2024; Putri & al., 2023; Xu & al., 2022).

Main Hypothesis 2: Digital entrepreneurship, considering its three key aspects, would positively impact digital marketing practices.

▪ **Digital Innovation → Digital Marketing**

Digital innovation, at the core of digital entrepreneurship, exerts a major influence on digital marketing. By adopting an innovation-centered approach, digital entrepreneurs develop innovative products and services that can be promoted through digital marketing strategies (Centobelli & al., 2022). This constant innovation in product/service offerings enables businesses to stand out on digital channels and attract consumer attention (Mohammed-Nasir

& al., 2023). Additionally, digital innovation stimulates creativity in marketing campaigns, prompting companies to adopt original approaches and use emerging technologies to engage their target audience (Si & al., 2023). Thus, digital innovation enhances the effectiveness of digital marketing by providing differentiated products/services and creative campaigns, thereby contributing to business growth in the digital economy.

Sub-Hypothesis 2a: Digital innovation would positively influence digital marketing practices.

▪ **Agility and Adaptability → Digital Marketing**

The variable "Agility and Adaptability" from the dimension of digital entrepreneurship exerts a significant influence on digital marketing. Digital entrepreneurs must demonstrate high agility to quickly adapt to market changes, technological advancements, and customer demands (Chowdhury, 2024). This ability to pivot swiftly allows them to adjust their marketing strategy based on market feedback, which is crucial in a constantly evolving digital environment (Groenewald & al., 2024). Moreover, the adaptability of digital entrepreneurs enables them to promptly seize new opportunities and effectively address competitive market challenges (Karimi & Walter, 2021). By integrating these agility and adaptability characteristics into their marketing approach, digital entrepreneurs can optimize their online presence, effectively target their audience, and maximize the impact of their marketing campaigns (Ramadan & al., 2023).

Sub-Hypothesis 2b: Agility and adaptability stemming from digital entrepreneurship would positively impact digital marketing practices.

▪ **Connectivity and Network → Digital Marketing**

Connectivity and network, inherently linked to digital entrepreneurship, play a crucial role in the field of digital marketing. Digital entrepreneurs actively leverage online channels and social networks to promote their products and services, expand their reach, and engage with their target audience. By establishing connections with customers, partners, and other stakeholders in the digital ecosystem, they enhance their online presence and credibility (Lungu & al., 2024 ; Modgil & al., 2022 ; Purbasari & al., 2021). This connectivity also fosters collaboration and access to new business opportunities, thereby contributing to the growth and sustainability of businesses in a constantly evolving digital environment (Taura, 2022 ; Yadav & al., 2023).

Sub-Hypothesis 2c: Connectivity and the network of digital entrepreneurship would positively influence digital marketing practices.

❖ **Influence of Digital Transformation on Digital Marketing**

The digital transformation of businesses, characterized by the digitization of operations, modernization of IT infrastructure, and change management, exerts a profound influence on digital marketing practices. The digitization of operations enables companies to adopt innovative technologies such as automation and artificial intelligence, enhancing their ability to target, engage, and convert customers through digital channels (Broccardo & al., 2024 ; Jaish & al., 2023 ; Makovoz & Lysenko, 2024). Similarly, modernizing IT infrastructure, by facilitating access to data and enhancing security, enables companies to optimize their digital marketing campaigns and provide a more personalized customer experience (Butt, 2020 ; Arifdianto, 2023 ; George, 2024). Lastly, change management fosters the adoption of new digital marketing strategies by creating a culture of innovation and adaptability within the organization (Ba & al., 2023 ; Kala Kamdjoug, 2024 ; Khilji & Nolic, 2024).

Main Hypothesis 3: Digital transformation, considering its three key constructs, would positively influence digital marketing practices.

▪ Digitization of Operations → Digital Marketing

The digitization of operations, as a key element of digital transformation in businesses, significantly influences digital marketing. By integrating digital technologies into business and operational processes, companies are better equipped to optimize their digital marketing. For instance, automating operational tasks can free up time and resources to focus on more strategic and creative marketing activities (Jaish & al., 2023). Moreover, digitizing operations enables more effective data collection, providing marketers with valuable insights to personalize marketing strategies and enhance the customer experience (Makovoz & Lysenko, 2024). By adopting technologies such as the Internet of Things and artificial intelligence, companies can also develop more targeted marketing campaigns that are responsive to customer needs (Aithal, 2023).

Sub-hypothesis 3a: Digitization of operations would positively impact digital marketing practices by enabling more effective data collection and increased personalization of marketing strategies.

▪ Modernization of IT Infrastructure → Digital Marketing

The modernization of IT infrastructure as part of businesses' digital transformation has a direct impact on digital marketing. By adopting cloud solutions and implementing integrated information systems, companies can enhance their agility and capacity to innovate in their marketing strategies (Butt, 2020). Modern IT infrastructure also enables better management and analysis of data, which can assist marketers in making more informed decisions and implementing more effective marketing campaigns (Arifidianto, 2023). Furthermore, modernizing IT infrastructure facilitates the integration of new marketing technologies and tools, enabling companies to stay at the forefront of digital marketing practices (Marks & Al-Ali, 2022).

Sub-hypothesis 3b: The modernization of IT infrastructure would positively influence digital marketing practices by enhancing companies' agility and their ability to effectively utilize data for more performance-driven marketing campaigns.

▪ Change Management → Digital Marketing

Change management within the context of businesses' digital transformation directly influences digital marketing. By fostering a culture of innovation and adaptability, change management enables companies to better respond to market developments and adopt more effective marketing strategies (Malik & al., 2024). By involving employees at all levels of the organization, it also promotes a better understanding and adoption of digital marketing tools and technologies (Ajayi & Udeh, 2024). Moreover, effective change management can reduce internal resistance to change, allowing companies to implement innovative marketing initiatives more rapidly (Sabaruddin & al., 2024).

Sub-hypothesis 3c: Change management would positively impact digital marketing practices by fostering a culture of innovation and adaptability, as well as enhancing employees' adoption of digital marketing tools and technologies.

3.2.5 Schematic of the Conceptual Model of the Research

The schematic of the conceptual model developed in this theoretical article aims to unveil the links between digital transformation of businesses, digital entrepreneurship, and digital marketing. By identifying key variables and associating them with main dimensions, this model provides an analytical framework to understand the influence of these domains on digital marketing practices. Structured methodically in several steps, this schema offers a visual representation of the relationships between variables, thereby guiding our theoretical

understanding. Figure 1 graphically illustrates this conceptual model, thus providing an overview of the interrelations explored in our article.

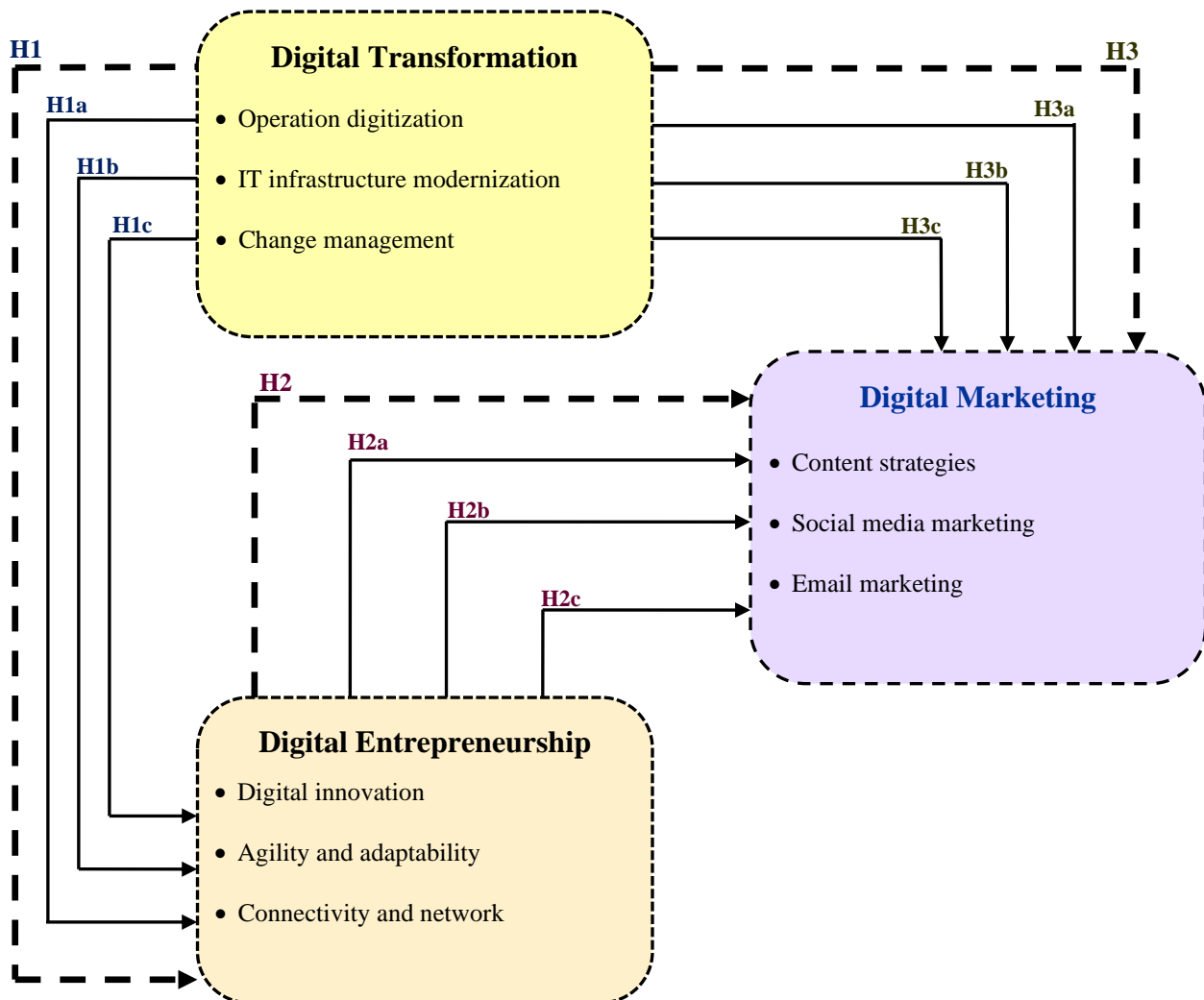


Figure 1 : Diagram of the conceptual research model.

4 Conclusion

In this article, we have examined the role of digital transformation and digital entrepreneurship in shaping the evolution of digital marketing practices. Our analysis has highlighted the growing significance of these two dimensions in today's digital landscape. We have identified how digital transformation, characterized by the digitization of operations, the modernization of IT infrastructure, and change management, impacts digital marketing practices by facilitating data collection, optimizing marketing campaigns, and adopting new innovative strategies. Similarly, we have emphasized the crucial role of digital entrepreneurship in promoting innovation, agility, and connectivity, all of which contribute to enhancing the effectiveness of digital marketing strategies.

A critical analysis of our conceptual model reveals several strengths as well as areas for improvement. Among the positives, our model offers a holistic approach by integrating digital transformation, digital entrepreneurship, and digital marketing, enabling a better

understanding of the complex interactions between these dimensions (Bican & Brem, 2020; Elia & al., 2023). However, our model could benefit from greater precision in defining variables and underlying mechanisms (Makovoz & Lysenko, 2024). Additionally, particular attention should be given to empirically validating the model through case studies or surveys among digital marketing practitioners (Centobelli & al., 2022; Yadav & al., 2023).

Despite its contributions, our conceptual approach has some limitations. Firstly, our analysis relies heavily on bibliographic data and theoretical models, which limits the generalizability of our conclusions. Furthermore, our model does not consider certain external factors such as economic fluctuations or regulatory changes (Mirdasse, 2024), which could influence digital marketing practices. Lastly, our focus on businesses may overlook the impact of individual consumer practices on digital marketing.

This research brings several significant contributions to both academic and practical literature. Firstly, our conceptual model provides a theoretical framework for understanding the impact of digital transformation and digital entrepreneurship on digital marketing practices. Moreover, our analysis underscores the importance of agility, innovation, and connectivity in today's digital landscape, which can guide businesses in their marketing strategy. Lastly, our study highlights the necessity of an integrated approach to address the challenges and opportunities of digital marketing in a constantly evolving environment.

From a managerial standpoint, our research emphasizes the importance for businesses to adapt to new digital realities by investing in digital transformation and fostering a culture of innovation and agility. From a scientific perspective, our study paves the way for future research aiming to empirically validate our conceptual model and explore further the underlying mechanisms of interactions between digital transformation, digital entrepreneurship, and digital marketing.

To enhance our model, integrating empirical case studies to validate our theoretical propositions would be beneficial. Furthermore, a more in-depth analysis of causality mechanisms and change management models could enrich our understanding of the complex dynamics between different dimensions. Lastly, extending our model to include other relevant variables, such as digital ethics or sustainability, could offer a more comprehensive view of digital marketing in the context of digital transformation.

To deepen our understanding of digital marketing practices, conducting longitudinal studies to track the evolution of marketing strategies over time would be valuable. Additionally, comparing different industries and geographic regions could highlight contextual factors influencing digital marketing practices. Finally, exploring the ethical and social implications of digital marketing in the context of digital transformation could prompt important reflections for practitioners and researchers.

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