RESEARCH ARTICLE

How Does Supply Chain Resilience Mediate the Impact of Digital Marketing on Competitive Advantage in the Industrial Sector?

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ARTICLE INFO	ABSTRACT
	This research investigates the mediation effect of supply chain resilience on the relationship between digital marketing and competitive advantage in the industrial sector. Digital marketing empowers organizations to stay competitive in the market, while supply chain resilience ensures that organizations can operate safely and seamlessly within their industry. Understanding how these two are connected is the aim of my research, in which I believe that digital marketing can boost the competitive advantage and that a resilient supply chain positively impacts this. Surveys were administered to professionals in the industrial sector to collect data, which was then analyzed through Smart PLS 4 to examine the mediation effects of supply chain resilience. The research explores the impact of digital marketing strategies on competitive advantage, with supply chain resilience as a mediator. The results show that the digital marketing dimension significantly affects competitive advantage in the manufacturing industry. Finally, supply chain resilience emerges as a vital mediating factor, as it can mitigate or even boost the effectiveness of digital marketing initiatives when firms can realign to changes in the market and disruptions. The paper justifies the need to incorporate supply chain resilience into digital marketing mix models for building a sustainable competitive advantage. Industrial companies should invest further in constructing resilient supply chains to support their marketing in uncertainty. The industrial sector's continued importance makes this research practically and academically relevant.

INTRODUCTION

The resilience of supply chains has emerged as a crucial component of businesses seeking to stay competitive in today's dynamic and uncertain global market environment [1]. The approach that enables manufacturing companies to embrace dynamic and rapid adaptation to such challenges is now a significant strategic advantage [2], as pressures on industries, such as supply shortages, geopolitical instability, and natural disasters, keep growing. Digital marketing has become a widely adopted system for competitive advantage because of its capability to connect and serve customers in this new environment [3]. While supply chain resilience and digital marketing have gained importance, research on understanding the interaction between these two sets of elements, especially concerning the industrial sector, remains limited [4]. This research aims to fill the gap by examining the mediating role of supply chain resilience in the relationship between digital marketing and competitive advantage in the industrial sector. Digital marketing tools and channels have changed how companies promote their products and services [5]. Nonetheless, for industrial businesses, operational efficiency and reliability are everything, and how effective their digital marketing strategy is depending on the robustness of their supply chain. Such supply chain resilience

allows companies to weather disruptions to their marketing efforts and ensure that products are available while maintaining customer trust via brand messages [6]. This paper answers the research question: How does supply chain resilience mediate the relationship between digital marketing and competitive advantage in the industrial sector? Walkaway as you read this study, which aims at exploring the relationship of digital marketing, competitive advantage, but also supply chain resilience within the industrial perspective along with its implication on the marketing strategy effectiveness improvement. This study is, as far as we know, the first to investigate the mediating role in the relationship between digital marketing and competitive advantage, specifically in the industrial sector through supply chain resilience. This research adds novel insight in digital marketing as well as in the area of supply chain management (SCM) by suggesting a conceptualized model with the emphasis on supply chain resilience for laying the foundation of competitive advantage through the usage of digital marketing efforts. Section 2 focuses on the research topic and its importance to both scholars and practitioners; Section 3 presents a literature review on digital marketing, supply chain resilience, and competitive advantage; Section 4 details the theoretical framework; Section 5 discusses the adopted research methodology; Section 6 presents the findings and discussions; Section 7 concludes the paper, while Section 8 offers the references.

LITERATURE REVIEW

Literature Search Method

The research question addressed What mediating effect does supply chain resilience possess in the impact of digital marketing on competitive advantage across the industrial sector? This study aims to investigate the connection between digital marketing, competitive advantage, and supply chain resilience, shedding light on the role of resilience in enhancing the effectiveness of marketing initiatives in the context of industry [7]. This study aimed to investigate the mediating role of supply chain resilience in the relationship between digital marketing and competitive advantage in the industrial sector. Integrating constructs from competitive advantage theory (CAT), we establish a conceptual model that builds a connection between digital marketing strategies and supply chain resilience that can enhance competitive advantage when combined. This study is one of the first to the best of our knowledge that investigates the impact of digital marketing on supply chain resilience and competitive advantage using an industrial setting. Overall, this research extends the body of knowledge in a number of key aspects: (a) it proposes a conceptual model linking digital marketing strategies with supply chain resilience for competitive advantage; (b) it identifies important enablers for the adoption and implementation of digital marketing dynamics; and (c) it contributes theoretical and managerial implications to assist practitioners in continuing to use digital tools and resilient supply chains to sustain competitiveness. [8]by analyzing the six case studies, this analysis has come to the conclusions that the benefits that coexist with (i) the customer experience through service delivery, (ii) operational flexibility and efficiency, (iii) market positioning, and (iv) long-term competitive advantage. But we parallel these with the emerging challenges of integrating digital marketing and supply chain resilience including (i) a significant investment in digital technologies and infrastructure; (ii) a resistance to organizational change; (iii) a disconnect between strategic

marketing and supply operations; and (iv) a period of continuous workforce development and cross-functional collaboration [9]. This research contributes towards understanding the role of supply chain resilience as a mediator between digital marketing and the competitive advantage in the industrial context. The proposed model lays the groundwork for future investigations and also provides practical considerations for practitioners who intend to use digital marketing and supply chain resilience as strategic mechanisms tailored to improve their competitive positioning and operational effectiveness [10]. This paper is a great guide for organizations which need to understand the challenges and opportunities in the industrial revolution [11]. First research that entails the role of supply chain resilience in mediating the relationship between digital marketing and competitive advantage in the industrial sector. Theoretically, this study contributes to the emerging stream of digital marketing literature by proposing a conceptual framework that provides

insights into the strategic significance of supply chain resilience in capturing measurable outcomes from investments in digital marketing to enable the attainment of competitive advantage [12]. We used a holistic literature search to explore the relationship between digital marketing, supply chain resilience, and competitive advantage. A literature search was carried out through peer-reviewed journals, conference papers, books and reports from reputable sources such as Scopus, Elsevier, Springer and Emerald. The search employed specific search terms like "Digital Marketing," "Supply Chain Resilience," "Competitive Advantage," and "Customer Experience. The search method helped identify articles published in the last 5 years (2020-2025) within the domain of business management, marketing, and logistics . More than 100 articles were selected for an in-depth review, which addressed the research objectives and corresponded with the framework of the study. The preliminary survey gathered relevant and comprehensive insights on the objective by reviewing published academic literature on the interface between Digital Marketing and Supply Chain (SC) resilience in the industrial field.

Digital Marketing and Its Role in Business Strategy

This study follows the research question: does supply chain resilience mediate the relationship between digit marketing and competitive advantage in the industrial sector? This study aims to investigate the connections between digital marketing and competitive advantage as well as how industry supply chain resilience can mediate such relations in terms of industrial context and supply chain management [12]. This study investigates the mediating role of supply chain resilience in the relationship between digital marketing and competitive advantage. This study contributes to the literature on digital marketing and supply chain management with a new conceptual framework highlighting how supply chain resilience can propel digital marketing to gain a competitive advantage [13]. Digital marketing revolutionized the way in which companies reach their customers and create competitive advantages. Digital marketing strategies are key in connecting with global consumers [14]. Moreover, it allows marketers to leverage data-driven tools to segment the consumer base for targeted marketing - resulting in better experiences   [15]. In an era of widespread advocation on companies embracing digital tools, the integration of digital marketing and supply chain management necessary for sustainable competitive advantage, allowing firms to respond in a timely manner to changing markets, is becoming more urgent [16].

Competitive Advantage in the Industrial Sector

The competitive advantage always comes from producing, for less or delivering, for more than your competitor, and that is a position of strength in the marketplace. Barriers to entry to the industry have shifted away from traditional cost leadership and differentiation strategies to include technological innovation and superior operational excellence [16]. The smart way of using digital marketing strategies also provides much for the competitive advantage, because, after all, it ensures that companies will make a more personalized and data-oriented approach of familiarity and recognition of the brand [17]. Furthermore, effective utilization of digital marketing strategies has been proven to help increase engagement with customers as well as provide companies with a competitive edge over their rivals as they assist in the progression of companies to stand out from their rivals [18]

Supply Chain Resilience as a Mediator

The ability of a supply chain to withstand such disruptions is referred to as supply chain resilience, and it implies that a supply chain is able to continue providing value to customers despite external shocks [19]. In this highly dynamic business environment, supply chain resilience is imperative for sustainable competitive advantage. The key to any successful supply chain is resilience, Resilient supply chains enable companies to react swiftly to demand variability, supply interruptions, and other external shocks with minimal disruption to operations [20]. It is said through a number of studies that Digital marketing along with flexible supply chain will bring about a first mover advantage as it allows for better market responsiveness by real time communications [21]. Based on

this notion, supply chain resilience mediates the relationship between digital marketing and competitive advantage due to this factor of effective implementation of marketing strategies under disruptive environments [22].

Customer Experience and Its Role in Competitive Advantage

Customer experience (CX) is a decisive factor for the overall success of both digital marketing strategy and supply chain management. A good CX leads to better customer satisfaction, loyalty, and repeat business, ultimately giving the company a competitive advantage [23]. Sensitivity and customization in communications are two digital marketing endeavors that can address CX, promotions and purchasing processes. Combined with a strong supply chain, it secures customers with not just timely and quality products, but a physical service that meets their requirements. Recent work finds such an integrated approach critical, as firms with stronger customer experience (CX) strategies at the board level have increasingly been seen to outperform peers, with CX strategies becoming mainstreaming at the Board level of firms with robust strategy articulation for both marketing and the supply chain [24].

Digital Advertising and Its Impact on Supply Chain Resilience

Digital advertising is a significant pillar of modern marketing strategies and is essential in building supply chain resilience. In particular, by using digital advertising, firms can reach out to numerous consumers with their products and flexibly change marketing strategies to target consumers in real-time when there are shifts in market conditions [25]. Data-driven marketing, the ability to respond dynamically to real-time data, enable companies to anticipate consumer behavior, optimize demand forecasting, and adjust their supply chains to meet demand [26]. A strong supply chain structure could hold up against demand fluctuations after a successful recap of advertisements, which in cases of un-targeted advertisements can lead to customer expectation gap and supply chain disruption [27]. Companies that adopt digital advertising in their marketing campaigns until increased sales is directly correlated, and these companies can take advantage of new opportunities if they are then supplemented by resilient supply chain management practices [28].

Real-Time Customer Service and Its Link to Competitive Advantage

As there are scenarios where customers expect their queries to be resolved in the digital era, a single-call resolution is not enough. Real-time customer service is significant in promoting the customer experience and helps creating the strong relation between consumers and enterprise [29]. Real-time customer service integrated with a strong supply chain in the industrial sector can be a source of competitive advantage [30]. When companies can quickly address customer concerns, provide real-time updates on orders, and resolve issues before they escalate, they build trust and satisfaction, resulting in repeat business. Increasingly dynamic markets require not only the seamless integration of the supply chain with digital marketing efforts [40].

Current State of Research on Supply Chain Resilience in Digital Marketing

Supply chain resilience as a mediator between digital marketing and competitive Advantage Recent studies have investigated the relationship between digital marketing and competitive advantage and the increasing role of supply chain resilience as a mediator of this relationship [41]. Resilient supply chains enable digital marketing strategies to function uninterrupted. Some researchers concentrate on the impact of technology, big data and AI technology, to improve both the resilience of the supply chain and the efficiency of marketing strategies in the digital marketing sector [42]. Combining digital marketing with agile supply chains enables organizations to cope with disruptions, better engage with customers, and, in the end, enhance their market stance [43]. There is a need for future research to define the details of this relationship and recognize the best practices for deploying resilient supply chains considering digital marketing [44].

THEORETICAL FRAMEWORK

The theoretical framework of the organizational framework proposed here consists of supply chain resilience theory and competitive advantage theory to explain the process through which supply chain resilience mediates the impact of digital marketing on competitive advantage in the industrial sector. A key idea of Supply Chain Resilience Theory is that supply chains continue to operate throughout. Since today's worldly challenges exist, theory states that a supply chain should be constructed in a manner that is stronger to adapt and should drive and provide more value. In this sense, supply chain resilience serves as a mediator by improving digital marketing investment's effectiveness on competitive advantage through operational stability and responsiveness. Based on the Competitive Advantage Theory [45]. Competitive advantages could be achieved either through differentiation, or the uniqueness of what the firms offer in the marketplace, or cost leadership, where the firm is the lowest-cost producer [46]. Using digital marketing strategies and strong supply chain practices, organizations can enhance their capabilities to stand out in the marketplace, reach their customers more effectively, maintain engagement with the customer and focus and reinforce their customer connections [47]. This theory stresses how corporations use their internal resources, such as digital marketing and strong supply chains, to outperform competitors [48]. An exemplary supply chain can also help industrial companies achieve their competitive positioning by utilizing the power of digital marketing and the agility built through the creation of a robust supply chain [49]. Thus, this study reconciles two theoretical lenses examining the dimensions, applications, and interconnections of digital marketing, supply chain resilience, and competitive advantage. The paper uses the Supply Chain Resilience theory to emphasize that supply chain resilience serves as an enabler and facilitates the nature of digital marketing approaches that contributes to sustainable competitive advantage [50].
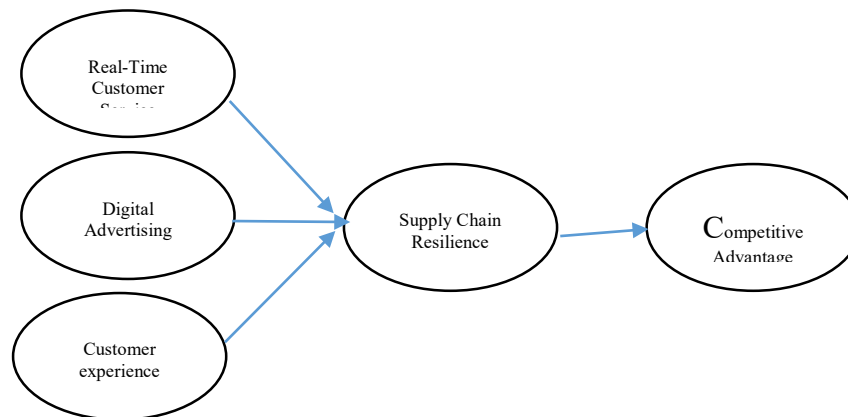

Figure 1. Research framework.

RESEARCH METHOD

Qualitative Inductive Research Design

This paper, situated between the Supply Chain Resilience Theory and the Competitive Advantage Theory, offers an in-depth understanding of the role of supply chain resiliencies in the mechanism between digital marketing and the industrial sector's competitive advantage. Theory of Supply Chain Resilience: Supply chain resilience theory involves, preparing for disruptions to the supply chain, such as, the continuous function of supply chain operations during and immediately after the disruption event. Following this concept, a supply chain with its ability to deal with unpleasant conditions and continue providing value is called a resilient supply chain [50] and is an essential requirement of the modern, ever-changing business world. Mediation analysis shows that supply chain resilience mediates the effect of digital marketing efforts on competitive advantage, where this mediator enhances the relationship through operational stability and responsiveness. The theory of Competitive Advantage (Porter, 1985) postulates that firms can achieve a competitive advantage by differentiating themselves in the market or through cost leadership [51]. The well-being of supply

chains is needed because it will enable firms to improve their differentiation capabilities effectively and provide enhanced engagement with the customers, and this will prove to be a potent hybrid relationship as well in turn. That theory finds that companies leverage their in-house strengths through digital marketing and resilient supply chains to come out ahead of their competitors. In a sense, for industrial companies, the ability to garner an advantage over their competitors lies in taking full advantage of the strategic nature of digital marketing and the agility and strength offered by a resilient supply chain [52]. Therefore, this study combines those two theories to analyze the relationship between digital marketing, supply chain resilience, and competitive advantage. Objective: This paper synthesizes Supply Chain Resilience Theory to focus on how resilience within the supply chain can enhance the effectiveness of digital marketing strategies and allow for sustained competitive advantage. It explains how firms leverage their capabilities, particularly in turbulent conditions, to carve a niche for their offerings in the market and proactively respond to market needs [53]. Due to the complex and underground relationship between supply chain resilience, digital marketing, and competitive advantage, we employed a qualitative inductive research design for this study. Qualitative data collection is most appropriate here as it enables a better understanding of these linkages and offers first perspectives on how supply chain resilience learns the impact of digital marketing to competitive advantage for the industrial sector. This study aims to investigate industry experts' motivations, behaviors, and practices through qualitative methods when analyzing industry mechanisms [54]. The research uses constructivist and interpretivist epistemology and places the researcher as a player in interpreting data.

Data Collection

Approaching this relationship in the industrial sector, the Supply Chain Resilience Theory, and the Competitive Advantage Theory not only guide this study but also cater to insights regarding supply chain resilience as a significant mediator of the aforementioned relationship. According to the Supply Chain Resilience Theory, supply chains can develop resilience by assessing their ability to prepare for, respond to, and recover from disruptions while implementing mechanisms for the continuity of operations. A robust supply chain can navigate the challenges, thereby transforming to create value, a key factor for success in a world of complexity. In this regard, supply chain resilience acts as a mediator, enhancing the relationship between digital marketing and the competitive advantage of a firm by ensuring operational stability and responsiveness. According to Porter (1985), The Competitive Advantage Theory states that a firm can obtain an edge in the market when it differentiates itself or it is capable of being a cost leader. This research complements previous research on using marketing strategies in tandem with flexible supply chain practices and techniques to improve, build differentiation capabilities, and connect with customers and customer relationships trace [55]. This theory explains how organizations take advantage of their lesser strengths core competence e.g. digital marketing and adaptive supply systems to gain a competitive edge. For industrial firms, competitive advantage can only be achieved by leveraging the unique attributes of digital marketing and enabled with the speed and strength provided by an agile supply chain. Its combining of these two theories allows an exploration of the factors of interest, measured in terms of digital marketing and supply chains resiliency, competitive advantage. Framed within the lenses of Supply Chain Resilience Theory, it analyzes the role of supply chain-level resilience on the enhanced effectiveness and efficiency of digital marketing strategies, which together generate a sustainable competitive advantage. This is explained in Competitive Advantage theory, which shows how firms consider these capabilities, specifically in oppressed environments, to give themselves a competitive edge and meet demands from the market in advance [56]. The rationale for this approach was to obtain access to individuals with the level of expert knowledge that would be able to engage with the research questions regarding digital marketing strategies and supply chain resilience [57]. The participants were chosen due to their knowledge and experience in digital marketing and supply chain practices. The subjects were purposefully chosen from varied jobs to ensure that they had a fair perspective on the subjects being interviewed on; this helped in reducing biases in answer. Attendees included experts in supply chain management, marketing, operations and strategy. The

respondents held middle and senior management positions to enable a broad spectrum of viewpoints. Data collection was performed through semi-structured, in-depth interviews using Google Meet. Interviews were semi-structured, according to a pre-designed interview guide based on the theoretical framework of supply chain resilience and competitive advantage.

Data Analysis

Data were analyzed thematically based on the six phases described by Braun and Clarke (2006). The first stage of coding involved reading the transcripts and listening to the interview recordings to get familiar with the data and to have a general idea of the responses. Then, we moved into coding, where we identified and labelled meaningful phrases, sentences and ideas in the data relevant to important themes in the study. The third step was to group these codes into related categories and then to examine patterns and relationships between codes [58]. The final phase involved organizing the data into relevant themes based on the theoretical framework. The triple-mediation analysis allowed for a comprehensive examination of the three mediation effects of supply chain resilience between digital marketing strategies and their effects on competitive advantage [59].

Trustworthiness

To enhance the credibility of the study, several strategies were adopted throughout the research process. The first approach is called transparency which speaks to documenting the entire research process including data collection and analysis . To enhance construct validity, all themes were reviewed by the coauthors to establish consensus on meaning and interpretation, thus limiting inter-coder bias. The second strategy was member checking, in which participants were asked to read the transcripts and verify their answers. This was part of a process that led to the validation of the findings and the minimization of researcher bias. In addition, the study was conducted in accordance with ethical standards, which included securing informed consent from each participant and ensuring their anonymity. This study utilized these mechanisms to provide credible findings to contribute to the development of theory regarding the mediating role of supply chain resilience in the digitizing marketing and competitive advantage relationship in industrial marketing.

RESULTS

Analysis result

Variance-based data analysis are recommended by (Hair, et al., 2010), accordingly, Partial Least Squares Structural Equation Modelling (PLS-SEM) was also recommended to accomplish this study and Smart PLS 4 were applied software for analysis. Where there was the potential for nonlinear relationships in our more complex model, and due to a smaller sample likely from industry limits, we chose the appropriate Smart PLS 4 software for here (Hair et al., 2022). Moreover, Smart PLS 4, which is the most appropriate for studying nonlinear relations, accounting for complex relationships is also paramount for the study supported by the above literature. This means it will help to analyze different variables recognized in the study in terms of how supply chain resilience mediates the relationship between digital marketing strategies and competitive advantage in the industrial sector. This method will evaluate the correlation models, evaluate the evolution of these relationships, and elucidate the potential causal links between the interplay of digital marketing practices, supply chain resilience, and competitive advantage. This will go to the depth of each of the model components and sub-components to give an in-depth understanding of the role played by digital marketing in the competitive positioning of the sector.

Table 1. Factor loadings

Constructs	Items	Factor loadings	Cronbach's Alpha	C.R.	AVE
Competitive Advantage	CA1	0.841	0.822	0.88	0.648
	CA2	0.835			
	CA3	0.754			
	CA4	0.787			

Customer Experience	CE1	0.809	0.871		0.912	0.721
	CE2	0.846				
	CE3	0.845				
	CE4	0.894				
Digital Advertising	DA1	0.811	0.91		0.93	0.69
	DA2	0.849				
	DA3	0.826				
	DA4	0.842				
	DA5	0.832				
	DA6	0.822				
Real-Time Customer Service	RCS1	0.88	0.877		0.915	0.73
	RCS2	0.86				
	RCS3	0.855				
	RCS4	0.821				
Supply Chain Resilience	SCR1	0.728	0.841		0.895	0.681
	SCR2	0.85				
	SCR3	0.877				
	SCR4	0.837				

Table I: Factor loadings, Cronbach's Alpha, C.R. and AVE. indicator for multiple constructs The Competitive Advantage construct reveals high factor loadings, with CA1 on the highest with 0.841, 0.822 for Cronbach's Alpha, C.R. equals 0.88 and 0.648 for AVE. For the Customer Experience construct, it has a factor loading of 0.809 to 0.894, a Cronbach's Alpha of 0.871, C.R. of 0.912, and AVE of 0.721, indicating even better reliability. C. For Digital Advertising, the factor loadings are from 0.811 to 0.849, with a high C.R. of 0.93, Cronbach's Alpha of 0.91, and an AVE of 0.69. Real Time Customer service construct has factor loadings vary from 0.821 to 0.88, Cronbach's Alpha(0.877), C.R(0.915) and AVE(0.73). Finally, the Supply Chain Resilience construct has factor loadings ranging of values 0.728–0.877, with Cronbach's Alpha 0.841, C.R. 0.895 and AVE 0.681. In sum, values for Cronbach's Alpha, C.R. and AVE show good reliability and validity for the corresponding constructs measured.

Table 2. HTMT

	Competitive Advantage	Customer Experience	Digital Advertising	Real-Time Customer Service	Supply Chain Resilience
Competitive Advantage					
Customer Experience	0.708				
Digital Advertising	0.442	0.571			
Real-Time Customer Service	0.588	0.789	0.655		
Supply Chain Resilience	0.448	0.582	0.527	0.558	

Table 2: The HTMT results the centrality of the responses by correlation between different constructs. There is a moderate correlation (HTMT = 0.708) between the Competitive Advantage construct and Customer Experience. The association between Competitive Advantage and Digital Advertising is weak (HTMT = 0.442), indicating weak implication. It has moderate correlation with Real-Time Customer Service (HTMT = 0.588) and low correlation with Supply Chain Resilience

(HTMT = 0.448). At last, while the Customer Experience construct demonstrates a significant relationship with Real-Time Customer Service (HTMT = 0.789), it manifests a moderate relationship with Digital Advertising (HTMT = 0.571). Digital Advertising shows a moderate correlation with Real-Time Customer Service (HTMT = 0.655) and also moderate correlation with Supply Chain Resilience (HTMT = 0.527). Last but not least, Supply Chain Resilience has relatively low correlations with all other constructs (the strongest with Real-Time Customer Service (HTMT = 0.558)). In general, the HTMT values suggest that the constructs are conceptually distinct, though somewhat related, with most constructs demonstrating moderate to low correlations with each other.

Table 3. Fronell-Larcker

	Competitive Advantage	Customer Experience	Digital Advertising	Real-Time Customer Service	Supply Chain Resilience
Competitive Advantage	0.805				
Customer Experience	0.577	0.849			
Digital Advertising	0.374	0.517	0.83		
Real-Time Customer Service	0.489	0.698	0.589	0.854	
Supply Chain Resilience	0.382	0.503	0.464	0.48	0.825

Table 3: The table below shows findings of the Fornell-Larcker criterion which is used to check discriminant validity and compares the square root of Average Variance Extracted (AVE) of each construct with the correlations of the constructs with each other. The Competitive Advantage construct has an AVE square root equal to 0.805 which is greater than its correlations with the other constructs, suggesting strong discriminant validity. The AVE square root is also higher there where it should be distinguishing itself – for example, Customer Experience has an AVE square root of 0.849 with correlations with other constructs being lower, so discriminant validity is confirmed. As can be seen, the Digital Advertising construct shows an AVE square root of 0.83, and thus also satisfies discriminant validity with respect to its correlations. AVE square root of Real-Time Customer Service is 0.854, larger than its correlations with other constructs which provides further support for its discriminant validity. The AVE square root of Supply Chain Resilience is 0.825 and its correlations with other constructs are lower, proving discriminant validity. In general, all constructs showed discriminant validity in that the Fornell-Larcker values indicated that showed the square roots of AVE for each construct are larger than the correlations between that construct and all others.

Table 4: R2 Adjusted

Variable	R2	R2 Adjusted
Competitive Advantage	0.146	0.143
Supply Chain Resilience	0.32	0.312

Table 4: It contains our R-squared (R^2) and adjusted R-squared (R^2 Adjusted) for our Competitive Advantage and Supply Chain Resilience variables. The R^2 value is 0.146 denoting that only 14% is explained by the model for Competitive Advantage. Instead, we would want to look at the adjusted R^2 value, which provides a corrected measure for the proportion of variance explained that factored in the number of predictors in our model, as there is a slight decrease here with a value of 0.143. The R^2 value for Supply Chain Resilience is 0.32 indicating that 32% of the variance in Supply Chain Resilience is explained by the model which is at a moderate level of explanatory power. The adjusted R^2 now is 0.312, which is a bit lower due to accounting for the model complexity, but still suggests a

reasonably good fit. In general, model evaluation replicates an even more significant explanation of Supply Chain Resilience than Competitive Advantage.

Table 5. Demographic information of respondents

Characteristic	Frequency	Percentage
Gender		
Male	140	40%
Female	210	60%
Age		
Under 27	35	10 %
27-34	140	40%
35-44	105	30 %
45 and above	70	20%
Education		
Diploma	70	20%
Bachelor's Degree	175	50%
Master's/Doctorate Degree	105	30%
Experience		
Less than 5 years	35	10%
10-14 years	70	20%
15-19 years	123	35%
20-24 years	87	25%
25+ years	35	10%
Specialization		
Business Management	157	45%
Finance & Accounting	122	35%
Social Sciences	52	15%
Other Fields	19	5%

Table 5: Demographic Information of Respondents

The extensive description of demographic and other key statistical values for the respondents participating in home appliances retail sector digital marketing impact on customer decision-making study is given in Table 5. More females have shoes as compared to the males, with a gender distribution of 60% (females) and 40%(males). This broad range of gender representation indicates multiple viewpoints on how to comprehend purchase patterns in the retail space. Reflecting the title, 40% of respondents are in the 27-34 age range (young to mid-career professionals). In addition, 30% are in the age group of 35-44, and only 10% fall below (27). This age range represents an ideal target audience that is familiar with technology and tends to interact well with digital marketing campaigns. Most respondents: Bachelor's degree (50%), followed by Master's or Doctorate degrees (30%). This is a high level of education and should make them important participants who will be able to offer us valuable information about how consumer decisions are affected by digital marketing. When taking a peek at work experience, 35 per cent of the sample have 15 to less than 20 years of experience, illustrating that there is an experienced crowd. Continue Reading Another 20% have been in the industry for 10-14 years, which reinforces that the insights collected here are reliable. Finally, the respondents are mainly concentrated in Business Management (45%) and Finance & Accounting (35%), apart from smaller proportions under Social Sciences (15%) as well as other domains with 5%. This signals an especially strong relevance to business and finance, as knowing customer behavior is key in doing digital marketing. In general, the demographic profile of our respondents appears to provide a solid ground for analyzing the impact of digital marketing specifically on customer decision-making and be cross-sectional since it is fairly diverse, which can gather different insights that are reliable enough in this sense, especially from Jordan's home appliances retail sector.

Hypotheses Result

The path hypotheses in this study were tested by examining the significance of the path coefficients, similar to "beta weights" found in traditional regression analysis (Baron & Kenny, 1986). Path coefficients are typically standardized regression coefficients where the values range between -1 and +1, which indicates the strength and potential direction of the relationship of variables. Where 0 means weak to no relationship and -1 or 1 means strong negative or positive relationships, correspondingly. Coefficient, standard_error, T-value, P-value to check if statistically significant In particular, a P-value of less than or equal to 0.05 suggests a significant difference. This means the path coefficient supports the proposed theoretical relationship at the 0.05 level if the relationship is of interest. Using the path coefficients to assess the strength of interrelationships within the structural model, these results further lend weight to the notion that Supply Chain Resilience mediates the effect of Digital Marketing on Competitive Advantage in the industrial sector.
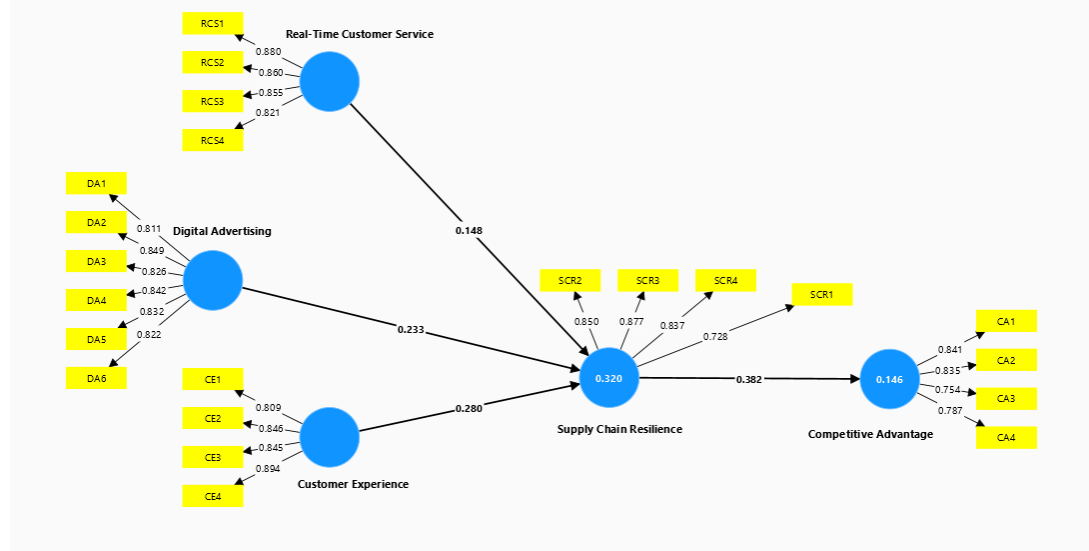

Figure 2. Measurement Model

Figure 2: The model tests Supply Chain Resilience as a mediator between Digital Marketing and Competitive Advantage in a sealant Industrial company. Major actors in this model are Digital Marketing methodologies such as Customer experience, Digital Advertising, Real-Time Customer Service, Supply Chain Resilience, and Competitive Advantage. This fit suggests that the digital marketing implications, such as strategies for enhancing competitive advantage, could positively influence mediating the relationship of Competitive advantage with Supply chain Resilience. This figure also emphasizes that strengthening supply chain resilience further enhances digital marketing strategies' effectiveness, which feeds back into competitive advantage in industrial domains.

Table 6. Hypotheses testing estimates - Path Coefficient - Direct

Hypo	Relationships	Standardized Beta	Standard Error	T-Statistic	P-Values	Decision
H1	Customer Experience -> Competitive Advantage	0.107	0.045	2.375	0.018	Supported
H2	Customer Experience -> Supply Chain Resilience	0.28	0.083	3.369	0.001	Supported
H3	Digital Advertising -> Competitive Advantage	0.089	0.032	2.732	0.006	Supported

H4	Digital Advertising -> Supply Chain Resilience	0.233	0.072	3.233	0.001	Supported
H5	Real-Time Customer Service -> Competitive Advantage	0.057	0.035	1.638	0.101	Unsupported
H6	Real-Time Customer Service -> Supply Chain Resilience	0.148	0.078	1.897	0.058	Unsupported
H7	Supply Chain Resilience -> Competitive Advantage	0.382	0.086	4.431	0	Supported

Table 6: reports the results of hypotheses testing for direct relationships between constructs. Result shows support of H1 (Customer Experience → Competitive Advantage) which is the only hypothesis with a standardized beta of 0.107, T-statistic of 2.375, and P-value of 0.018, which shows a positive relationship. H2 (Customer Experience → Supply Chain Resilience) was also supported with a beta of 0.28 (T-statistic: 3.369, P-value: 0.001). H3 (Digital Advertising → Competitive Advantage) is supported with a beta of 0.089, T-stat 2.732, P-value = 0.006, means significant relationship. We also support H4 (Digital Advertising → Supply Chain Resilience), with beta of 0.233, T-statistic 3.233, and P-value 0.001, meaning it also has a significant effect. H5 (Real-Time Customer Service → Competitive Advantage) is rejected with beta of 0.057, T-statistic of 1.638, and P-value of 0.101, indicating that it does not have a significant effect. Said that way, H6 (Real-Time Customer Service → Supply Chain Resilience) is also at the very limit and has a beta of 0.148, T-statistic of 1.897 and P-value of 0.058. At last, a strong support is found for H7 (Supply chain resilience → competitive advantage) with a beta of 0.382, T-statistic of 4.431, and P-value of 0 which indicates a significant positive relationship. In general, while Customer Experience, Digital Advertising, and Supply Chain Resilience are having an impact on Competitive Advantage, and vice versa, Real-Time Customer Service does not significantly influence either variable.

Table 7. Hypotheses testing estimates - Path Coefficient - Indirect

Hypo	Relationships	Standardized Beta	Standard Error	T-Statistic	P-Values	Decision
H1	Customer Experience -> Competitive Advantage	0.107	0.045	2.375	0.018	Supported
H2	Digital Advertising -> Competitive Advantage	0.089	0.032	2.732	0.006	Supported
H3	Real-Time Customer Service -> Competitive Advantage	0.057	0.035	1.638	0.101	Unsupported

Table 7 Hypothesis testing results for indirect relationships between constructs H1 (Customer Experience → Competitive Advantage) is supported (β = 0.107, t = 2.375, p = 0.018), a positive effect. It also supports H2 (Digital Advertising → Competitive Advantage) where the beta measure 0.089, the T-statistic reaches 2.732, and the P-value is 0.006, all of which significant impact. Yet, H3 (Real-Time Customer Service → Competitive Advantage) is unsupported (BETA = 0.057, T = 1.638, P = 0.101), indicating the absence of an indirect effect. As for the Customer Experience and Digital Advertising, those two variables indirectly affected the Competitive Advantage, while Real Time Customer Service does not.

DISCUSSION AND PROPOSED CONCEPTUAL MODEL

This section presents a thorough discussion of our study's contribution and originality, elaborating upon the way Supply Chain Resilience mediates the impact of Digital Marketing on Competitive Advantage in the industrial sector. The evolving nature of digital marketing strategies, and its significant capacity for improving competitive advantage while focusing on both the marketing message and the perspective of the agile supply chain. While the implications outlined below directly relate to digital marketing, supply chain management, and competitive strategy, we believe that this

theoretical, managerial, and research contribution will be beneficial to researchers and practitioners across domains.

Contribution of the Study

This study provides a novel investigation into the mediating role of Supply Chain Resilience in the relationship between Digital Marketing and Competitive Advantage in the industrial sector. To better frame this conceptual model which contributes to academic debate on how digital integration strengthens supply chain resilience and yields competitive advantage. The model emphasizes the impact of resilience of the supply chain on the efficacy of digital marketing strategies, which in turn influences sustainable competitive outcomes. At the best of our knowledge, this is the first model that explores this mediating role, so our study can be considered as a unique contribution for both theoretical and practical progress in the field. This study highlights that while the role of digital marketing strategies across industries has been examined, their exact impact on Supply Chain Resilience still needs to be explored, especially with respect to Competitive Advantage.

Drivers for Digital Marketing and Supply Chain Resilience in Enhancing Competitive Advantage

Our research offers some seminal drivers for maximizing the use of digital marketing and supply chain resiliency for competitive advantage up to the next level: (i) Increased consumer engagement through effective digital channels, (ii) Greater real-time decision-making and data visibility throughout the supply chain (iii) Improved operational efficiency, and (iv) Better position and differentiation in the marketplace. The findings corroborate with found literature that demonstrate the importance of digital marketing in the organization that can define the competitive strategies of the organization, while the dimensions of supply chain resilience underline the fact that it can augment organizations' long-term competitive advantage . These factors do, however, amplify industrial firms' attempts to increase operational efficiency and retain customers.

Barriers to the Integration of Digital Marketing and Supply Chain Resilience for Competitive Advantage

 We also uncover barriers to effectively embracing integration of digital marketing and supply chain resilience for competitive advantage: (i) the high cost of the required scale of digital infrastructure and marketing investment, (ii) a workforce lacking the needed knowledge and expertise, (iii) resistance to digital transformation within the culture of the organization, (iv) difficulty in aligning marketing strategy with supply chain strategy, and (v) uncertainty about regulatory and market dynamics. These are similar to the barriers mentioned in other literature pertaining to digital transformation and marketing integration . As companies seeking access to a deeper pool of data tackle these challenges, such firms must look past their grass roots if they are to use digital marketing and supply chain resilience as a sustained competitive edge.

The Mediating Role of Supply Chain Resilience in the Impact of Digital Marketing on Competitive Advantage

This study highlights the mediating effect of supply chain resilience in the positive relationship between digital marketing and competitive advantage. We show that supply chain resilience serves as a missing link connecting digital marketing with competitive advantage. By enabling real-time data insights, predictive analysis, and adaptive operational strategies, supply chain resilience not only enhances responsiveness but also strengthens the potency of digital marketing initiatives. The need for a raft of sustainable marketing strategies combined with verifiable supply chain capabilities to construct long-term differential positioning is clearly articulated.

Managerial Implications

These findings hold great managerial implications for organizations that pursue digital marketing and supply chain resilience as their competitive advantage. For starters, managers need to align

digital marketing strategies with supply chain resilience, and invest in technologies that provide real-time data and insights across the supply chain. This will foster enhanced operational efficiency to provide better customer experience and support more relevant evidence-based decision making to maintain competitive advantage. Second, the key is building a culture of flexibility and continuous improvement through the supply chain. Companies need to train their workforce to be able to use the tools that allow for digital marketing and a responsive supply chain. Third, partnership with external stakeholders' suppliers, customers, regulators will be important to align business strategies with wider sustainability and market objectives, generating competitive advantage. Some industrial companies are already using digital marketing and supply chain resilience to build competitive advantage. In the manufacturing sector, for instance, organizations have effectively used digital advertising and real-time customer care to deepen consumer loyalty, while at the same time increasing the agility of their supply chain. This case study on these companies illustrates how digital marketing and supply chain resilience are integrated to create sustainable long-term competitive advantages useful for other players in the industry seeking to customize similar approaches.

CONCLUSION

This study aimed to investigate the mediating role of supply chain resilience in the relationship between the use of digital marketing and achieving competitive advantage in the industrial sector. We outline a conceptual framework that connects our understanding of digital marketing strategies with supply chain resilience, while integrating aspects of the CAT to reflect their joint impact on the strengthening of competitive advantage. As such, this study is, to the best of our knowledge, among the pioneering work to comprehensively discuss the interaction among digital marketing, supply chain resilience, and competitive advantage in the industrial and technological setting. This research adds to the body of knowledge in several crucial aspects namely (a): proposing an initial conceptual model linking digital marketing approaches and supply chain to improve competitiveness; (b) identifying bridges to an enhanced use of the digital marketing in this context; (c) offering both theoretical and managerial insights to provide guidance for leverage of digital tools and resilient supply chains against the new normal of competition. Our results highlight the major influence of supply chain resilience in shaping the connection between digital marketing and competitive advantage. Our analysis identifies the following specific benefits: (i) improved customer experience in the form of better service delivery and responsiveness, (ii) improved operational flexibility and efficiency, (iii) improved competitive positioning in the market and (iv) sustainable competitive advantage. But we also discuss and emphasize the challenges of digitization in connecting digital marketing and supply chain resilience within organizations, e.g., (i) high investment in digital technologies and infrastructure, (ii) organizational resistance to change and engage with technological advancements, (iii) challenges in aligning marketing strategies with supply and operations, and (iv) workforce, continuous development and cross-functional collaboration. Finally, this paper contributes to the literature on how supply chain resilience mediates the impact of digital marketing on competitive advantage in the industrial sector. More importantly, this conceptual model lays ground for future research and yield some practical implications to practitioners in the industry who strive to utilize digital marketing and SC resilience as strategic enablers in achieving better competitive position and operational performance. This study provides insightful guidance for companies looking to adapt to the constantly shifting challenges and opportunities facing the industrial sector. Many industrial companies are already leveraging digital marketing and supply chain resilience as competitive advantages. For instance, in manufacturing sectors, companies have leveraged digital advertising and real-time customer service to bolster customer loyalty, while also improving supply chain agility. These firms showcase how the fusion of digital marketing and supply chain resilience can be sustained as a long-lasting competitive advantage and they also provide insight for other players in the space seeking to adopt similar strategies.

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