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Review Article

Online Printing Companies in Nigeria: Exploring the Role of Digital Marketing Communications for Sustainable Growth

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Abstract

Web-to-print (W2P), also known as online printing or print e-commerce, has transformed print consumption behaviour considerably. It allows print buyers to place and fulfil orders via online platforms, eliminating the need for face-to-face contact. Previous research has examined the broad spectrum of online print buying, but there is a dearth of knowledge on online printing in the context of a developing economy like Nigeria. To fill this gap, this study explores web-enabled printing in the print and graphic arts industry in Nigeria, focusing on the digital marketing activities of Nigerian online printing companies. Utilising online research methods, data (SEO rankings) on the websites of Nigerian online printing companies were analysed, along with secondary data sources. The study revealed the digital marketing strategies used by Nigerian web-to-print businesses to achieve long-term success, highlighting the relevance of an effective online promotional strategy in achieving business success and sustainable growth. The need for further research into the social media marketing practices of Nigerian online printing companies was highlighted. Furthermore, it is imperative for online companies to embrace a digital strategy that encompasses word-of-mouth marketing, search engine marketing, and social media advertising to enhance their online presence. By providing an understanding of web-to-print (W2P) adoption, this study contributes to the limited knowledge of online printing in Nigeria.

Keywords: *Digital Marketing; Online Printing; Print e-commerce; Search Engine Marketing; Web-to-print*

Introduction

Printing companies have a strategic role, not only in the media and communication industry but also in the global economy. However, as Thompson (2014) notes, there are concerns about the survival of printing firms in the global commercial environment, as they experience tougher market conditions arising from the growth of digital media and its competitive effects and threats to print products. As a reference point, he also highlights the declining number of printing firms in the United Kingdom, citing UK VAT registration data, which puts the 2014 population of print businesses at around 17,500—a decline of over 6% from the 2002 figure. As Thompson (2014) asserts, this figure is expected to decline further in the coming years due to the increasing penetration of digital media and the further displacement of print media.

The disruptive impact of digital media, especially the Internet, on the printing industry has prompted various strategic responses. Instead of bemoaning their losses, print investors are adapting to change and have begun adopting digital technologies to survive the wave of technological disruptions.

The emergence and growth of web-to-print technology is one clear example of such strategic responses. Broadly, web-to-print (W2P) refers to the practice of running print businesses by integrating online resources into the print production value chain. According to Collins *et al.* (2015), the prevailing level of competition in the media market has spurred print firms to adopt W2P as a means of offering convenience and ease of print ordering to customers. He notes that the W2P model, among other benefits, helps print companies build a large customer base, streamline workflows, and reduce production costs. In general, W2P enables the automation of the print ordering process by linking online orders with print production.

Web-to-print has been a subject of interest in print and media technology research (Ishak & Ahmad, 2023; Hayta, 2023; Hsieh, Jiang, & Wong, 2018; Hsieh *et al.*, 2011; Mutlu, Özcan & Hayta, 2018). However, little is known about the adoption of web-to-print innovation in the Nigerian printing industry due to the scarcity of research on this subject. The closest available study is Ani (2016), which investigated the adoption of online printing technology in newspaper production in Nigeria. The study established the presence of distributed or remote printing, which enhances the efficiency of print production workers in the Nigerian newspaper industry. While Ani (2016) highlights the availability of some aspects of web-based printing technology in the Nigerian newspaper industry, there remains a gap in the literature on W2P adoption and the marketing of online printing in the country, particularly in the small and medium enterprise (SME) sector.

Since W2P technology emerged in the Nigerian printing industry in the late 2000s, there is no documented evidence of the promotion and development of this innovation in the digital landscape. This study explores the digital marketing communications of online printing companies, with a focus on search engine marketing and social media marketing. It is argued that while W2P technology is a strategic tool that provides Nigerian printing companies with the leverage to survive in a competitive marketplace, effective online marketing—through search engines and social media—is essential to bringing this innovation to consumers' awareness.

Literature Review

Innovation Technologies and Sustainable Growth

Innovative technologies aim to drive economic growth and sustainable development. Kwon-Ndung, Kwon-Ndung and Migap (2014) define innovation as "the creation of a new device or process resulting from study or experimentation, the creation of something in the mind, the act of starting something for the first time, or introducing something new." Joseph Schumpeter was one of the early users of the term "innovation." He described development as a historical process of structural changes driven by innovation. According to him, these structural changes are motivated by the pursuit of profit (Schumpeter & Swedberg, 2021). Schumpeter argued that innovation is an essential driver of competitiveness and economic dynamics, describing it as a "process of industrial mutation that incessantly revolutionises the economic structure from within, incessantly destroying the old one and incessantly creating a new one" (Śledzik, 2013). In brief, Schumpeter contended that innovation is crucial to economic growth. From a strategic management perspective, Schilling and Shankar (2019) identify technological innovation as the most significant driver of competitive success in industries today. This view is based on the premise that innovation is a strategic necessity for firms, as failing to innovate may lead to diminishing profit margins due to the obsolescence of products or services.

The Internet as Innovation and Driver of Innovations

The internet is an innovation whose adoption is inevitable. Porter (2001) asserts that the key issue is not whether to deploy internet technology but rather how to deploy it effectively. He argues that the internet provides modern businesses with greater opportunities for strategic positioning than were available in the past. According to Porter (2001), while the internet is a product of innovation, it also serves as an enabler of innovation, as it facilitates interconnectivity and networked innovation processes. Blind (2011) supports this view, stating that the expansion of broadband internet connections has broadened participation in innovation, making it accessible to customers, suppliers,

competitors, and government agencies, among others. This fosters community engagement in the diffusion and adoption of innovation. Gauntlett (2013) describes the internet as part of the digital world that brings new possibilities. He highlights that high-speed internet connections have transformed human communication by enabling people to connect in diverse and efficient ways previously unknown.

From being a tool of interpersonal and mass communication, the internet has evolved into a platform for commercial transactions, giving rise to e-commerce in modern society. Ghosh (1998) explains that the internet provides "direct, ubiquitous links to everyone, anywhere," allowing businesses to establish interactive relationships with customers and suppliers. This facilitates the delivery of new products and services at a lower cost. Consequently, e-commerce can be regarded as an internet-driven innovation that creatively responds to the needs of all parties involved in business transactions today.

Web-to-Print (Web2Print) Innovation Technology

Web-to-print, also known as internet printing, online printing, remote publishing, or print e-commerce, refers to the process of printing products—both variable and static—through websites designed specifically for customer use (Ofori-Dei, 2016; Hsieh & Lin, 2011). Enabled by e-commerce platforms, this technology expands the print market and allows printers and clients to exchange job files, review and approve print proofs, and process payments for authorised projects (Hsieh & Lin, 2011; Rosnan, 2018). The adoption of web-to-print has prompted structural shifts within the printing industry, compelling businesses to reconsider their models and diversify their product and service offerings (Cummings & LeMaire, 2006).

Since 1999, web-to-print has been recognised as a significant technological innovation in the printing industry. Belmark Inc., a label printing company based in Wisconsin, was the first business to formally adopt this new approach (Ofori-Dei, 2016). According to Booklets Print (2021), web-to-print is characterised by speed, adaptability, personalisation, and the use of technological advancements in production. A market analysis by ReportLinker (2021) valued the global web-to-print market at $983.4 million in 2020 and projected growth to $1.5 billion by 2027, with a compound annual growth rate of 6.6% between 2020 and 2027.

Digital Marketing of Online Printing

The marketing of innovative products and services, such as online printing, requires an approach that departs from conventional marketing strategies (Hsieh, Jiang & Wong, 2018). In this regard, Kartajaya, Kotler, and Hooi (2019) propose the concept of "Marketing 4.0." This approach is based on the convergence of technology, which has led to the integration of digital and traditional marketing. They argue that the rise of big data analytics has transformed product and service marketing into a highly personalised process, making it essential for businesses to leverage digital media. Marketing 4.0, while incorporating elements of traditional marketing, primarily focuses on driving action and advocacy through digital channels, as these offer greater accountability via analytics. Kartajaya, Kotler, and Hooi (2019) define "Marketing 4.0" as "a marketing approach that combines online and offline interaction between companies and customers, blends style with substance in building brands and ultimately complements machine-to-machine connectivity with human-to-human touch to strengthen customer engagement."

Digital marketing emerged in the 1990s and became increasingly sophisticated in the 2000s and 2010s. Joshi (2019) notes that although the term "digital marketing" was not widely used in the 1990s, the proliferation of digital devices has driven its exponential growth. Prabhala and Rao (2019) further highlight that digital marketing has gained immense traction in today's communication and advertising industries. Alternative terms for this practice include online marketing, internet marketing, and web marketing. Digital marketing encompasses various techniques, including search engine marketing (SEM), social media marketing (SMM), and email marketing. Among these, SEM and SMM play a particularly crucial role for online printing businesses.

Search engine marketing is fundamental to the visibility and discovery of websites by potential customers. As websites serve as the central platform for interaction between online printing firms and

their clients, these businesses rely heavily on pull marketing strategies to drive traffic to their sites via SEM. Chaffey and Ellis-Chadwick (2016) define SEM as "promoting an organisation through search engines to meet its objectives." They argue that SEM is effective because high rankings on search engine results pages increase website traffic, leading to higher conversion rates. The importance of SEM for the profitability and sustainability of online printing businesses is underscored by the fact that, unlike physical marketplaces, search engines in digital marketplaces enable consumers to access information and compare product and service offerings. Chiang (2006) describes online search engines as a form of "human-computer interaction" that provides a cost-effective and convenient means for consumers to locate websites. Rowley (2004) also notes that websites serve as essential channels for consumer engagement in the online marketplace. Therefore, businesses must prioritise strategies that enhance website visibility, even though search engine optimisation can be both costly and time-consuming.

In combination with SEM, social media marketing (SMM) plays a crucial role in directing traffic to online sites. Nayyar and Pandey (2016) stress the importance of integrating content marketing with search engine optimisation to cultivate customer loyalty. They argue that keyword research is critical to content creation and that businesses should focus on producing content around popular topics and search terms to succeed in content marketing. They further highlight that social media posts must be relevant to the target audience to generate engagement and loyalty. SMM serves as a platform where content containing website links is shared, ultimately driving traffic. Additionally, social media content can be optimised through influencer marketing, live video streaming, and social media advertising (Tjiptono, Khan & Yeong, 2022).

Conceptual Framework

Consumer Decision-Making Model

Online print buying involves a consumer decision-making process. According to the consumer decision-making model, five steps are involved: i) recognition of need, ii) information search about how to satisfy the need, iii) evaluation and selection of choices available to meet the need, iv) purchase, and v) post-purchase evaluation (Ardiansyah & Sarwoko, 2020). The consumer decision-making process is acknowledged as a cognitive processing model in which consumers make a conscious effort to obtain information and make choices by evaluating two or more alternatives. In addition to using search engines, online buyers also rely heavily on reviews in online communities and social media platforms (Fernandes *et al.*, 2021).

Web Crawling and Online Search Models

To find information to meet their needs, consumers in contemporary society use the Internet via search engines. Generally, search engines are built around the concept of "information indexing". As Hawking (2006) notes, when users submit queries to search engines, they employ crawling algorithms to gather information from websites worldwide, extract data, rank the websites, and present them in the form of search engine result pages (SERPs). The ranking of websites by search engines is guided by several factors, the chief one being relevance. According to Croft, Metzler, and Strohman (2010), relevance is at the core of information retrieval using search engines. Relevance, in this context, refers to web pages or documents containing information that corresponds to queries submitted by online users through search engines. To ensure a wider coverage of relevant words, search engine programmers introduced the retrieval model, which is a formal framework for the process of matching a query with web content so that algorithms in search engines can efficiently produce ranked lists of websites (Croft, Metzler & Strohman, 2010).

The results returned during an online search can either be unpaid or paid. The unpaid results are known as organic results. To gain priority organic result ranking, website owners must adhere to a host of rules that ensure favourable ranking. This is popularly known as Search Engine Optimisation (SEO). According to Dodson (2016), SEO is a process of repositioning a website for easy online discovery through practices that ensure the website is indexed and ranked favourably by search engines. Beyond

visibility in web searches, the goal of SEO is to generate website traffic. The more visitors landing on a web-to-print site, the higher the chances of increasing sales.

However, digital marketers do not leave their page ranking performance solely to SEO, as they also engage in what is known as paid search strategies. This involves paying for advertisements to appear on the search results page, in the right column, and at the top of the page. It is used to advertise to potential customers when they search for specific words and phrases on search engines. This is also known as "pay-per-click" advertising, as the advertiser only pays when a user clicks through to their site. The advantage of paid search is that it targets people who are actively searching for products and services (Dodson, 2016).

Research Methodology

The study obtained secondary data from digital marketing and SEO literature to gain in-depth insights into the digital marketing practices of online printing firms in a global context. In addition, a combination of page ranking and content analysis was employed to evaluate the digital marketing presence of Nigerian online printing companies. Given the online nature of these companies, content analysis of their websites and social media platforms provides a comprehensive method for assessing their digital engagement and marketing practices (Fielding, Blank & Lee, 2008).

The performance of a website or piece of content in search engine results can be assessed by evaluating its SEO rankings. This helps determine the factors that enhance website visibility, enabling adjustments to be made to the content and layout (Alfiana *et al.*, 2023). On this basis, Nigerian printing companies were selected through targeted search queries on Google, Bing, and Yahoo!, using keywords such as "Nigeria online printing" and "web-to-print Nigeria." Only companies appearing in the top search results were included to ensure market relevance and visibility. Data was collected in July 2022 and analysed using: i) social media presence (with a score of 5 points for each platform) and ii) online content (1 point per blog post), to quantify each company's digital engagement.

The adopted approach is grounded in prior research on improving website rankings through Search Engine Optimisation techniques (Chotikitpat *et al.*, 2015; Iqbal *et al.*, 2022; Ologunebi & Taiwo, 2023; Shahzad *et al.*, 2020), providing a basis for exploring search engine marketing practices in Nigeria's printing sector.

Results

Online Printing from a Global Perspective

The rise of digital printing products and services, such as online printing, has made marketing communications essential in the printing industry worldwide. For example, Hamluddin and Wibowo (2023) report the deployment of marketing communication strategies by digital printing companies in Indonesia to achieve marketing goals. This aligns with the findings of Makatora *et al.* (2024), who highlight the role of ICT in enhancing the competitiveness of printing firms in Ukraine through digital product and service marketing.

In Spain, Magadán-Diaz and Rivas-Garcia (2021) document the emergence of the online printing business model, which integrates the Internet with digital printing systems. As of 2021, the adoption rate stood at 34.7%, with 20% of small-sized, 44% of medium-sized, and 40% of large-sized printing companies implementing this innovation. With online printing gaining traction globally, the need for digital marketing—particularly SEO and social media marketing—becomes increasingly significant.

Huda, Chumaidiyah, and Hasun (2019), in their analysis of digital printing startups in Indonesia, emphasise that a niche market strategy is a key component of their marketing plan. They note that this strategy requires the implementation of search engine optimisation (SEO) to ensure that digital printing firms can be easily discovered by potential customers through search engines (p.312). Similarly, Zainudin *et al.* (2024) highlight the importance of digital marketing and social media presence in the operations of Malaysian printing firms offering online printing services. These researchers stress the necessity for printing firms to adapt to the evolving landscape of customer engagement and retention.

This perspective aligns with Hansuebsai (2018), who asserts that online printing businesses require digital marketing strategies to thrive, as they play a crucial role in supporting small and medium enterprises (SMEs) by providing printed materials for marketing purposes.

Online Printing in Nigeria

In the Nigerian context, findings from this study provide key insights into the digital engagement practices of Nigerian online printing companies, particularly regarding social media usage and blogging (content creation and posting). A total of 10 companies were identified as active in the online printing sector in Nigeria, with varying levels of digital presence and engagement strategies.

Adoption of Web-to-Print Technology

DuduPrintz Media Company was the first to introduce web-to-print technology in Nigeria in 2012, marking the sector's initial step towards digital workflow automation (The InfoStride, 2012). However, despite this early introduction, adoption has been slow. As of 2022, the study reveals that most companies have yet to fully integrate advanced web-to-print solutions beyond basic online ordering systems. This presents a significant opportunity for development, as investment in such technologies could streamline operations, enhance user experience, and improve competitiveness within the digital landscape. Therefore, Nigerian printing companies must prioritise end-to-end web-to-print solutions to align with global best practices and meet customer expectations.

Social Media Platform Utilisation

The analysis highlights a significant disparity in social media usage among companies. Only four out of the ten companies actively engage across multiple platforms (Printivo, Ryteprint, Print Factory, Printrite), achieving an average score of 5 points per platform assessed (Twitter, Facebook, Instagram, LinkedIn, WhatsApp). These companies consistently engage with their audiences on social media, leading to greater visibility and potential customer interaction.

For instance, Printivo actively uses all five major social media platforms and has published 141 blog posts, achieving the highest engagement score (166 points). This suggests that companies leveraging multiple platforms effectively are better positioned to reach diverse audiences and foster brand loyalty.

Impact of Social Media Activity on Digital Marketing Performance

Companies with active and diverse social media profiles tend to have a stronger online presence and greater customer interaction (Bozkur, Gligor & Babin, 2021). This underscores the importance of a structured social media strategy in maintaining brand visibility and driving online traffic. Printivo's high volume of blog posts and cross-platform engagement demonstrates a strategic emphasis on content marketing, which significantly contributes to customer retention and organic search rankings.

Conversely, companies with limited social media activity, such as Print House Nigeria and NigeriaOnlinePrinting, recorded significantly lower engagement scores (6 and 8 points, respectively). This highlights a missed opportunity for brand outreach and online marketing effectiveness. These findings indicate that regular content creation - including blog posts and platform-specific updates—can drive engagement and improve SEO performance. Thus, online printing firms should adopt a content calendar aligned with customer interests and industry trends. Topics such as printing tips, design inspirations, and service updates are excellent content ideas to explore.

Blog Content and SEO Performance

The presence of blog content varied significantly across companies. Printivo leads in content creation with 141 posts, followed by QuickPrint Shop (18 posts) and Ryteprint (6 posts). These blogs contribute to search engine visibility by providing valuable content that attracts and retains customers. This trend underscores the importance of content marketing in establishing online authority and increasing website traffic.

However, several companies either lack a blog section entirely or have minimal content, limiting their ability to capture organic search traffic and engage customers through informational resources.

Developing a blog section focused on high-value keywords related to printing, design, and online marketing services would significantly enhance search rankings and attract targeted audiences.

Overall, the findings highlight that while Nigerian online printing companies have established a presence across multiple platforms, there is considerable room for improvement. To compete effectively in an increasingly digital market, these firms must enhance their SEO strategies, expand their content marketing efforts, and leverage social media to engage customers and drive business growth.

Table 1: Summarised information of top online printing companies in Nigeria (as of July 2022)

Company	Website	Twitter (5pts)	Facebook (5pts)	Instagram (5pts)	LinkedIn (5pts)	WhatsApp (5pts)	Blog Posts (1 pt)	Total Points
Instant print Nigeria (IP)	Instantprint.ng	5	5	✗	✗	5	✗	15
Kiakiaprint (KP)	Kiakiaprint.com	✗	✗	✗	✗	5	54	59
NigeriaOnlinePrinting (NOP)	nigeriaonlineprinting.com	✗	✗	✗	✗	5	3	8
Printanything (PA)	Printanything.ng	✗	✗	✗	✗	5	9	14
Print Factory (PF)	printfactory.com.ng	5	5	5	5	5	13	38
Print House Nigeria (PH)	Printhouse.ng	✗	✗	✗	✗	5	1	6
Printivo (PT)	Printivo.com	5	5	5	5	5	141	166
Printrite (PR)	printrite.ng	5	5	5	5	5	✗	25
QuickPrint Shop (QPS)	Quickprintshop.com.ng	✗	✗	✗	✗	5	18	23
Ryteprint (RP)	Ryteprint.com	5	5	5	5	5	6	31

Discussion

As the findings reveal, online printing has firmly taken root in Nigeria, with ten such companies identified through a series of online searches. From the data in Table 1, it is apparent that online printing companies in Nigeria place a high premium on search marketing and social media marketing. While scores suggest that Printivo, Kiakia Print, Print Factory, and Ryteprint have the leading social media marketing presence, the appearance of all ten listed companies on search engine results pages (SERPs) provides evidence of their efforts in search engine marketing.

An online printing company is a typical e-commerce entity that depends on pull marketing strategies (Purnomo, 2023). A pull marketing strategy, according to Shuen (2012), is crucial for attracting leads that can be converted into sales. In contrast to push marketing, where businesses engage in intense efforts to take their products to customers, pull marketing aims to get customers to seek out products of their own volition. Thus, marketers attempt to "pull in" customers by taking steps to meet identified needs. With the emergence and proliferation of various Internet technologies serving as tools for information-seeking, there have been immense changes in consumer behaviour. When customers initiate the consumer decision-making process, their first step is to seek information through search engines on the Internet (Noureddine & ZeinEddine, 2018). This has enhanced the possibility of discovery for online businesses that are well positioned for favourable placement on search result pages. Indeed, search engines are not just critical to capturing leads for online businesses; they are foundational to creating and nurturing an enduring and profitable customer relationship. As Charlesworth (2014) explains, "Anyone looking for a product or service started on a search engine – so if you wanted to sell anything, you had to have a high ranking on the search engine results page (SERP)." Thus, the importance of search engine marketing to the identified online printing companies in Table 1 cannot be considered overrated.

However, the social media presence of these companies is not particularly impressive. While the use of WhatsApp for marketing is common across all the companies, the use of other platforms varies considerably, with five of the companies (representing 50%) not having any other social media platform

apart from WhatsApp. Also concerning is the low level of blogging activity among the identified online printing companies, with many (80%) either lacking blogs or not having enough blog posts to support content marketing effectively. This contrasts with a study evaluating SEO and the online visibility of hotel websites in Croatia by Šimunić *et al.* (2023), which underscores the significant role of content creation and regular posting in boosting SERP rankings. According to the researchers, posting new content signals to search engines that a site is active and continuously providing updated information. This ultimately boosts engagement metrics such as visit duration and click-through rates, both of which positively influence rankings.

The role that effective SEM strategies play in improving both SERP rankings and online visibility through firms' social media presence is evident in the study by Šimunić *et al.* (2023). It is therefore important for Nigerian online printing companies to enhance their SMM practices to reach the large market for print products required by customers in a country with a population of over 200 million, as recorded by the Statista Research Department (2024). A study on online printing in Thailand by Weerasinghe (2016) affirms that customers largely order business cards, luxury invitation cards, brochures, posters, letterheads, printed photo mugs, and branded gift items. These are everyday printed products that remain in demand (albeit in reduced quantities) despite the impact of digitalisation on contemporary consumers' media consumption patterns. As Fenton (2016) argued, by aggregating online orders from different geographical markets to increase print volume, web-to-print applications create economies of scale in print production through automation. The automated process eliminates print production bottlenecks while also reducing costs and increasing profits for printing companies.

Regarding customers, Fenton (2016) highlights the value of enhancing customer experience through web-to-print solutions. Customers benefit from being able to place orders at any time (day or night) and enjoy the convenience of doing so online, coupled with automatic notifications regarding the receipt, production, and dispatch of their orders. However, if an unreliable or malfunctioning online payment mechanism exists, the advantages of online ordering may be negated (Weerasinghe, 2016). Fortunately, recent research demonstrates that the introduction of online payment solutions has improved and strengthened the foundation of e-commerce in Nigeria (Ashishie, Ugah, & Ogunfeyimi, 2022; Ayokunmi, Falade & Aladesuru, 2022; Ogunmuyiwa & Amida, 2022).

However, there are other limitations or challenges faced by online printing companies, not just in Nigeria but globally. From past studies, two key challenges are relevant to this discussion: one is technical, while the other pertains to marketing. Regarding technical challenges, an analysis of world-class online printing companies in Europe (such as Vistaprint, Flyeralarm, WIRmachenDRUCK, Onlineprinters, and Saxoprint) by Meissner (2024) reveals the unavoidable need for online printing enterprises to invest in technology and expertise to benefit from the economies of scale associated with online printing. As the scholar explains, "These investments will further lower production costs – but will never be economical for small production volumes" (p.41). For entrepreneurs in developing countries like Nigeria, the technical expertise and substantial capital required to operate at this level of high-technology printing may be beyond reach. This suggests that, compared to Europe, online printing companies in Nigeria are still at an early stage of market development. However, this does not indicate stagnation. Rather, it highlights the market opportunities for Nigeria to emerge as the powerhouse of online printing in the West African sub-region, similar to the status of Flyeralarm and Vistaprint in Europe.

As for marketing challenges, König (2013) highlights strategic promotion as the lifeline of online printing, noting that "without a clear publicity strategy, there is no chance to grow sustainably in this multitudinous market. Publicity is the second critical success factor for today's online printers." Citing Robert Keane, CEO of Vistaprint, König (2013) stresses the necessity for online printers to be experts in internet-driven direct marketing to build lasting market awareness. The scholar cites examples such as Vistaprint's focus on Business-to-Consumer (B2C) clients using high-end web-to-print design tools and Flyeralarm's emphasis on brand visibility through sports sponsorships and stadium advertising. All these marketing efforts require substantial financial investment, and, as with technical investments, Nigerian online printing companies are start-ups with limited funding.

When asked about the challenges faced in building what would become Nigeria's first online printing company, Oluyomi Ojo, a co-founder of Printivo, responded:

"... It was difficult convincing customers that they could order print online. It was challenging to break into the market and build customer confidence in ordering something as physical as print through the Internet. Another challenge was finding the right talent, as we were the first to start this kind of business. We couldn't recruit people from other companies in the same field, so we had to train our own people and create our own talent. Funding was also a problem, but we've been able to overcome most of these challenges" (Bounce News Nigeria, 2018).

Despite these challenges, the Nigerian online printing sector is poised for growth, as confirmed by 6Wresearch (2022). According to the consulting firm, the increasing demand for customised printing solutions in various sectors (such as advertising, packaging, and publishing) provides the basis for this projected growth. However, 6Wresearch (2022) underscores the necessity for the Nigerian government to create an enabling environment, facilitating grants and low-interest loans to help businesses upgrade their printing technologies.

Conclusion

The Internet has been both a threat and a blessing to the printing and graphic arts industry. As a threat, it is supplanting print as a product substitute. However, on the brighter side, the Internet is complementing or strengthening print media in creative and innovative ways. Thus, technologies like online printing or web-to-print technology have taken root in the print media space. The argument made here is that, without doubt, W2P technology is necessary for printing companies to survive and thrive in a cut-throat marketplace, while search engine marketing and social media marketing are crucial for raising consumer awareness. As this exploratory study shows, the adoption of the Internet in the print procurement process is an indicator of the possible synergy between print and digital media. This reality has firmly taken root in Nigeria with the emergence of online printing companies that are creating new frontiers in e-commerce through the adoption of web-to-print solutions and digital marketing practices. The study identifies online printing companies in Nigeria and explores their digital and social media marketing practices to identify their challenges and opportunities for growth. The results underscore the need for online print businesses to place the highest premium on search engine marketing and social media marketing, given their vital roles in driving traffic to websites. Consequently, it can be argued that the Internet is not a threat to printing companies in Nigeria, but rather a leverage through which the sustainable growth and development of the printing industry can be achieved.

This study is exploratory; thus, it is aimed principally at documenting the existence of online printing businesses in Nigeria through search engine discovery. While it sets the tone for research in this vastly uncovered area of media technology, further research into the social media marketing practices of Nigerian online printing companies is imperative. Although SEM may be considered the nerve of online printing, SMM is the oil that keeps its wheel of growth grinding. Recommendations for companies involved in online printing include the need to embrace a digital strategy that encompasses word-of-mouth marketing, search engine marketing, and social media advertising to enhance their online presence, as well as prioritising continuous research to deepen adopted digital strategies. Moreover, it is important for online companies to stay updated by monitoring evolving trends in the dynamic digital marketing landscape, especially the ever-changing algorithms that drive engagement in online marketing. Finally, as the convergence of print and digital media drives the Nigerian online printing business toward sustainable growth and development, it becomes crystal clear that print media's future rests not in rivalry but in cooperation with the infinite potential of the digital sphere, where success is defined by innovation.

Conflict of Interest

The authors affirm that there are no conflicting objectives.

Acknowledgement

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