

Digital Marketing for Entrepreneurs: A Social Network Analysis

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Abstract: *The evolving landscape of digital marketing has brought forth unprecedented opportunities and formidable challenges for entrepreneurs. This research explores the evolution of digital marketing and entrepreneurship within academic scholarship for the years 2012 to 2023, examining changes in scholarship productivity, authorship, institutional contribution, and impact metrics. The productivity pattern observed reveals a modest beginning in 2012, a dip in 2013, and gradual growth until a peak in 2017, followed by a dramatic increase in 2023, likely due to expanded funding and emerging themes for research. The analysis indicates a rich diversity of contributions across regions and institutions and highlights India as a dominant contributor to the research output. Core topics like digital marketing, entrepreneurship, and SMEs continue to dominate the discourse, while new focus areas like social responsibility and social media indicate shifting focal priorities. Evaluation of prolific authors suggested varied levels of participation, which imply differing degrees of collaboration and consistent input from a single-authored perspective. This reinforces the interdisciplinary character of the researched phenomena, which invite attention from the fields of business, social sciences, and arts and humanities. This summary serves as a basis for formulating further avenues of inquiry within the discipline.*

Keywords: *Digital Marketing; Entrepreneurs; Social Network Analysis; Thematic Analysis; Bibliometrics*

Introduction

Today's entrepreneurs are confronted with unmatched opportunities and challenges in the context of a rapidly evolving and digitally driven world (Weigel Margaret et al., 2009). They shield themselves with an arsenal that includes digital marketing, a multifaceted discipline that uses

internet-based platforms to propel products, foster client relations, and stimulate business growth (Balunywa Ali et al., 2011). In the current environment, digital marketing serves as the lifeblood of any business, as its absence renders one hopelessly irrelevant and non-competitive

(Teece, 2000; Rodgers, 2010; Covin & Slevin, 2017). However, the intrinsic dynamism of this field brings along complexities, constraints, and countless unanswered questions that, in turn, require a deep understanding of its multifaceted potential and pitfalls. The objective of this research is to systematically integrate and logically structure the content provided to avoid redundancy while highlighting important aspects. There is a vast amount of knowledge readily available for entrepreneurs looking to begin their journey in digital marketing.

In addition, the acceleration of digital marketing is parallel with the expansion of digital systems and technologies over the last two decades (Miller & Vaccari, 2020). This knowledge base has been created from numerous scholarly works. It includes critical aspects of digital marketing like Search Engine Optimization (SEO), Social Media Marketing, Content Marketing, Email Marketing, Pay-Per-Click (PPC) Advertising, Data Analysis, Consumer Behavior and Psychology, Ethics, Law, and more (Piñeiro-Otero & Martínez-Rolán, 2016; Bapat, 2018; Rosario & Cruz, 2019; Gupta, 2020; Kumar, 2021). These topics are fundamental to the development and continuous improvement of strategies for digital marketing, equipped with tools needed to prosper in the constantly changing digital environment.

Despite an abundance of accessible data, entrepreneurs are bound to the realities and challenges that come with digital marketing (McMullen & Dimov, 2013). One of the most challenging factors in entrepreneurship nowadays is the swift changes in social media and search engine algorithms (Carrigan & Fatsis, 2021). Furthermore, the oversaturation and fierce competition within the industry require more innovative strategies to tailor a brand to stand out. Scarce resources, especially limited funds, and staff, impede an entrepreneur's ability to execute comprehensive digital marketing campaigns, constraining budget, and personnel to execute holistic digital marketing initiatives (Iqbal, 2023). Furthermore, emerging concerns regarding data collection and privacy, especially

with GDPR, demand attention and caution when using data (Harini et al., 2023; Hegar et al., 2023). All of these factors combine to shape the environment that entrepreneurs must navigate while strategically marking their presence within the realms of digital marketing.

Review of Literature

The last few years have seen a drastic change in the digital world, which has transformed the methods of doing business, how to interact with clients, and how to market goods/services (Brand & Rocchi, 2011; Cuevas, 2018). With this change, the startups have been presented with a new and unique set of challenges and growth opportunities. Leading this technological disruption is the domain of marketing at the intersection of the internet and business, known as digital marketing, which involves the use of internet space and other technologies to communicate offers in the fast-changing economy (Rathore, 2019). There are several reasons that float the boat of digital marketing.

To start, the development of the internet and mobile devices have made it possible for consumers to access a broad digital ecosystem where a multitude of platforms and services spend most of their allocated time online (Ketter et al., 2022). Furthermore, social media, email marketing tools, and search engines have equipped businesses with low-cost methods to contact and interact with their clients (El Houda, & Baghdad, 2023; Sulistianingsih, 2023). In addition, the billions of parts that constitute digital marketing data allow entrepreneurs the luxury of focusing their advertising, message delivery, and performance evaluation, all in real-time, allowing instant refinement of strategies to maximize results (Jameaba, 2023). Entrepreneurs, more so driven by the persistent lack of adequate finances and tight budgets, resort to digital marketing to compete, even against established giants within the same industry (Sull, 1999; Fenton, 2009). The appeal of novel global audiences, the ability to test new marketing strategies with little financial exposure, and the ability to adapt to constantly

shifting market conditions make digital platforms indispensable for small companies and newly formed start-ups. However, opportunities, while abundant, come with boundless challenges. The shifting landscapes of economic frameworks coupled with new technologies create rigorous competition, as well as new consumer preferences, thus an always-growing arsenal of tools to be used (Rathore, 2020; Kumar et al., 2021). Finally, a profound grasp of techniques applied in digital marketing is crucial, provided that it is catered to the needs and limitations of the business in question (Pache & Chowdhury, 2012). Not to add, marketing concerns such as privacy and transparency of data online have become a central part of debates in digital marketing (Dwivedi et al., 2021). Thus, it is important to apply ethical marketing frameworks while enabling the use of digital platforms to elevate the countable aspects of the business. Given these ever-evolving conditions, the focus of this particular research initiative is to conduct

a thorough descriptive study in the area of digital marketing for business owners. This study follows a more methodical approach focusing on the broad spectrum of Digital Marketing and Entrepreneurship as a distinct field of study. This vast study incorporates many components such as the total number of published works, citation analysis, primary areas of research attention, emerging areas of concern, the Inogr journals that dominate the field, publication origin geography, author's institution diversity, membership and collaboration in professional organizations, and detailed analysis of productive scholars. Moreover, this study will analyze the spatial distribution of publication and citation counts, three field path analyses, keyword co-occurrences, and thematic trends and maps of the field. All these efforts go towards achieving the goal of equipping today's entrepreneurs with the knowledge of the digital marketing environment, what it entails, and how best to use it in the achievement of their entrepreneurial ambitions.

Methodology

The methodology for this research leveraged the PRISMA Framework (refer to Figure 1), which offers a systematic approach to identifying a subset of publications within the scope of Digital Marketing and Entrepreneurship. Scopus was chosen as the central database for this study because of its broader reach in scholarly output. The search was carried out on January 1, 2024 (refer to Figure 1) in an attempt to utilize the latest research available from 2012 to 2023. This time window was selected in order to provide a well-rounded evaluation reflecting the latest advancements.

A Boolean query ("Digital Marketing" AND "Entrepreneur*") was executed to retrieve all publications addressing both digital marketing and entrepreneurship topics to ensure accuracy. The subject areas (as depicted in Figure 1) included "Business, Management, and Accounting," "Social Sciences," "Economics, Econometrics, and Finance," as well as "Arts and Humanities," which represented typical areas of

these disciplines. Publications outside these areas were omitted to maintain focus. Only document types labeled as "Articles" and "Reviews" (see Figure 1) were included in the analyses because they tend to offer in-depth research and critique alike. All other document types, including conference papers and editorials, were removed. To further streamline the data set, only English publications were kept. Additionally, only records containing complete author details, titles, abstracts, and other critical information were kept. This step reduced the chances of retaining erroneous or incomplete records, thus improving the accuracy and trustworthiness of the data.

The selection criteria outlined above (figure 1) resulted in a refined dataset consisting of 107 publications, achieving a robust and detailed analysis of the identified research gaps and trends in Digital Marketing and Entrepreneurship.

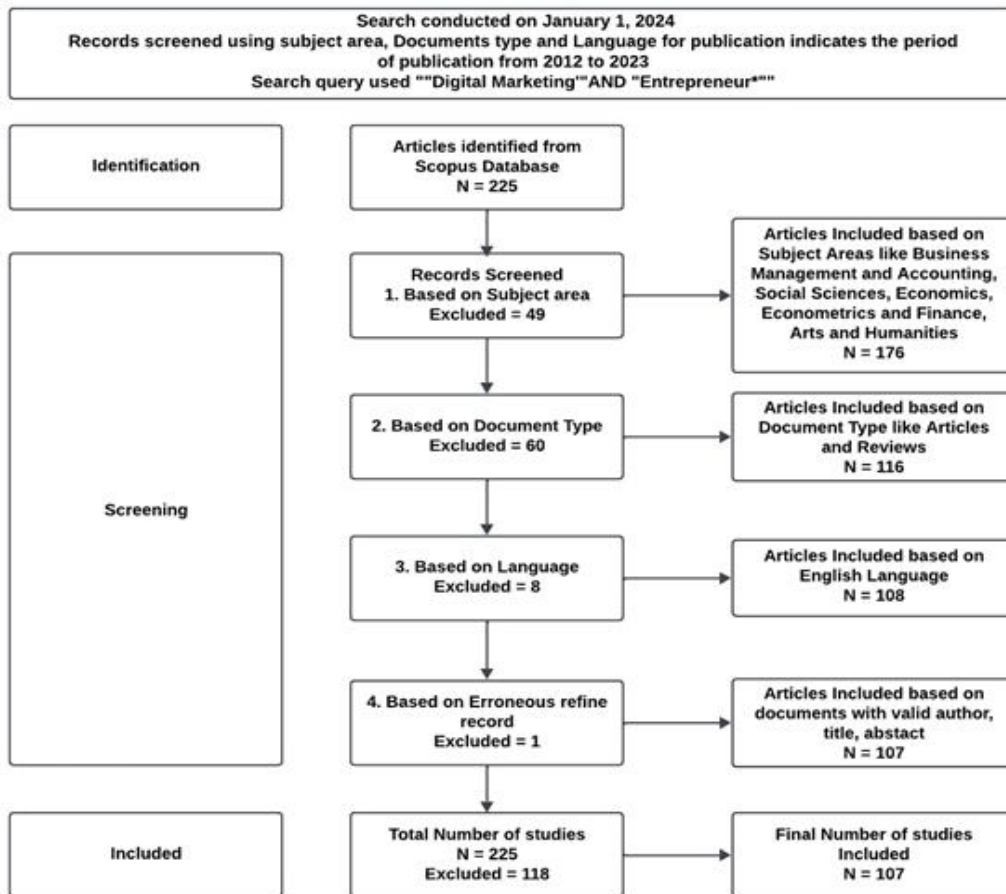


Figure 1: Study flow using PRISMA Framework

Source: Developed by the authors using PRISMA Framework

Results and Interpretation

Table 1: Summary statistics

Description	Results
Timespan	2012:2023
Documents	107
Sources (Journals, Books, etc)	70
Annual Growth Rate %	37.04
Average citations per doc	7.07
Keywords Plus (ID)	101
Author's Keywords (DE)	382
Authors	305
Authors of single-authored docs	17
Authors of multi-authored docs	288
Authors per docs	2.85
Documents per Author	0.35
Co-Authors per Doc	2.93
International co-authorships %	9.34

Source: Developed by the authors based on R

The output from this area of research has significantly surged strikingly between 2012 and 2023, i.e., 107 documents were published in 70 different journals, which demonstrates growing diversity in the scope of research. It is important to note that the 37.04% annual increase clearly shows scholarly interest and academic activity in the increased enduring query for the field. The citation rate shows that 7.07 active citations per document is a favorable figure that a researcher should strive towards, thus indicating a commendable influence on the intellectual community, even if not stellar. Moreover, the dataset comprises 101 Keywords Plus (ID) and 382 Author's Keywords (DE), displaying how broad and diverse the topics and terminologies

that authors deal with are. Apart from that, this volume has 305 authors, with 17 of them collaborating solo and the remaining 288 joining multi-authored collaborations, which is quite massive considering how comprehensively this domain is intensely an area of research. Therefore, the per-document average is 2.85 authors (in simple terms – 0.35 documents per author), which signals a level of collaboration and provides evidence for the claim of 2.93 co-authors per document. Furthermore, the number of international co-authorships is 9.34%. The findings as a whole point toward a more dynamic research area as well as connectivity with the advancement of global outreach.

Distribution of publications

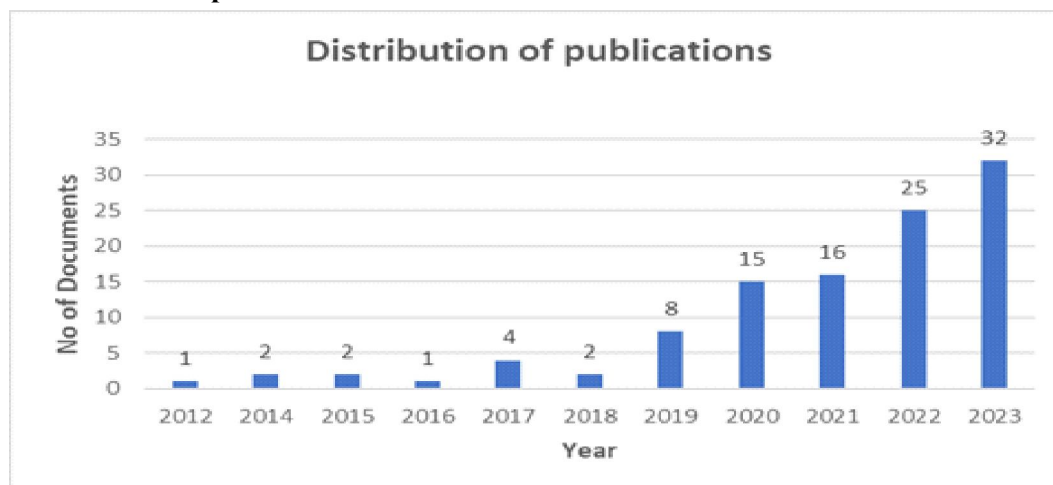


Figure 2: Distribution of Publication

Source: Developed by the authors based on Scopus database

The research output data (see Figure 2) for the years 2012 to 2023 demonstrates clear patterns of scholarly activity. In the beginning, the period started with modest output in 2012 and a pronounced drop in 2013, which might have been caused by a change in research focus, an economic slump, or even global happenings. Following this, there was sporadic growth, most pronounced after 2017, when an upsurge was observed from 2019 to 2022. A variety of factors drove this growth. There was better funding directed towards researching digital marketing

and entrepreneurship, especially after 2020, when there was greater spending by governments and institutions because of the shift towards digital transformation and entrepreneurial activity. The surge in government spending on research programs for economic recovery post-pandemic served as a catalyst. There were also specific funding initiatives such as government-sponsored entrepreneurship programs or digital transformation funds that offered critical financial resources that interested researchers, thereby increasing public and private sector engagement.

Moreover, the emergence of AI, big data analytics, new digital marketing tools, and other technologies offered profound new avenues for scientific inquiry in these areas and added greater breadth and depth. For instance, the introduction of AI technologies in marketing sparked interest in new models and methodologies that had not received much attention. These technological advances have the intended and permanent effects on the research agenda. Lastly, other innovations attributed to policy shifts tend to focus on innovation and entrepreneurship. These include lowering barriers for startups, tax breaks for tech businesses, and subsidized access to

venture capital funds. Such policies have, for example, incentivized more research in digital marketing for startups and emerging enterprises. The convergence of these policies with academic priorities resulted in heightened scholarly activity. The Research output in 2022 showed remarkable growth, peaking at 2022 levels and surpassing the previous year. While this indicates a prolific shift fueled by funding and funding policies, technology, and encouraging regulatory frameworks, it also suggests a tempered stabilization driven by sustained efforts in funding, technological strides, and progressive policies.

Prolific authors, Affiliations and Countries based on research productivity and research impact:

Table 2: Prolific authors, Affiliations and Countries based on Citation's impact

TP	Author	TC	TP	Organization	TC	TP	Country	TC
1	Wang F.	65	1	King's College London, United Kingdom	65	7	United Kingdom	228
1	Alford P. and Jones R.	63	1	University of Birmingham, United Kingdom	63	14	Indonesia	76
1	Alford P. and Page S.J.	61	1	University of Southampton, United Kingdom	63	5	South Africa	68
2	Ukpere C.L et al	52	1	Bournemouth University, United Kingdom	61	5	Spain	62
1	Sultan S. and Sultan W.I.M.	38	2	Cape Peninsula University of Technology, South Africa	52	11	United States	62
1	Daud I. et al.	32	2	University of Johannesburg, South Africa	52	20	India	44
1	Saura J.R. et al.	27	1	Birzeit University, Palestine	38	1	Palestine	38
1	Lacarcel F.J. and Huete R.	26	1	Hebron University, Palestine	38	6	Malaysia	27
1	He Z., Kuai L., and Wang J.	24	1	University of Muhammadiyah Malang, Indonesia	32	1	China	24
1	Sozinova A.A.	23	1	Sekolah Tinggi Ilmu Ekonomi PPI, Indonesia	32	2	Russian Federation	23

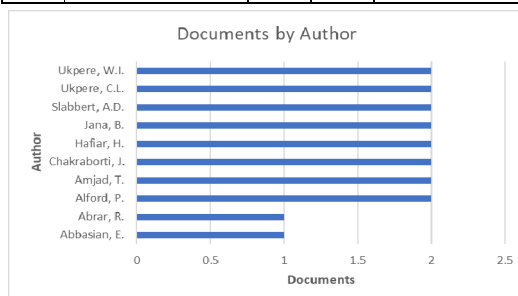


Figure 3: Total Documents by Author

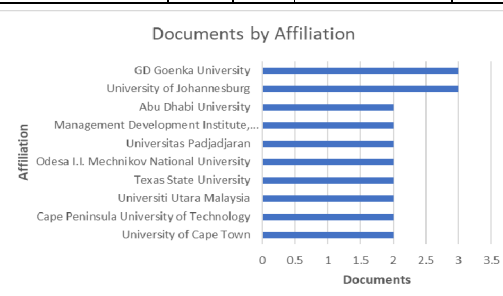


Figure 4: Total Documents by Affiliation

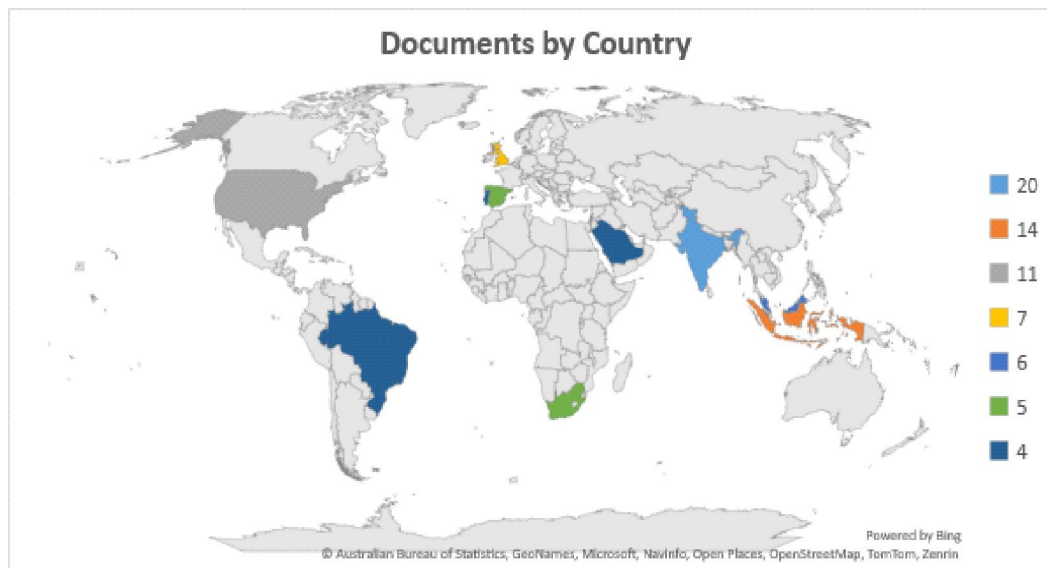


Figure 5: Total Document by Countries

Source: Developed by the authors based on Scopus database

The study of scholarly output shows immense productivity differences among leading authors, institutions, and countries. There is a marked output disparity from the top ten authors, as illustrated in Figure 3. For example, Abbasian has one publication, and Alford, Amjad, Chakraborti, Hafiar, Jana, Saura, Slabbert, and Ukpere C.L. and W.I. have two each. This indicates differing degrees of scholarly engagement. Some authors tend to specialize in niche topics, while others take a more holistic approach to several multi-faceted projects. As mentioned earlier, Alford extensively writes on the nexus of digital marketing and entrepreneurship, while Ukpere focuses on the impact of digital transformation in emerging markets.

The Institutions resulting in an analysis of the top ten out of 216 institutions, as depicted in Figure 4. Productivity among most universities was consistent in that they all contributed two documents. This was not the case for the University of Johannesburg and GD Goenka University, each of which contributed three. The University of Johannesburg is renowned for its digital marketing and entrepreneurship considerations in developing countries. At the

same time, GD Goenka University is noted for its research in the use of digital technology and innovation. The output uniformity points to similar institutional research capacities to some degree, explaining the lower research output secondary to resource allocation or institutional policies.

In country-level analysis from total citations (refer to Figure 5), only the top ten of 38 countries were included. Leading is India, with 20 documents, and closely followed by Indonesia, with 14 demonstrating significant scholarly output. The United States, United Kingdom, and Malaysia contributed 11, 7, and 6 documents, respectively. South Africa, Spain, Brazil, Portugal, and Saudi Arabia contribute moderately with 4 to 5 documents. These patterns support the baseline hypothesis of research output and population distribution. India and Indonesia play an emerging role as primary authors in the fields of digital marketing and entrepreneurship that are being researched, concentrating on domestic market conditions and innovations. While these two countries focus more on local issues, the United States and the United Kingdom focus

more broadly on global issues regarding digital evolution and entrepreneurial ecosystems.

The impact citation analysis (see Table 2) extracts and marks researchers with the most significant impact. Wang F. tops the list with 65 citations, and Alford P. is next with 63. He has 61 citations from other co-authored works, which also emphasize significant contributions. Co-authored works by Ukpere C.L. et al. have been cited 52 times, revealing the power of collaborative work across institutions. Other contributors include Sultan S., Sultan W. I. M., and Saura, J. R., who have between 27 and 38 citations, indicating ongoing engagement with the core research issues. Alford's work on digital entrepreneurship is cited extensively, showing the rising interest in this topic.

With regards to institutional citations (Table 2), King's College London has the highest with 65 citations. They are followed by the University of Southampton and the University of Birmingham, each with 63 citations. These universities are known for their research in digital entrepreneurship, innovation, and the use of contemporary marketing tools. South African institutions such as Cape Peninsula University of Technology and the University of Johannesburg are emerging with 52 citations each, reflecting their growing impact within developing countries. Together, Palestinian institutions, including Birzeit University and Hebron University, have contributed 38 citations toward the adoption of digital marketing and entrepreneurial practices in the Middle East.

The country-level citation analysis (refer to Table 2) depicts specific discrepancies in research impact across countries. The United Kingdom has the highest record, with 228 citations accruing from 7 contributions, owing to robust research in digital marketing and entrepreneurship. Indonesia comes second with 76 citations from 14 contributions, marking significant scholarly activity in digital entrepreneurship in Southeast Asia. South Africa and Spain report 68 and 62 citations, respectively, concentrating on innovation and strategies of

the digital economy. The United States demonstrates a strong intellectual output with 62 citations from 11 contributions, especially on global entrepreneurship. While India contributes the highest number of contributions (20), its citations (44) are on the lower side, suggesting a large volume of material that is not widely recognized. Palestine stands out with a single contribution that has a disproportionate citation count of 38, illustrating the effects of targeted research.

A detailed examination of India's efforts in entrepreneurship is provided within the framework of government policies such as 'Startup India,' 'Make in India,' and 'Digital India,' which greatly aided innovation and entrepreneurial activity.

The abovementioned policies not only shape an enabling environment but also have a considerable impact on fostering research in marketing as well as entrepreneurship in India. Additionally, the Indian government's push toward increasing digitization has fueled scholarly attention on the use of information technology in regional markets and business environments and profoundly shaped academic interest.

Furthermore, the collaborations facilitated through the imprint Initiative and the Prime Minister's Fellowship Scheme for Doctoral Research on Innovation-driven Institutional partnerships are likely to be responsible for the sharp increase in research output in universities like GD Goenka University, GITAM University, NIT Agartala, IMS Ghaziabad in the areas of digital marketing and entrepreneurship.

These findings illustrate the disparity between different regions, institutions, and authors within the global scope of research activity. While emerging markets, including India, Indonesia, and South Africa, are increasingly focused on the constructive facets of digital marketing and entrepreneurship, there is a tremendous amount of research work already done in the UK and the US.

Publications and citations

Table 3: Top cited Articles

Author	Title	Total Citations	TC per Year	Normalized TC
Wang F, 2020	"Digital marketing capabilities in international firms: a relational perspective"	65	13.00	4.62
Alford P, 2020	"The lone digital tourism entrepreneur: Knowledge acquisition and collaborative transfer"	63	12.60	4.48
Alford P, 2015	"Marketing technology for adoption by small business"	61	6.10	2.00
Ukpere CL, 2014	"Rising trend in social media usage by women entrepreneurs across the globe to unlock their potentials for business success"	41	3.73	1.58
Sultan S, 2020	"Women MSMEs in times of crisis: challenges and opportunities"	38	7.60	2.70
Daud I, 2022	"The effect of digital marketing, digital finance and digital payment on finance performance of Indonesian SMEs"	32	10.67	5.56
Saura JR, 2023	"Digital marketing in SMEs via data-driven strategies: Reviewing the current state of research"	27	13.50	7.14
Lacarcel FJ, 2023	"Digital communication strategies used by private companies, entrepreneurs, and public entities to attract long-stay tourists: a review"	26	13.00	6.88
He Z, 2023	"Driving mechanism model of enterprise green strategy evolution under digital technology empowerment: A case study based on Zhejiang Enterprises"	24	12.00	6.35
Sozinova AA, 2018	"Marketing concept of managing the reorganization of entrepreneurial structures using the latest information technologies"	23	3.29	1.92

Source: Developed by the authors based on Scopus database

The table showcases an overview of the publications from 2014-2023, highlighting the research activities on digital marketing and its adjacent domains. Wang F (2020) continues to dominate by far, with the highest overall citations of 65 and a robust annual citation rate of 13.00, indicating his substantial impact on understanding the role of digital marketing in international companies over the last decade. Alford P. has two entries. His 2020 paper on digital tourism entrepreneurs follows closely with 63 citations, signaling a remarkable impact within the realm of digital tourism. Alford's 2015 paper performs well but has a lower annual citation rate, demonstrating an enduring impact but less recent

relevance. While older, Ukpere CL's 2014 study on social media usage among women entrepreneurs has accumulated 41 citations, demonstrating a moderate impact. Sultan S's 2020 research on women MSMEs during crises has a noteworthy, normalized TC, which suggests a well-timed and impactful contribution. Daud I's 2022 research regarding the relationship between digital marketing and the finance performance of Indonesian SMEs had high TC per year, which reflects notable current interest. Lastly, all three authors have high ANC and normalized TC from 2023, which indicates emerging importance and potential future impact. The 2018 work of Sozinova AA, although not widely referenced,

offers perspectives on entrepreneurial reorganization, underscoring the importance of adaptability in the shifting digital climate. This table illustrates the ongoing shifts in scholarship

within the realm of digital marketing and the multi-faceted scopes of the application of digital tactics in different fields and countries.

Distribution of Research Subjects

Table 4: Distribution of Research Subjects

Subject Area	Documents
Business, Management and Accounting	84
Social Sciences	59
Economics, Econometrics and Finance	34
Computer Science	11
Arts and Humanities	7
Decision Sciences	7
Environmental Science	7
Energy	4
Engineering	4
Psychology	2

Source: Developed by the authors based on Scopus database

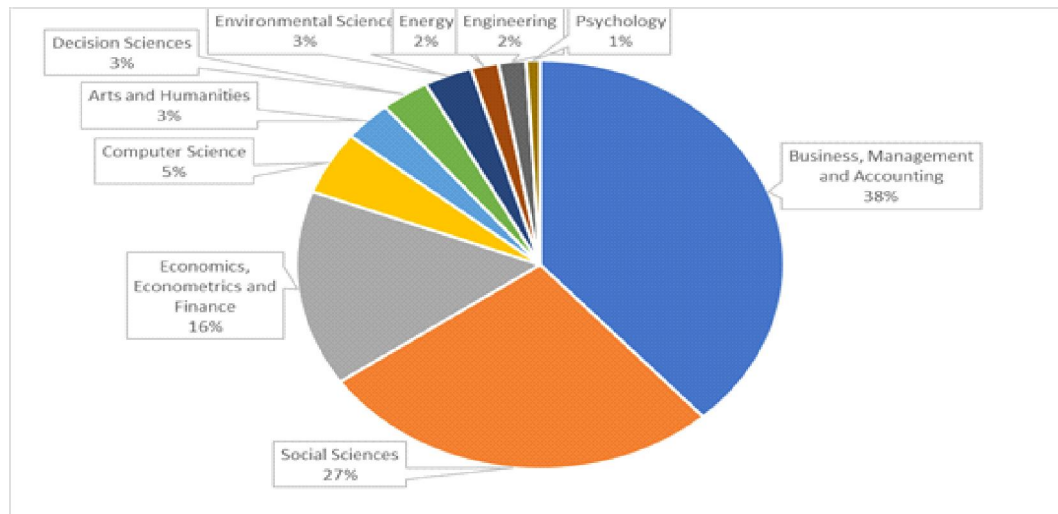


Figure 6: Distribution of research subjects by percentage

Source: Developed by the authors based on Scopus database

The data reveal the extent to which research documents have been published regarding certain fields of study (refer to Table 4 and Figure 6), which adds to understanding the education and research system. Business, management, and accounting are identified as the most productive subject areas, with 84 remarkable documents, which emphasize the amount of research done

within the field, perhaps due to its applicability and importance in the world economy. Social Sciences takes second place with 59 documents, showing the discipline's comprehensive and interdisciplinary nature and its impact across society. Economics, Econometrics, and Finance, with 34 documents, continue to attract substantial attention owing to these disciplines' importance

for the functioning of economic and financial systems and markets. With 11 documents, Computer Science lags behind, with a modest level of research productivity reflective of the advancing pace of technology. With seven documents per discipline, arts and Humanities, Decision Sciences, and Environmental Science indicate a moderate balance between the cultural and artistic activities and the analytical and environmental dimensions of research. Energy and Engineering, with four documents each, illustrate the broad range of academic interests from a global perspective on sustainable energy development to technological innovation.

Psychology is the most underrepresented field in the dataset with a mere single entry. This could suggest a lower volume of research activity within this area or specialization relative to a larger, more multidisciplinary domain. Nevertheless, it reveals a finding exemplifying the development of a cultural scholarly work. The available documents indicate the degree of investigation concerning the particular subjects within these disciplines and the expectations and requirements regarding scholarly productivity for a given period and, therefore, assist in determining future research strategies.

Predominant Journals

Table 5: Top Journals

Journals	Documents	Citations
"International Marketing Review"	1	65
"Tourism Management"	1	63
"Service Industries Journal"	1	61
"Mediterranean Journal of Social Sciences"	2	52
"Journal of Research in Marketing and Entrepreneurship"	5	43
"Journal of Small Business and Enterprise Development"	1	38
"International Journal of Data and Network Science"	1	32
"International Entrepreneurship and Management Journal"	2	31
"Journal of Small Business Management"	1	27
"Business Strategy and the Environment"	1	24

Source: Developed by the authors based on Scopus database



Figure 7: Top Journals

Source: Developed by the authors based on Scopus database

Based on the number of documents and citations, the provided table and figure (see table 5 & figure 7) showcase the various academic journals' impact and relevance. "International Marketing Review" tops the list with a single document garnering 65 citations, followed by "Tourism Management" and "Service Industries Journal" with 63 and 61 citations, respectively. The "Mediterranean Journal of Social Sciences" and "Journal of Research in Marketing and Entrepreneurship" display moderate impact, with five documents contributing 43 citations, suggesting more able research output. "Journal

of Small Business and Enterprise Development," "International Journal of Data and Network Science," and "International Entrepreneurship and Management Journal" also display moderate impact with their citation counts. Journals such as "Small Business Management" and "Business Strategy and the Environment," which are lower in citation count, still contribute valuable insights in the field. This table supports the researcher in identifying key journals and landmark works for literature review and publication planning, leading to high-impact resources and critical articles in their specialization.

Three Field Path Analysis

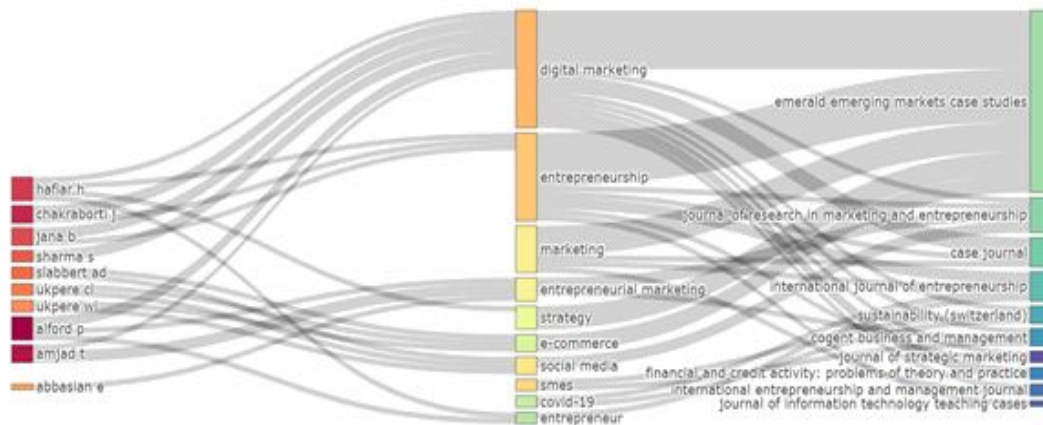


Figure 8: Three Field Path Analysis

Source: Developed by the authors based on Scopus database on R (Bibliometrix)

The diagram (see Figure 8) illustrates a flow visualization concerning researchers and their corresponding publications in marketing and entrepreneurship. On the left, the names of the researchers, such as Hafiar H, Chakraborti J, and Sharma S, are given, and each is color-coded. The center section classifies the research into broad topics like digital marketing, entrepreneurship, and marketing, while the right side shows the respective journals where these works are published, which include "Emerald Emerging Markets Case Studies," "Journal of Research in Marketing and Entrepreneurship,"

and "Sustainability (Switzerland)." The flow lines depict the work done by each researcher about these categories and journals, which exhibit the multifaceted nature and numerous outlets of their research. As an example, the work of Hafiar H touches on several categories, and he has a strong presence in digital marketing and many other journals. This kind of visualization reveals the elaborate network of research outputs and specialized publications in which these works are disseminated, reflecting the collaborative nature of academic research in these fields.

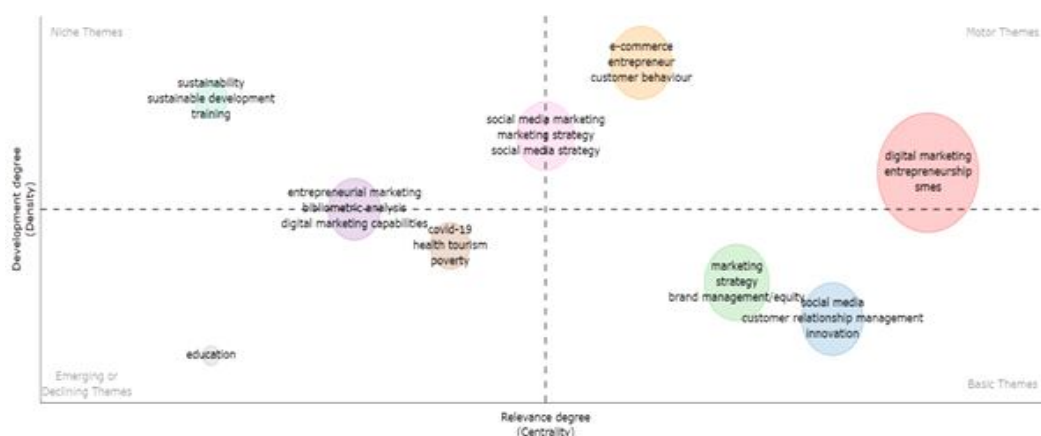


Figure 9: Thematic map

Source: Developed by the authors based on Scopus database on R (Bibliometrix)

The thematic map (see Figure 9) illustrates the central area of research and how they relate to the level of development (density) and relevance (centrality) of the research. All themes emerged from analyzing the research volume, citation patterns, and publications over time, which is beneficial for identifying themes gaining traction and assessing their positioning relative to peer research. The core focus themes, such as digital marketing, entrepreneurship, and SMEs, have been significantly developed and relevant, with copious scholarly discussion and discourse. On the other hand, niche themes such as sustainability and sustainable development are deemed less central and exude specialized

research impact and, therefore, are developed but have limited broader relevance. Basic themes like marketing strategy, brand management, and customer relationship management are critical for grasping broader trends; however, foundational and less developed require more exploration. Emerging or declining themes like education demonstrate lower relevance and development, showing areas either gaining interest or focus from the research community. This thematic map, in turn, highlights all the key focus areas, including, but not limited to, foundational concepts, specialized niches, and critical gaps for future research.

Keyword Co-Occurrences

Table 6: Keyword Co-Occurrences

Keyword	Occurrences	Total Link Strength	Keyword	Occurrences	Total Link Strength
Digital Marketing	54	89	Social Marketing	2	6
Entrepreneurship	23	41	Barriers	2	5
Smes	12	23	Digitalization	3	5
Social Media	11	21	Entrepreneur	4	5
Strategy	7	17	Entrepreneurial Orientation	3	5
E-Commerce	5	15	Innovation Resistance Theory	2	5
Marketing	9	13	Small Businesses	2	5
E-Marketing	2	11	Start-Ups	2	5
M-Commerce	2	11	Training	2	5

Online Social Networking	2	11	Digital Transformation	2	4
Online Strategy	2	11	Entrepreneurs	2	4
Web 2.0	2	11	Handicraft	2	4
Entrepreneurial Marketing	8	10	Search Engine Optimization	2	4
Customer Behaviour	2	9	Sustainable Development	2	4
Customer Relationship Management	3	9	Bibliometric Analysis	2	3
Innovation	3	9	Competitive Advantage	2	3
Marketing Strategy	3	9	Digital Marketing Capabilities	2	3
Search Engine Marketing	2	9	Health Tourism	2	3
Social Media Strategy	3	9	Women Entrepreneurs	2	3
Content Marketing	3	8	Brand Management/Equity	2	2
Social Media Marketing	4	8	Crowdfunding	2	2
Consumer Behavior	2	7	Msmes	2	2
Covid-19	4	7	Sustainability	2	2
Retailing	2	7	TAM	2	2
Marketing Mix	2	6	Education	3	1
Servicescape	2	6	Poverty	2	1

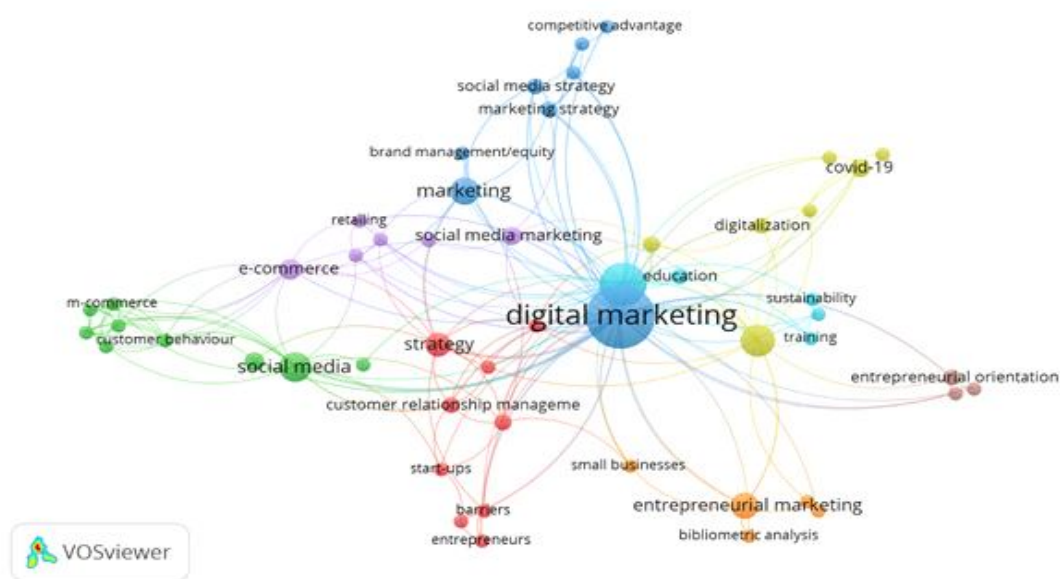


Figure 10: Network Visualization

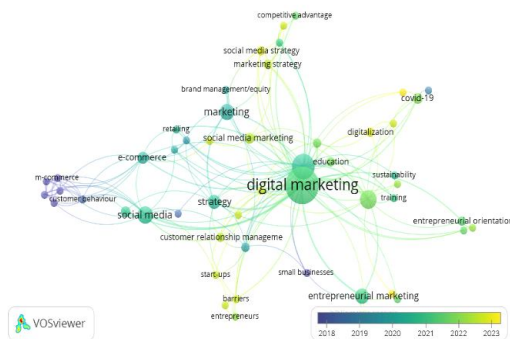


Figure 11: Overlay Visualization

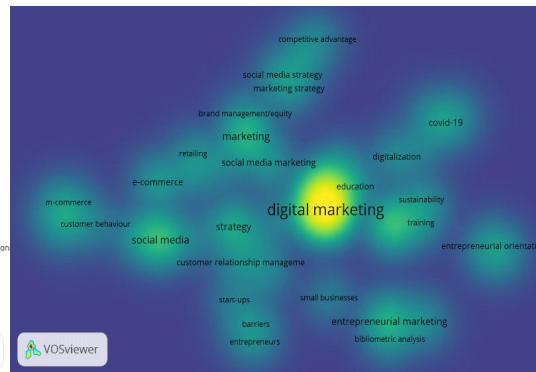


Figure 12: Density Visualization

Source: Developed by the authors based on Scopus database on using VOSviewer

In the scope of digital marketing and entrepreneurship studies, the data showcased in Table 6 and Figures 10, 11, and 12 illustrate the frequencies of keywords and their total link strength. The most prominent keyword, ‘Digital Marketing,’ not only occurs 54 times but also possesses a total link strength of 89. This reinforces that, within the research domain, significant emphasis is placed on the term and its interrelated topics. Subsequently, “Entrepreneurship” and “SMEs” rank as highly notable keywords as well, with 23 and 12 occurrences and total link strengths of 41 and 23, respectively. This illustrates that significant consideration is given to the intersection of digital marketing and entrepreneurial activities, particularly regarding small and medium-sized

enterprises (SMEs). Other significant but comparatively less interconnected key concepts include ‘Social Media,’ ‘Strategy,’ and ‘E-Commerce,’ each exhibiting moderate occurrences and link strengths. Concepts such as “Customer Relationship Management,” “Innovation,” and ‘Marketing Strategy’ display lower occurrence frequencies but high link strength, signaling importance within niche studies. At the lower end, ‘Education’ and ‘Poverty’ showcase sparse occurrence and link strength, suggesting that these terms represent focused or novel areas of concept that need further development. Overall, the information reveals the importance of digital marketing and entrepreneurship in current research, as diverse study topics enrich the interrelated academic ecosystem.

Discussions

The output data from research between 2012 and 2023 showcases some remarkable tendencies in scholarly productivity about digital marketing and entrepreneurship, as illustrated in Figure two. An examination of the output data reveals a modest document count in 2012, which dropped to zero in 2013, marking either a change of focus in research activities or some external influences. There have been sporadic increases thereafter, but the most defining point was in 2017, when there was a distinct jump in research output, thus signifying a rekindling of interest in these areas.

In the period stretching from 2019 to 2023, however, this increase skyrocketed the gains to new heights. This can be explained by many additional reasons, such as the availability of resources, newly emerging research paradigms, or even the completion of projects that have been delayed for a long time. Understanding the nature and classification of these documents may better explain why the research output has gained substantially in such a short period. While analyzing the dataset, it reveals striking patterns in productivity for prolific authors (see Figure 3

& Table 2). The researcher observes partial and complete authorship patterns in the data that suggest varying “volumes” of output across the scholarly world. A group of scholars appears to focus intensely on a single distinct topic while another group produces shallow work on multiple topics. More impact and content analysis could clarify the actual positions of these scholars in their disciplines.

The dataset analyzes the scholarly output of different affiliated institutions (see Figure 4 & Table 2), revealing symmetric results. Most institutions published two documents each, indicating uniform levels of productivity. Outliers exist, however, with greater output, which may reflect varying research priorities or capabilities among different institutional facilities. These results highlight the need to study the research ecosystems of these institutions to understand the reasons behind their low productivity.

The geographic allocation of research output (refer to Figure 5 & Table 2) indicates different countries’ capabilities and depth of engagement. India is the leader with twenty documents, reflecting notable engagement in research, followed by Indonesia with fourteen. The United States, a global research leader, has eleven documents. The United Kingdom, Malaysia, Spain, Portugal, and South Africa are moderately active, while Palestine and China have the lowest output with one document each. The gaps between countries suggest that some institutional and economic factors might be shaping the research landscape in these countries. More clearly defined funding, policy frameworks, and local research priorities might be examined to reveal local.

The collection of research articles, along with their citations and normalized TC per year (see Table 3), draws attention to articles that received attention. They cover nearly all topics related to digital marketing, entrepreneurship, and digital technologies, which is reflective of the changing nature of the field and growing attention towards interdisciplinary fields.

The examination of research output about subjects (review Table 4 and Figure 6) indicates the current gaps in research focus. It marks the Centre of Business, Management, and Accounting as a leader with 84 documents. This indicates why this field is interdisciplinary. Following this are Social Sciences with 59 documents, marking digital marketing and entrepreneurship as social phenomena of importance. There are also Economics, Computer Science, Decision Sciences, and Environmental Science, which, in addition to the aforementioned, underline the cosmopolitan nature of this area.

The assessment of research output and impact at the journal level (review Table 5 and Figure 7) points out key journals such as “International Marketing Review” and ‘Tourism Management’ which have a high citation-to-published document ratio. This indicates that some journals have articles with a significant impact while their total output is comparatively low. Further investigation could examine how these journals maintain their influence in the academic world despite a limited publication output.

The visualization of the flows (refer to Figure 8) and the flow analysis emphasize the entire development ecosystem in the digital marketing and entrepreneurship research domain. Scholars such as Hafiar H., Chakrabarti J., and Sharma S., have published significantly diverse works across many journals and topics. This diversity in scope illustrates the interdisciplinary nature of the field, as evidenced by the “Emerald Emerging Markets Case Studies” and “Sustainability (Switzerland),” which are among the complete and multidisciplinary jade of digital marketing research.

Thematic maps (see Figure 9) illustrate the progression and inter-relationships between the research areas. Some motor themes are more dominant comparatively, including discourse on digital marketing, entrepreneurship, or even SMEs. Well-developed but less central niche themes include sustainability. Foundational and basic themes, such as marketing strategy or

customer relationship management, also persist, but to a greater extent, regarding the evolution of digital interfaces and the restructuring of consumer paradigms, expectations need to be placed in more rigorous exploration. In the context of current trends, education, and other emerging subjects are more easily approached and deserve more in-depth study.

As discussed in Table 6 and Figures 10, 11, and 12, the occurrence and strength of links analysis reveals “Digital Marketing” to be the most dominant keyword due to its importance in the context of this research. Other highly significant keywords, such as “Entrepreneurship” and “SMEs,” are strongly related and suggest that interest in the nexus between digital marketing and entrepreneurial behavior is increasing. Keywords “Social media” and “E-commerce” are loosely related, while “Customer relationship

management” and “Innovation” are relevant in very specialized studies. The rising interest in “Education” and “Poverty” suggests emerging areas of research that may significantly impact the field.

Taking into consideration the outlined analysis, one can gain a holistic understanding of the growing scholarly activity on digital marketing integrated with entrepreneurship: examining research activity, prolific contributors, their associated institutions and nations, the relevant journals and their impact, the evolution of themes within the field, as well as the occurrence and frequency of keywords. Such analysis establishes a point of departure for subsequent research activities and directs researchers, academic bodies, and policymakers toward important challenges and prospects within this rapidly evolving area.

Implications for Future Research

While looking at the research trends in digital marketing and entrepreneurship from 2012 to 2023, which expose some fascinating patterns, there are important concerns for future inquiry. The patterns provide an underlying grasp of contemporary scholarship and indicate numerous pathways for further inquiry.

Exploring the Drivers Behind the Surge in Research Output (2019–2023)

The focus area displayed the most research output after 2019 (see Figure 2), especially peaking in 2023. This calls for a study on the reasons behind this growth. Examples of longitudinal studies include the influence of emergent technologies (e.g., AI in marketing), economic shifts, or better funding opportunities. One could do a wealth of comparative studies on the level of funds available, technology, and policies through time to identify what caused this increase. researcher must analyze whether the impact of growth comes primarily from technological advancement, global market activities, or new incentives offered by institutions.

Geographical Disparities and the Need for Inclusive Research

The research activity output by countries shows heavy distribution focus on Indonesia and India, whereas China and Palestinian regions lack research output. Further research could uncover the reasons for these geographical differences, looking into the presence of international collaborations, international peer recognition, relevant local research priorities, and local resource access. Models of collaboration could be structured to facilitate greater participation in global research initiatives, focusing on infrastructure enhancement, increased funding for overlooked regions, and enhanced borderless collaborations.

Institutional Ecosystems and Their Impact on Research Productivity

The cross-institutional disparity in the research output shows that a few leading universities dominate the overall output, producing an exceedingly disproportionate amount of research compared to other universities. These high-output institutions are examined through the lens of funding and interdisciplinary collaboration

leadership to develop actionable frameworks. Valuable insights could be gathered from high-output compared to lower-output institutional case studies wherein governance, research culture, and leadership influence productivity. Other insights could include suggestions to counteract underdeveloped research ecosystems recommended to foster robust inter-university networks or incentivize cross-institutional collaborative research.

Interdisciplinary and Cross-sectoral Collaboration

The illustration of research activity in Business, Social Sciences, Economics, and Computer Science suggests a high level of interdisciplinary collaboration. Researchers could investigate the interface of digital marketing and entrepreneurship, and psychologists, environmental scientists, and decision scientists to develop new theories in consumer behavior, entrepreneurial activities, and digital technologies. Research in sustainability or corporate social responsibility (CSR) illustrates how entrepreneurship innovation can be applied to global issues.

Future Research Directions

The analysis of research output on digital marketing and entrepreneurship between 2012 and 2023 reveals several intriguing opportunities for further investigation. These avenues will

Emerging and Niche Themes in Digital Marketing and Entrepreneurship

It is noticeable that the analysis put together some areas of focus, such as digital marketing, entrepreneurship, SMEs, and, at the same time, niche themes like sustainability or education. All those are useful for emerging themes. Further research needs to be done on those themes. For instance, how can sustainability practices be incorporated into the digital marketing process in business? This also applies to education and entrepreneurship through digital marketing in poorly developed parts of the world.

Future of Keywords: Investigating the Relevance and Evolution of Research Topics

The increasing popularity of keywords like “Digital Marketing,” “Entrepreneurship,” and “SMEs” alongside the newly emerging terms “Education” and “Poverty” indicates new potential areas of research. Studying how such terms evolve within technological advancements and socio-economic challenges may be worthwhile. Terms such as E-Commerce, Innovation, and Consumer Ethics should be examined more to determine how technological disruptions, shifts in consumer attitudes, and globalization influence them.

enhance scholarly research whilst simultaneously creating value for businesses and policymakers who grapple with the realities of the digital economy.

Table 8: Future Research Directions

Focus Area	Objective	Potential Research Questions
Deepening Understanding of Digital Marketing	Examine effective digital marketing practices for SMEs	What are the most effective digital marketing practices for SMEs?
		How do digital marketing capabilities influence SME growth?
		What is the role of social media in brand visibility and customer engagement?
Expanding Collaborative Research Efforts	Increase international collaboration	What barriers exist to international collaboration?
		What is the impact of international co-authorship on research quality and impact?
		Best practices for fostering cross-border research initiatives?

Investigating Emerging and Declining Themes	Explore the intersection of sustainability and digital marketing	How can digital marketing promote sustainable consumer behaviour?
		What are the challenges and opportunities of integrating sustainability into digital marketing strategies?
		Sector-specific sustainability approaches?
Analyzing the Role of Digital Technologies	Assess the impact of digital technologies on entrepreneurship	How do AI, blockchain, and big data impact entrepreneurial strategies?
		Key factors driving technology adoption among entrepreneurs?
		What is the effect on the scalability and internationalization of new ventures?
Addressing Gaps in Psychological and Behavioral	Investigate psychological aspects of consumer interaction with digital marketing	Psychological factors influencing consumer responses?
		Demographic differences in digital marketing engagement?
		Impact on consumer trust and loyalty?
Exploring the Impact of Digital Marketing	Study the effectiveness of digital marketing during crises	How do businesses adapt digital marketing strategies in crises?
		Key elements of resilient digital marketing practices?
		Role in business recovery and continuity?
Enhancing Methodological Approaches	Utilize advanced data analytics and machine learning techniques	New analytical methods for studying consumer behaviour in digital contexts?
		How can machine learning improve market trends and consumer preference prediction?
		Implications for strategic decision-making?
Evaluating the Socio-Economic Impact of Digital	Assess broader socio-economic impacts	Evaluating economic benefits for small businesses and local economies?
		Contribution to social equity and inclusion?
		Long-term societal impacts of pervasive digital marketing?

Source: Developed by the authors

Deepening the Understanding of Digital Marketing Strategies for SMEs

A region-specific approach that studies the role of social media and digital marketing in improving brand awareness and customer engagement for SMEs is needed. Looking into these gaps could be useful in socio-economically disparate markets and help understand SMEs' scaling potential on digital platforms.

Expanding Collaborative Research Efforts

The value this type of research has for addressing the issue of focus diversity is invaluable.

Scholars must study the barriers to international collaboration, including differences in research culture, funding avenues, and institutional backing. Further, it will be helpful to focus on the impact of these collaborations on the resultant research and its dissemination. Deriving mechanisms that widen international collaboration in cross-border research will be instrumental in overcoming these challenges.

Sustainability in Digital Marketing

New research must focus on how digital marketing shapes sustainable consumer

behavior. Investigations explore how companies consider sustainability in their digital marketing practices, concentrating on fashion, food, technology, and other sectors. Understanding the sustainability challenges in digital marketing will be important for creating positive systemic social and environmental value.

Role of Digital Technologies in Entrepreneurship

The strategic shifts due to AI, blockchain, and big data necessitate the assessment of these technologies in business growth and internationalization. Research might study technology acceptance among entrepreneurs in developing countries, addressing how such technologies can deal with common entrepreneurial impediments like capital and resource constraints.

Psychological and Behavioural Research

The understanding of why users respond to digital marketing is equally important. Studies should concentrate on the generational differences (millennials and older Gen Z members) and their interaction with marketing strategies. Moreover, research should examine the relationship between digital marketing and consumer trust, loyalty, and ethics to foster enhanced customer relations in the digital sphere.

Impact of Digital Marketing During Crises

The studies should be made to explore how companies alter their digital marketing strategies during economic recessions or global crises, such

Conclusion

The digital marketing and entrepreneurship research assessment from 2012 to 2023 has shown that there are still many unexplored areas. It has also shown that increased funding, technological advancements, and economic changes have fueled scholarly interest in this field from 2019 to 2023. Emerging technologies such as AI and economic shifts can serve as institutional incentives that foster growth. The disparity in research output between certain regions, like

as pandemics. Resilient digital marketing practices that have enabled business continuity and fostered recovery during crises should be examined. In addition, comprehensive plan frameworks for handling crises should be developed to enable businesses to adapt, withstand disruptions, and ensure continuity in operations during inevitable crises in the future.

Methodological Approaches Using Advanced Analytics

The use of sophisticated data-driven techniques and consumer behavior analytics with information technology or artificial intelligence offers advanced examination prospects concerning the trends in digital marketing and consumer behavior. Market trends, specialized marketing, and quick consumer preference shifts pose challenges that need academic attention. Studying digital marketing, big data, and real-time predictive models should enhance responsiveness to market dynamics.

Evaluating Socio-economic Impact

The role digital marketing can play in fostering socio-economic development, especially in the context of small and local businesses, needs to be investigated. With growing concerns about inclusivity with some communities left behind, equity in social and economic affairs needs to be broadened. The need to understand the ramifications of aggressive digital marketing techniques will assist in framing ethical guidelines for world businesses and states to ensure that such marketing strategies serve the interest of society at large.

India, which has a marked increase compared to Palestine and China, which exhibit lower output, suggests a need for more focused research. Regions underrepresented in research face a lack of resources and infrastructure, making it important to remove barriers to achieve greater international collaboration. There is also an opportunity to integrate digital marketing and other disciplines, like psychology, environmental science, or decision science, to offer new

perspectives on how consumers, businesses, and society approach sustainability and corporate responsibility issues. Again, as sustainability is increasingly important in the field, extensive research needs to be conducted into how businesses can use digital marketing to shape sustainable consumer habits. Further innovative avenues worth exploring are analyzing marketing strategies tailored for small and medium enterprises (SMEs) in varying socio-economic

Limitations

The researchers acknowledge the limitations of this study. First, this study uses only bibliometric analysis based on the Scopus database, which may incur some bias as it leaves out other reputable databases like Web of Science. It would be best for future studies to incorporate bibliographic data from both Scopus and Web of Science, where each database's unique publications are captured. Furthermore, there is a chance for regional underrepresentation, as some areas may lack prominence within Scopus' purview, which limits the global scope of the

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environments, exploring the impact of modern digital technologies such as blockchain and big data on entrepreneurship, and studying the socio-economic effects of digital marketing on local economies. Bridging these gaps will enhance the academic understanding of the subject while yielding practical guidance for businesses and policymakers in the dynamically evolving digital ecosystem.

analysis. There is also the risk of indexing lags, especially for documents published in the latter part of the study period, which impacts the data's comprehensiveness. In other domains, focusing on documents published in SSCI, ABDC, ABS, or FT 50 listed high prestigious journals would deepen the understanding of digital marketing and entrepreneurship research frameworks and enhance the quality of the underserved research. By filling these gaps and addressing the lack of alternative data sources, later studies would provide greater insight into the shifting research focus within these domains.

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