

Exploring the Impact of Digital and Social Media Marketing on University Brand Equity: A Comprehensive Literature Review and Bibliometric Analysis

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Abstract

The study of how universities utilize digital and social media marketing (DSSM) to build and enhance brand value is becoming increasingly important in modern times. So, promoting the utilization of digital and social media marketing to establish brand value has become an increasingly significant concern on a global scale. The objective of this study is to conduct a bibliometric analysis of academic literature focused on the utilization of digital and social media marketing strategies that impact the brand value of universities. The collected data is derived from the Scopus database spanning from 2005 to 2022. R-studio is utilized for conducting preliminary data analysis, performing citation and co-citation analysis, and establishing bibliographic coupling in conjunction with co-authoring. We employ a synthesis methodology to enhance our comprehension of the subject matter and organization pertaining to digital and social media marketing, as well as its portrayal in scholarly works. According to the survey, the rate of research conducted by startups has been rising since 2016, with an average of 19.58 citations per document. Through our analysis, we have determined that the United States, Indonesia, Malaysia, and India are the countries that produce the most quantity of research articles on entrepreneurship. The business journals "Developments in Marketing Science: Proceedings of the Academy of Marketing Science", "International Journal of Data and Network Science", "Journal of Marketing for Higher Education", and "Journal of Research in Interactive Marketing" have published the highest number of research articles in the respective field. The objective of the paper is to enhance our comprehension of the substance and organization pertaining to digital and social media marketing, as well as its portrayal in the literature. Unlike the recent progress in incorporating digital and social media content, the present study demonstrates a greater level of thoroughness in terms of the methodology and databases used. The results of this study provide a useful addition to the current literature on the successful utilization of digital and social media marketing (DSSM) to establish and enhance the brand value of universities.

Keywords: Digital marketing, social media marketing, brand equity, higher education institution, bibliometric analysis.

1. Introduction

The global market for higher education is seeing growth due to the increasing societal need for high-quality educational resources at the tertiary level (Altbach et al., 2009). The emergence of new academic institutions has escalated the previously intense rivalry among established colleges (Salem,

2020). The objective of attracting high-achieving students engenders significant competition among colleges. The educational market undergoes a transition from a seller's marketplace to a buyer's marketplace (Almadhoun et al., 2011). In the context of the dynamic and evolving landscape of student enrollment, brand marketing is widely recognized as a pivotal factor contributing to achieving success in

higher education (Rutter et al., 2016). In recent years, there has been a significant focus on the notions of branding and brand equity, mostly driven by the escalating levels of competitiveness observed across numerous marketplaces. Brands are indicative of consumer views and emotions towards a product or service, as well as its overall performance (Kotler & Keller, 2006). The inherent significance of a robust brand lies in its capacity to secure client preference and foster loyalty effectively (Pinar et al., 2011). A university's implementation of brand marketing strategies can effectively cultivate a positive public image, bolster its credibility, and confer a competitive edge in the enrollment market. In addition, effectively produced and efficiently managed brands serve as important assets and resources for businesses (Kapferer, 2012; Longwell, 1994). This phenomenon occurs due to the fact that well-established brands can provide companies with a competitive edge by virtue of their distinctiveness (Chaharbaghi & Lynch, 1999), their resistance to replication (Kor & Mahoney, 2005), and their potential to enhance a company's financial performance (Boyle, 2006; H. Kim et al., 2003). In order to maintain sustained demand and profitability, it is imperative for any brand to uphold its commitments, establish trust, and subsequently cultivate customer loyalty (Kotler & Armstrong, 2008; Reichheld, 2001). This is because robust brands play a substantial role in enhancing a firm's performance (Ailawadi et al., 2001; Sullivan, 1998).

Brand equity is often regarded as a valuable asset for organizations and holds significant importance within academic marketing (Ambler, 2003; Christodoulides & de Chernatony, 2010). Keller, (1993) introduced the term "customer-based brand equity" (CBBE) to describe the concept of brand equity. Drawing from the field of cognitive psychology, brand equity is the distinct impact of awareness of the brand on how customers respond to the brand's marketing efforts. A brand that possesses robust equity is readily identifiable and memorable, and significantly, establishes a differentiation that is sufficiently compelling to elicit positive reactions towards the brand. In light of both domestic and worldwide rivalry, administrators in higher education have come to recognize that relying solely on conventional

branding endeavors is insufficient for cultivating robust university brands. This realization stems from the observation that the majority of these efforts tend to prioritize promotional activities and the establishment of identity (Argenti, 2000; Bunzel, 2007). Consequently, universities initiated the development of enhanced brand strategy to address the competitive problems presented by globalisation (Whisman, 2009). Additionally, Nguyen et al., (2016) suggest that a brand represents the university's capability to meet the needs of students, fosters confidence in its ability to provide the necessary services, and aids prospective students in making informed judgments on academic pursuits and course selection. According to empirical research conducted by (Sultan & Wong, 2019; Watkins & Gonzenbach, 2013), it has been suggested that the implementation of an effective branding approach in higher education institutions has the potential to enhance university services and effectively draw in and hold onto students.

The rapid growth of social media has reached unprecedented levels, resulting in all countries providing favorable conditions for the practice of social media marketing and digital marketing (Li et al., 2021; Shan et al., 2021). Social media networks and online communities have emerged as significant platforms for marketing purposes. Universities' utilization of social media has a dual nature, including both advantageous prospects and complex obstacles that necessitate a comprehensive understanding to execute policies. In the context of higher education institutions, there is a prevalent trend of rapid adoption of social media platforms for marketing purposes. However, it has been observed that certain universities' endeavors in this domain tend to be inefficient due to the utilization of insufficient implementation tactics (Maresova et al., 2020a). There is a disparity in the effectiveness of social media marketing within the context of universities. According to Rutter et al., (2016), prior research has indicated that colleges have challenges in effectively implementing and optimizing their digital and social media marketing strategies, resulting in uncertain outcomes. Therefore, there is a need for further assessment study in higher education marketing, specifically focusing on implementing digital and social media marketing

strategies. This research aims to assess the effectiveness of their digital and social media marketing initiatives through a comprehensive literature review and Bibliometric analysis. By doing so, universities can identify and avoid ineffective techniques to optimize their marketing efforts.

The current study aims to investigate the responses to the following research questions:

RQ1. What is the annual scientific production of digital and social media marketing articles on brand equity?

RQ2. Who are the most prolific authors publishing research papers on including digital and social media marketing in creating brand equity?

RQ3. Which documents inside the integrated domain have received the highest number of citations?

RQ4. Which journals are considered the most prolific in releasing a high volume of research articles pertaining to the incorporated domain?

RQ5. What is the ratio of research article publishing that involves collaboration between countries?

RQ6. Which countries have the most productive in terms of publication?

RQ7. What are the most trend topics in the context of digital and social media marketing on brand equity?

In order to examine these questions, the current investigation employed bibliometric analysis.

The primary objective of this paper is to address many shortcomings identified in previous studies, intending to make a valuable contribution to the wider domain of brand equity in relation to digital and social media marketing. This study involved thoroughly examining the pertinent scholarly literature to acquire information, which was later submitted to rigorous analysis of the gathered data. A comprehensive scientific study was conducted to investigate the progress of research in the integration of digital and social media marketing in relation to brand equity within a specified period, specifically from 2005 to 2022. In the current study, the Scopus database is used to discover the bibliographic information on the incorporation of digital and social media marketing on brand equity of universities. This study exhibits a higher level of

comprehensiveness compared to previous research, hence reducing the likelihood of overlooking any significant contributions pertaining to the topic matter. The extent of time covered in prior study has demonstrated significant variability, depending on the specific topic under investigation and the research goals being pursued. Nevertheless, the purview of this study extended to scholarly works disseminated over a span of approximate decades, precisely from 2005 to 2022. This study has undertaken the task of examining this matter by conducting a systematic mapping and performance analysis regarding the integration of digital and social media marketing in relation to brand equity by universities.

2. Literature Review

2.1 Inclusion of Digital and Social media marketing in education system

The contemporary landscape of higher education is primarily governed by a cohort of individuals commonly referred to as digital natives (Mazurek et al., 2019). In contemporary times, social media has emerged as a significant determinant impacting the decision-making process of students while selecting institutions of higher education (Spearman et al., 2016). In increasingly competitive academic environments, universities have recognized the significance of maintaining strong connections with their student body (Masserini & Bini, 2021). Students exhibit a strong inclination to engage with universities through digital means, and they hold the perception that information acquired through direct interaction with universities via social media channels possesses greater credibility and value compared to conventional marketing strategies (Kelleher & Sweetser, 2012; Mazurek et al., 2019). Social media refers to an online interactive platform that operates on Web 2.0 technology, facilitating the creation, debate, alterations, and sharing of content (Kaplan & Haenlein, 2010). Social media, as a novel form of technological communication, exerts a significant influence on how consumers act (Arango et al., 2020; Chivandi et al., 2018). The acceptance of e-WOM, which is produced using social media channels, is prevalent among customers due to its perceived impartiality, dependability, and credibility (Belanger et al., 2014). Universities are rapidly

adopting digital and social media marketing strategies, mirroring the practices employed by professional marketers, in order to effectively reach their target audiences (Dixon et al., 2015; Williams & Omar, 2014). Marketing for higher education institutions (HEIs) presents a distinct set of challenges compared to marketing physical goods. This is primarily due to the distinctive attributes of the higher education industry, which give rise to a heightened perception of risk that comes with the decision to enroll or make a purchase (Zhang & Li, 2019). The inherent qualities of intangible nature, variation, inseparable, and perishability give rise to an elevated degree of uncertainty regarding the ultimate result of the rendered higher education service (Posselt, 2018). Prospective students engage in the evaluation of multiple elements in order to assess the quality of universities. However, Universities face challenges in effectively showcasing the quality and consistency of their brand promise until students are officially enrolled and have the opportunity to experience the services provided by the institution (Sharabati et al., 2019). This matter poses challenges for both Higher Education Institutions (HEIs) in their efforts to persuade prospective students to choose their high-quality educational services, as well as for prospective students who must weigh the potential risks associated with selecting a higher-priced education service (Endo et al., 2019).

The existing body of literature has provided confirmation that the utilization of social media tactics in marketing holds positive relevance (Ki et al., 2020) and has progressively emerged as a crucial component of brand marketing for universities (Maresova et al., 2020b). In contrast to conventional approaches, the utilization of social media by colleges and universities offers the advantage of reducing marketing expenses, while simultaneously broadening the reach of marketing efforts (Nyangau & Bado, 2012). Additionally, social media platforms facilitate the rapid and efficient establishment of robust connections with target audiences (Liza Benedict et al., 2014). Universities and colleges have increasingly included social media and digital platforms, including Facebook (Bamberger et al., 2020), Twitter (Veletsianos et al., 2017), YouTube (Perera et al., 2022), Sina Weibo (Zhu, 2019), and

WeChat Official Accounts (D. (William) Feng, 2019), in their marketing strategies.

2.2 Building and maintaining a strong brand equity by universities

A brand can be characterized as a collection of tangible and intangible qualities intentionally developed to generate recognition and establish a distinct identity, ultimately contributing to establishing and enhancing the credibility of a good or service, individual, location, or organization (Cooper et al., 2014). The significance of branding in higher education is heightened due to the service orientation, particularly the intangibility and mutual dependence of education, in comparison to firms that produce tangible items (Lowrie, 2007). The primary factors driving the branding of higher education institutions encompass a decrease in enrollment, a drop in student retention, intensified competition, the enhancement of brand prestige, and the augmentation of financial resources (Lowrie, 2007). In light of the growing influence of market competition among universities, there has been a heightened emphasis on the development of a positive institutional brand image among universities (Wilkins & Huisman, 2015). According to Hemsley-Brown & Goonawardana, (2007), the regular delivery of brand positioning is argued to be beneficial for higher education institutions (HEIs) in maintaining their competitiveness within the global marketplace. Previous research has employed many constructs to measure the characteristics of brand equity. The components encompassed in this context consist of awareness of the brand, perceived value, brand loyalty, personality of the brand, and organizational associations (Aaker, 1992; Buil et al., 2008; Tong & Hawley, 2009). Based on the perspective of strategy, previous research indicates that brands have the potential to enhance consumer value through the establishment of a brand ecosystem. This ecosystem encompasses the value networks and their interactions throughout the various stages of brand value development (Pooya, 2020). Through the implementation of standardized activities across foreign markets and the integration of various company operations to bolster the overarching branding endeavor, higher education institutions (HEIs) can effectively enhance their

brand equity (S. Feng & Horta, 2021). In order to address these problems, higher education institutions (HEIs) endeavor to enhance their brand equity as a measure of the quality of educational programs. Brand equity is defined as the collection of assets and liabilities associated with a brand, including its name and symbol, that contribute positively or negatively to the value delivered by a product or service to a company and/or its customers (Aaker, 1992). According to Myers, (2003), brand equity refers to the additional value that a brand provides to a product. Therefore, it is crucial for organizations to prioritize the establishment of a robust brand in their strategic decision-making process.

In the initial stages of universities' advertising for brands, conventional media platforms such as television, newspapers, and magazines were predominantly employed to facilitate the unidirectional dissemination of information. This particular approach exhibits a multitude of drawbacks, namely its exorbitant expenses, ineffectiveness, and limited scope. Furthermore, it fails to possess the essential attributes of interactivity and immediacy in the process of disseminating information. The advent of digital marketing and social media has presented universities with an optimal avenue for implementing marketing strategies in the digital era. Social media marketing has emerged as a rapidly expanding avenue within the realm of marketing, presenting unparalleled opportunities for brand cultivation (Zarei et al., 2022). Given the increasing convenience and indispensability of social media marketing in driving business turnover, it is evident that various industries, including higher educational institutions, are strategically aligning their marketing policies to leverage this platform for external advertising, promotional endeavors, relationship building, and within interactions between staff members (Seo & Park, 2018). The use of social media can be employed as an integral component of a comprehensive marketing plan, serving as a reliable platform for marketing and communication efforts. Alternatively, it can be employed as a sequence of targeted promotional activities aimed exclusively at augmenting the online visibility and reputation of a university

(Ashley & Tuten, 2015). The utilization of social media and digital marketing has gained significant prominence within the realm of higher education, particularly when universities aim to attract millennials who possess a high level of proficiency in digital technology (Shields & Peruta, 2019).

Nevertheless, it is important to note notable variations in the efficacy of social media utilization and levels of digitalization across different universities (N. Paladan, 2018). Despite the growing body of scientific research on universities' successful utilization of social media to connect with students and encourage education-related brands, there remains a lack of concrete proof regarding evaluating the effectiveness of social media marketing programs. This study aims to address this gap by focusing on the efficiency evaluation of such programs. This study provides two primary contributions to the existing body of literature pertaining to the influence of digital and social media marketing on brand equity. This study encompasses the comprehensive collection of scientific literature on the utilization of digital and social media marketing strategies to establish brand equity. The time frame for this investigation spans from 2005 to 2022, and the selected sources are limited to those indexed in the Scopus databases, which are renowned for including publications of significant global influence. This study represents the most thorough investigation conducted thus far on the subject of brand equity research. It sheds light on the organization of the conceptual subdomains within this field. It highlights the key areas of focus that have captivated researchers over a span of seventeen years in the realm of academic research. Furthermore, the outcomes of this study will offer scholars and practitioners a more comprehensive comprehension of the current state of knowledge and indicate prospective directions for future investigations, considering both the predominant driving themes and the developing or cross-cutting themes within the research domain.

3. Research Methodology

3.1 Bibliometric analysis: collection and analysis of data

For the purpose of this research, we have chosen to gather data from the Scopus databases, which are

extensively utilized in bibliometric studies, among the several bibliographic databases available (del Barrio-García & Prados-Peña, 2019; Muñoz-Leiva et al., 2012, 2015) in order to achieve a broader scope of analysis. The data were retrieved from the Scopus database spanning the years 2005 to 2022. The search query employed was ("Digital marketing" OR "social media marketing") AND ("brand equity" OR "universit*"), without any limitations on the disciplinary domain. The justification for choosing this particular date is based on the limited availability of relevant studies previous to 2005 that are included in the Scopus database. Our research was primarily centred on journal articles as the primary unit of analysis. This choice was made due to the widely recognized perception within the academic community that such publications provide the most current and comprehensive insights in the field of marketing, particularly in the domain of digital and social media marketing (del BarrioGarcía & Prados-Peña, 2019; Leone et al., 2012). The period from 2005 to 2022 was separated into three distinct segments to permit a longitudinal analysis of the progression of the pertinent themes. These segments include the years 2005 to 2010, 2011 to 2016, and 2017 to 2022. The aforementioned components are associated with an initial research stage focused on the exploration of digital and social media marketing's impact on brand equity. This stage encompasses a limited number of three articles. Subsequently, a second stage emerges, characterized by a substantial increase in research activity, with a total of 55 articles. Finally, a third stage is observed, marked by a significant surge in research output, resulting in the publication of 267 articles.

3.2 Analytical tools used

The list of items was obtained by utilizing the Scopus Analyze Search Results tools. The co-word analysis and generation of scientific maps depicting the co-occurrence of keywords were conducted using Biblioshiny in conjunction with R-Studio. Additionally, the bibliographic coupling was performed using VOSviewer software. Co-word analysis is a robust methodology that facilitates identifying, describing, and visually representing the relationships among keywords within a specific scientific domain (Muñoz-Leiva et al., 2015).

Density is a metric that quantifies the internal cohesion or strength of the keywords or theme network, whereas centrality pertains to the extent of interconnectedness between distinct networks. Therefore, within the quadrant characterized by high density and centrality, one would observe the principal research themes that garner the greatest scientific output and citations in relation to the subject matter, commonly referred to as the "motor themes". In contrast, inside the quadrant characterized by low density and low centrality, we observe the presence of rising themes or the decline of existing ones. The quadrant located in the upper left-hand region, which signifies a combination of high density and low centrality, pertains to themes that exhibit a significant level of internal development but remain isolated and disconnected from other networks. Ultimately, within the lower right-hand quadrant, characterized by low density and high centrality, one encounters the fundamental or core ideas that transcend multiple domains of knowledge as shown in Figure 5. The bibliographic coupling approach operates under the presumption that two publications exhibiting shared references possess similar content (Donthu et al., 2021; Kessler, 1963). Utilizing this methodology makes it feasible to visually represent recent contributions that have yet to have significant influence, thereby providing a depiction of the most up-to-date scientific output within the respective subject (Bretas & Alon, 2021). According to Donthu et al., (2021), using bibliographic coupling as a strategy enables the identification of contemporary subjects that exhibit favourable advancement, hence offering scholars potential areas for future investigation. The analysis involves the utilization of sphere size to indicate the relative number of links to other articles. Additionally, the proximity of the spheres and the thickness of the links are employed to symbolize the degree of similarity between articles, which is determined by the number of shared references (Andersen, 2021).

4. Results

4.1 Annual scientific production

In order to address Research Question 1, we analyze the progression of scholarly publications focused on the utilization of digital and social media marketing



strategies to enhance the establishment of brand equity for universities. This analysis is conducted on a yearly basis throughout the designated timeframe, as illustrated in Figure 1. In this study, we analysed publications pertaining to the domain of digital and social media marketing to investigate their impact on brand equity. The selected timeframe for this analysis spans from 2005 to 2022. The data for this study was sourced from Scopus, a widely recognized and extensively employed database by scholars and researchers for bibliometric and systematic literature review. The data extracted from

the Scopus database reveals a noteworthy surge in the scientific output of research publications, exhibiting an annual growth rate of 29.21% as shown in Table 1. A comprehensive analysis was conducted on a dataset comprising 299 research articles and 26 review papers, all of which were sourced from 220 distinct journals. Out of the total of 325 articles, it has been observed that 46 of them have been published with single authorship. Approximately 11.38% of articles published in academic journals involve collaborating with foreign authors.

Table 1: General statistics of the data taken for analysis

Description	Results
Primary data information	
Period	2005:2022
Annual percentage growth	29.21%
Sources	220
Articles	325
Average citations per doc	19.58
References	13772
Article types	
Research articles	299
Review articles	26
Authors	
Total number of authors	803
Authors of single-authored doc	46
International Co-authorship	11.38%
Authors' keywords	793

Source: Authors development using biblioshiny

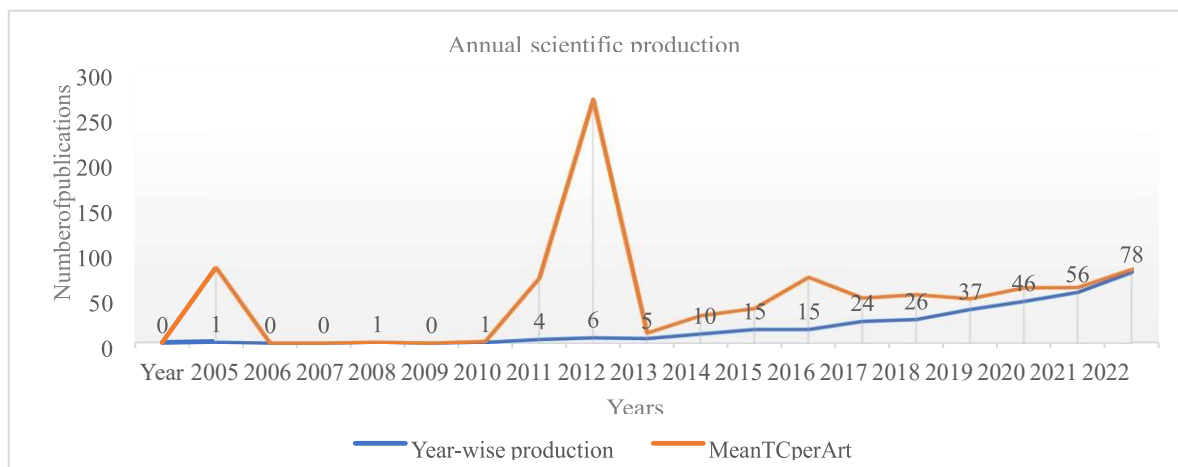


Figure 1: Annual scientific production of articles

Source: Authors development using biblioshiny



4.2 Most prolific authors of digital and social media marketing in creating brand equity In order to attain a comprehensive comprehension of this specific realm of investigation and tackle RQ 2, we additionally scrutinized the authors who have generated the most substantial body of scholarly work pertaining to this subject matter. Throughout the 18-year duration being examined, a cumulative number of 803 authors have contributed to the existing body of literature on reverse migration. Table 2 presents a comprehensive compilation of the top ten authors who have exhibited the highest level of productivity in digital and social media marketing, specifically in generating brand equity. The authors included in this table have been indexed in Scopus, a widely recognized database for scholarly literature. The quantification of productivity is determined by the assessment of the quantity of scholarly publications produced by individual authors. Furthermore, the table presents comprehensive data on the total number of citations acquired by the aforementioned authors and their affiliations and h-index values inside the corresponding database. The analysis demonstrates that Karen M. Lancendorfer, a researcher with a Scopus h-index of 7, is affiliated with Western Michigan University in Kalamazoo, United States.

Abdullah Al Mamun, with a Scopus h-index of 22, is affiliated with UKM-Graduate School of Business in Bangi, Malaysia. Kelley A. O'Reilly, with a Scopus h-index of 6, is also affiliated with Western Michigan University in Kalamazoo, United States. Each of these researchers has made contributions to four research papers. Similarly, Momoko Fujita, a researcher with a Scopus h-index of 7, maintains an affiliation with The UWA Business School in Perth, Australia. Paul O. Harrigan, an esteemed scholar with a Scopus h-index of 27, is affiliated with The UWA Business School in Perth, Australia. Manisha Mathur, an academic researcher with a Scopus h-index of 6, is affiliated with Augusta University in the United States. Adam Peruta, an academic with a Scopus h-index of 4, is currently affiliated with Syracuse University in the United States. Zillur Rahman, an individual with a Scopus h-index of 49, is additionally associated with the Indian Institute of Technology Roorkee in India. Each of the aforementioned researchers has made significant contributions to three research papers. Bashar Ababneh (Scopus h-index 5) affiliated with Skyline University College, Sharjah, UAE, has contributed a total of 2 research articles on digital and social media marketing, specifically in generating brand equity.

Table 2: Most prolific authors of relevant domain

Authors	Current Affiliations	Scopus h index	TP	TC
Karen M. Lancendorfer	Westren Michigan University, Kalamazoo, United states	7	4	11
Abdullah Al Mamun	UKM-Graduate School of Business, Bangi, Malaysis	22	4	13
Kelley A. O'Reilly	Westren Michigan University, Kalamazoo, United states	6	4	11
Momoko Fujita	The UWA Business School, Perth, Australia	6	3	72
Paul O. Harrigan	The UWA Business School, Perth, Australia	27	3	72
Manisha Mathur	Augusta University, United States	6	3	16
Adam Peruta	Syracuse University, United States	4	3	204
Zillur Rahman	Indian Institute of Technology Roorkee, India	49	3	219
Alison B. Shields	Ithaca College, United States	6	3	204
Bashar Ababneh	Skyline University College, Sharjah, UAE	5	2	41

Source: Authors' development using Biblioshiny in conjunction with R-Studio.

4.3 Most cited articles in digital and social media marketing for generating brand equity Table 3 is a compilation of the top 15 research articles that have garnered the highest citations within the

Scopus scientific databases, in alignment with RQ3. It is observed that the research paper titled "Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand" is at first position published in the journal "Journal



of Business Research" by (Kim & Ko, 2012) received a total of 1151 citations, followed by the article titled "Social media marketing efforts of luxury brands: Influence on brand equity and consumer behaviour", published by (Godey et al., 2016), in the journal "Journal of Business Research" received a total of 577 citations. The research work titled " A study on the effects of social media marketing activities on brand equity and customer response in the airline industry " by Seo and Park (2018) holds a prominent position as one of the top three publications in the field which is published in the esteemed journal "Journal of Air Transport Management," this piece has garnered a significant

number of citations (202). The research study titled "Use of General and Alcohol-Related Social Media and Their Associations With Alcohol-Related Behaviors," authored by Hoffman et al. (2014), holds the fourteenth position in terms of citation count, with a total of 84 citations. This article was published in the "Journal of American College Health." In the same way, a research article titled "Effects of the intensity of use of social media on Brand Equity: An empirical study in a tourist destination" authored by Stojanovic et al., (2018) published in "European Journal of Management and Business Economics" is at top fifteenth position by receiving a total of 83 citations as shown in Table 3.

Table 3: Most cited articles of digital and social media marketing for generating brand equity_Normalized

Authors	Title	Journal	YOP Total Citations			TC
			TC/Y	TC/Y	TC/Y	
(A. J. Kim & Ko, 2012)	"Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand"	Journal of Business Research	2012	1151	95.92	4.39
(Godey et al., 2016)	"Social media marketing efforts of luxury brands: Influence on brand equity and consumer behavior"	Journal of Business Research	2016	577	72.13	10.02
(Seo & Park, 2018)	"A study on the effects of social media marketing activities on brand equity and customer response in the airline industry"	Journal of Air Transport Management	2018	202	33.67	7.40
(Schivinski & Dabrowski, 2015)	"The impact of brand communication on brand equity through Facebook"	Journal of Research in Interactive Marketing	2015	179	19.89	7.76
(Nicholls, 2012)	"Everyday, Everywhere: Alcohol Marketing and Social Media—Current Trends"	Alcohol and Alcoholism	2012	176	14.67	0.67
(Phan et al., 2011)	"Social Media and Luxury Brand Management: The Case of Burberry"	Journal of Global Fashion Marketing	2011	156	12.00	2.31
(Taken Smith, 2012)	"Longitudinal study of digital marketing strategies targeting Millennials"	Journal of Consumer Marketing	2012	137	11.42	0.52
(Yadav & Rahman, 2017)	"Measuring consumer perception of social media marketing activities in ecommerce industry: Scale development & validation"	Telematics and Informatics	2017	134	19.14	5.21
(Ebrahim, 2020)	"The Role of Trust in Understanding the Impact of Social Media Marketing on Brand Equity and Brand Loyalty"	Journal of Relationship Marketing	2019	118	29.50	7.95

(Zollo et al., 2020)	“Unpacking the relationship between social media marketing and brand equity: The mediating role of consumers’ benefits and experience”	Journal of Business Research	2020	115	28.75	7.75
(Wang et al., 2016)	“The impact of sellers' social influence on the co-creation of innovation with customers and brand awareness in online Communities”	Industrial Marketing Management	2016	112	14.00	1.94
(Peruta & Shields, 2017)	“Social media in higher education: understanding how colleges and universities use Facebook”	Journal of Marketing for Higher Education	2017	107	15.29	4.16
(Wymbs, 2011)	“Digital Marketing: The Time for a New “Academic Major” Has Arrived”	Journal of Marketing Education	2011	101	7.77	1.50
(Hoffman et al., 2014)	“Exploring College Students Use of General and Alcohol-Related Social Media and Their Associations With Alcohol-Related Behaviors”	Journal of American College Health	2014	84	8.40	4.16
(Stojanovic et al., 2018)	“Effects of the intensity of use of social media on brand equity: An empirical study in a tourist destination”	European Journal of Management and Business Economics	2018	83	13.83	3.04

Source: Authors’ development using Biblioshiny in conjunction with R-Studio.

4.4 Most prolific journals of the incorporated domain

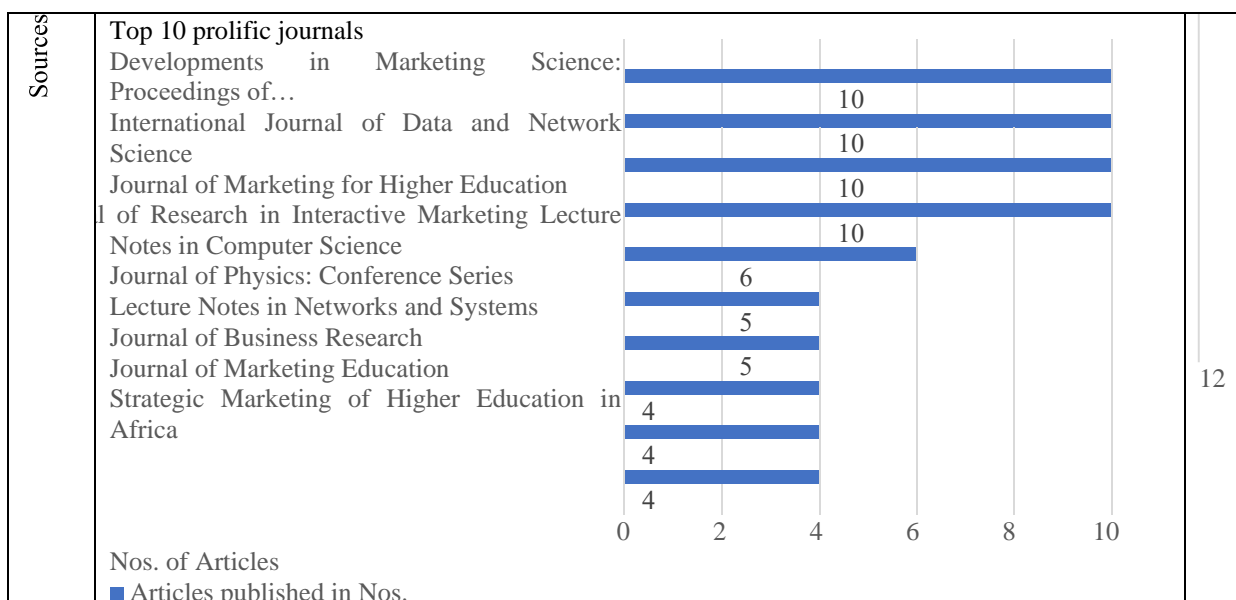


Figure 2: Most prolific journals

Source: Authors’ development using Biblioshiny in conjunction with R-Studio.

Regarding the journals that have published a more significant number of papers on the specific topic of interest, RQ4, it is worth mentioning that the journals titled "Developments in Marketing Science: Proceedings of the Academy of Marketing Science", "International Journal of Data and Network Science", "Journal of Marketing for Higher Education", and "Journal of Research in Interactive Marketing" each has emerged as the most prominent, having published a total of 10 articles each. Similarly, the scholarly journal "Lecture Notes in Computer Science" has released a cumulative count of six research articles. The journals "Journal of Physics: Conference Series" and "Lecture Notes in Networks and Systems" have each published five articles within the respective field of study. The aforementioned academic journals, namely "Journal of Business Research," "Journal of Marketing Education," and "Strategic Marketing of Higher Education in Africa," have each contributed four research articles.

4.5 Authors' collaboration (SCP/MCP ratio) for publication of research articles Lokta's law was

utilized to clarify the measurement of articles published by various writers in have been published by various writers in the realm of digital and social media marketing, with a specific focus on their role in establishing brand equity. Lokta's law posits a negative association between the quantity of articles and the frequency at which authors produce such articles (Sahu & Jena, 2022). According to the data presented in Table 5, a significant majority of authors 741 (92.30 percent) hailing from diverse nations have each contributed a single article on the subject of digital and social media marketing. The primary emphasis of these articles is on exploring the function of digital and social media marketing in the establishment of brand equity. Within the specific subject being examined, it is evident that a collective of 53 authors, accounting for 6.60 percent, have made noteworthy contributions by producing a total of two papers apiece. Similarly, it has been observed that a collective of six authors have made contributions to three publications apiece, while four authors have made contributions to four papers each inside the respective field.

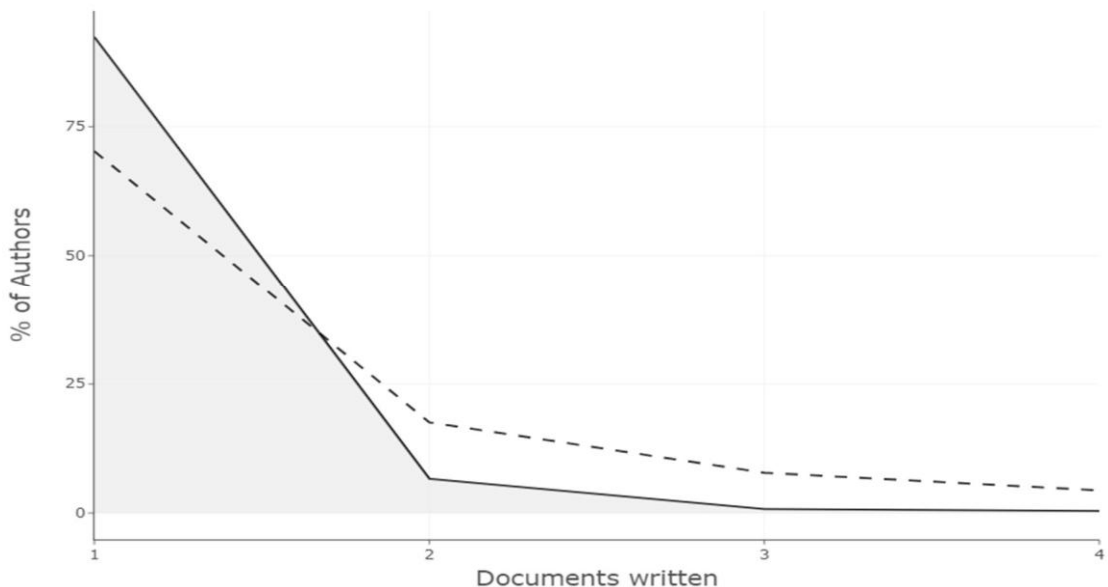


Figure 3: Authors' production using Lotka law

Source: Authors' development using Biblioshiny in conjunction with R-Studio.

Table 4: Authors’ collaboration using Lotka Law

Documents written	Number of Authors	Proportion of Authors
1	741	0.923
2	53	0.066
3	6	0.007
4	4	0.004

Source: Authors’ development using Biblioshiny (R-Studio).

Recent findings indicate that the United States of America has emerged as the foremost contributor in the field of entrepreneurial drivers and inhibitors, with a notable publication count of 43 papers. The papers under consideration have demonstrated a limited level of international collaboration, as evidenced by a corresponding authorship ratio of 0.116. This ratio signifies the proportion of articles that have been co-authored with researchers from countries other than the authors' own. India presently has a significant position as the second most prolific contributor in article publications, with of article publications, with a total of 17 articles. However, it is noteworthy that India's MCP ratio stands at 0.00. This implies that India does not engage in collaborative research article publications with authors from foreign countries. It is advisable that in order to enhance the level and scope of

research in the pertinent field, India should augment its engagement with overseas collaborators. Similarly, Indonesia has an MCP ratio of 0.00, reflecting a condition comparable to that of India. In contrast, Malaysia has generated a total of 12 scholarly papers, of which 5 have been published through collaborative efforts with international authors, resulting in an MCP ratio of 0.417. France is ranked fourteenth globally in terms of its contribution to the field of digital and social media marketing research, specifically in relation to the establishment of brand equity. This is evidenced by the production of three scholarly works on this subject matter. It is noteworthy that all three studies have been published in conjunction with authors from foreign countries. Hong Kong is ranked fifteenth in terms of research article production, having produced a total of three papers with an MCP ratio of 0.333 as shown in Figure 4.

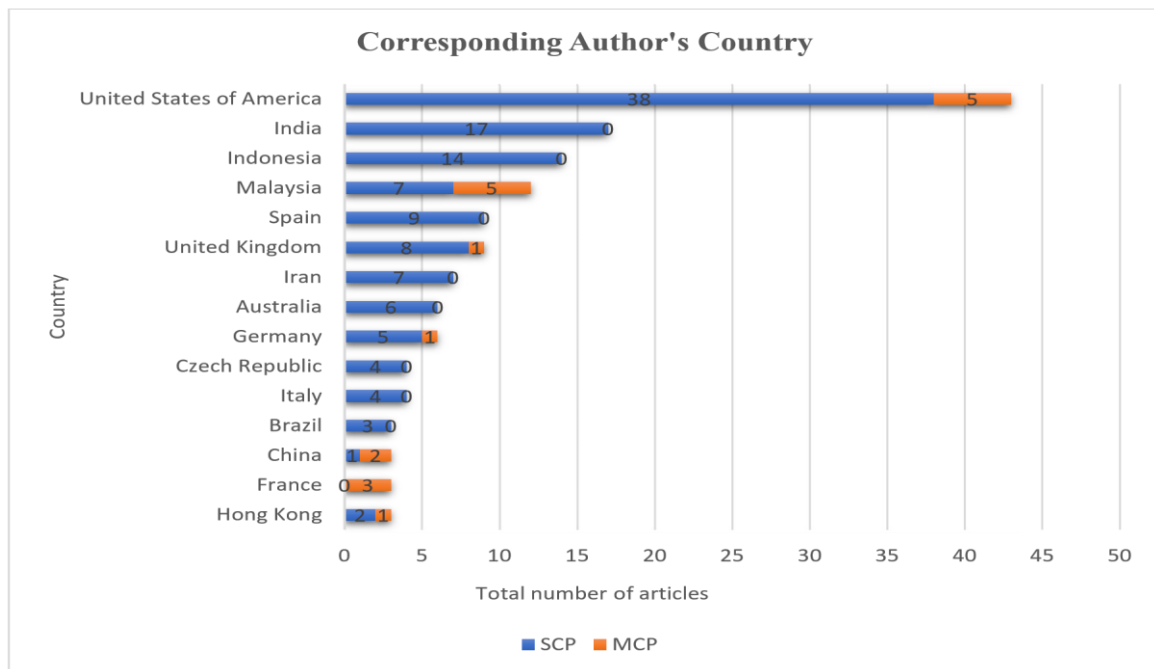


Figure 4: Corresponding Authors’ country for the publication of articles of related domain

Source: Authors’ development using Biblioshiny (R-Studio).



4.6 Prolific countries publishing research articles on incorporated domain

Based on the data provided in Table 5, it is evident that the United States of America is the foremost country in terms of research article publication, with a total of 138 articles, in the domain of leveraging digital and social media marketing to augment brand equity for universities. Following closely behind is Indonesia, which has contributed a total of 74 research articles in this area. Similarly, Malaysia, India, and Spain occupy the third, fourth, and fifth positions, respectively, in terms of research paper

publications in the integrated domain, with contributions of 61, 52, and 35 research articles. Research publications in the range of 20-30 have been published by the countries of the United Kingdom, Germany, Australia, Iran, Italy, and Romania respectively. While Pakistan, Turkey, China, and Croatia have each demonstrated their scholarly contributions through the publication of a commendable number of research articles, ranging from 10 to 20 articles. The United States of America holds the highest place in terms of total citations. In contrast, Croatia has garnered the fewest citations in the relevant field.

Table 5: Prominent countries for digital and social media marketing studies on brand equity

S.No.	Country	Total Number of Publication	TC
1	United States of America	138	1104
2	Indonesia	74	57
3	Malaysia	61	125
4	India	52	548
5	Spain	35	135
6	United Kingdom	29	343
7	Germany	28	30
8	Australia	27	157
9	Iran	23	35
10	Italy	23	75
11	Romania	21	46
12	Pakistan	18	34
13	Turkey	18	40
14	China	17	177
15	Croatia	14	4

Source: Authors' development using Biblioshiny (R-Studio).

4.7 Thematic map analysis

Braun & Clarke, (2012) assert that thematic mapping is an advantageous method for examining the progression of themes over time. This approach facilitates the identification of patterns, trends, seasonality, and outliers within the topics under investigation. The technique of thematic keyword mapping is employed to demarcate and establish the themes within a specific setting, the core expressions linked to these subjects, and their interconnectedness (Akter et al., 2021). The patterns located in the upper right quadrant are distinguished by motorrelated themes that demonstrate a notable degree of centralization and density. On the contrary, the themes located in the lower right quadrant are linked to fundamental themes that exhibit a significant level of centrality but possess a relatively

low density. The quadrant situated in the upper-left region, which exhibits a low degree of centrality and a high level of density, is frequently referred to as a niche subject. On the contrary, the quadrant positioned in the lower left, characterized by a combination of low density and low centrality, denotes the presence of emerging or decreasing themes. Figure 5 illustrates the significant and noteworthy study fields pertaining to the use of digital and social media marketing in the establishment of brand equity by universities. These domains include marketing, commerce, digital marketing, e-learning, human factors, and publications. The subjects included in the lower left quadrant, which represents growing or declining themes such as "education computing, higher education institutions, social networks, engineering education, and digital storage," demonstrate a

restricted level of advancement and pertinence within their respective field. The realm of incorporating digital and social media marketing

strategies to enhance brand equity within the context of universities exhibits minimal correlation with niche and basic quadrants, as depicted in Figure 5.

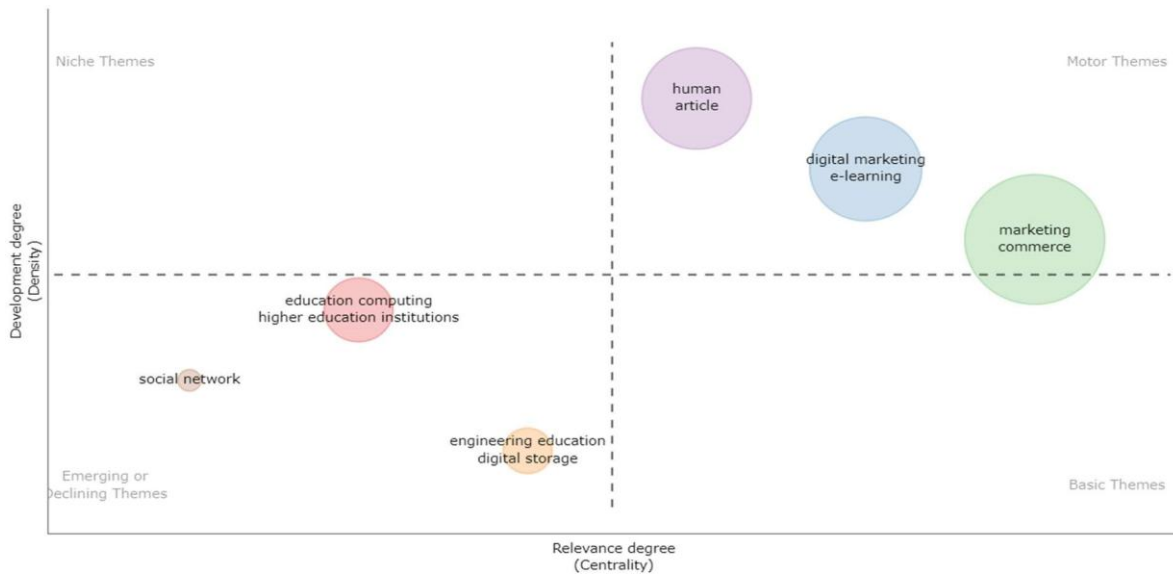


Figure 5: Thematic map analysis.

Source: Authors' development using R-4.1.0.

4.8 Trend topic analysis

The current study includes Figure 6, which presents the results of a trend topic analysis conducted using the authors' keywords from the publications. This analysis aimed to identify the most prominent

recurring topics within the domain under investigation. The minimum word frequency was established at a threshold of three words, and the number of words every year was similarly set to three.

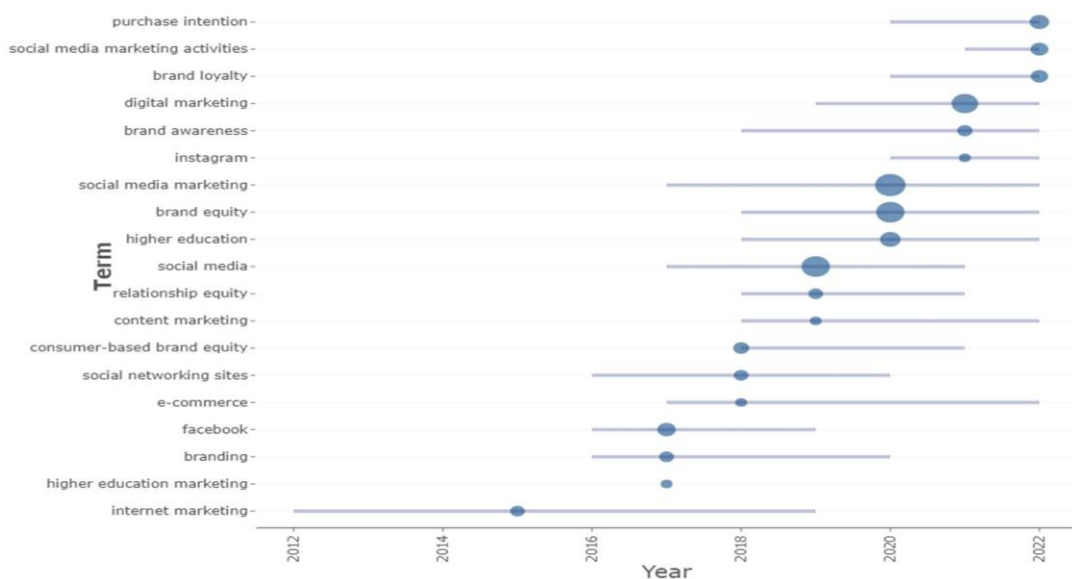


Figure 6: Trend topic analysis using authors' keywords

Source: Authors' development using Biblioshiny (R-Studio).

The findings of the trend topics analysis indicate that Purchase intention, Social media marketing activities, and brand loyalty have emerged as prominent topics in the year 2022, whereas digital marketing, brand awareness, and Instagram were identified as significant themes in 2020. In the year 2019, the subject of digital marketing was observed to have occurred 53 times, while in the preceding year of 2018, the concept of brand equity was noted to have appeared 64 times. Similarly, in the year 2017, the topics of social media marketing and

social media itself were found to have been discussed with a frequency of 80 and 64 occurrences respectively. These recurring mentions indicate the prominence and significance of these subjects during their respective years.

4.9 Conceptual structure map using Multiple Correspondence Analysis method

The objective of conceptual structure mapping is to determine the level of clustering density observed in the topics studied over a period of time.

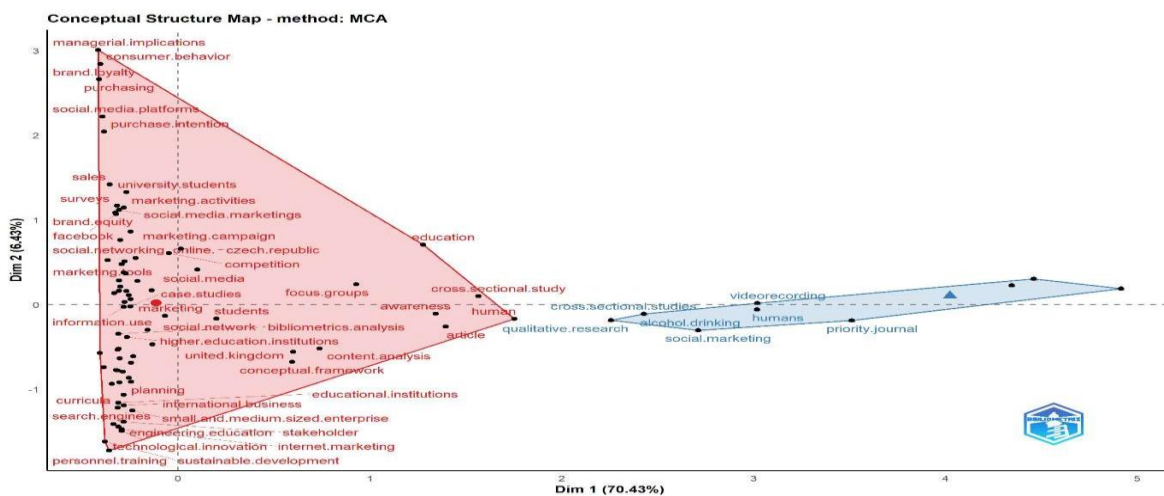


Figure 7: Conceptual structure map of digital and social media marketing for creating brand equity articles.

Source: Authors' development using Biblioshiny (R-Studio).

Figure 7 depicts the clustering of red corner themes, highlighting a significant focus on intellectual domains such as "Marketing, University students, Social networking, Marketing campaign, Higher education institutions, brand equity, Social media platforms, Content analysis, conceptual framework, and personal training". The observed clusters demonstrate a notable level of density, suggesting a pronounced interconnectedness and concentration of these intellectual endeavors. The observed clusters demonstrate a notable level of density, suggesting a significant degree of interconnectedness and focus within these intellectual endeavors. This observation indicates that these specific domains have attracted significant interest among scholars and are likely to continue being a popular area of research in the utilization of digital and social media marketing for establishing brand equity by universities in the foreseeable

future. As we transition to the following cluster, it becomes apparent that emerging areas, including "Videorecording, Cross-section studies, Qualitative research, Social marketing, Humans, and Alcohol drinking," are being acknowledged as having a lower degree of concentration compared to the previous cluster. This suggests that the aforementioned topics are currently experiencing a diminished level of research attention compared to their predecessors.

4.10 Bibliographic coupling analysis of countries

Figure 8 displays a comprehensive depiction of the bibliographic coupling among countries, revealing the emergence of a total of nine distinct clusters, encompassing both small and large entities. The initial cluster consists of seven nations, namely Ecuador, France, Indonesia, Italy, Romania, Taiwan, and Thailand. However, it should be noted that the overall quantity of publications originating from this

cluster is quite limited. In this context, the magnitude of the circle symbolizes the degree of publication intensity in conjunction with other nations. It appears that the United States of America (cluster 9), the United Kingdom (cluster 2),

Germany (cluster 3), Australia (cluster 5), Malaysia (cluster 6), Spain (cluster 7), India (cluster 8), and Russia (cluster 2) are the most prolific publishers of scholarly works.

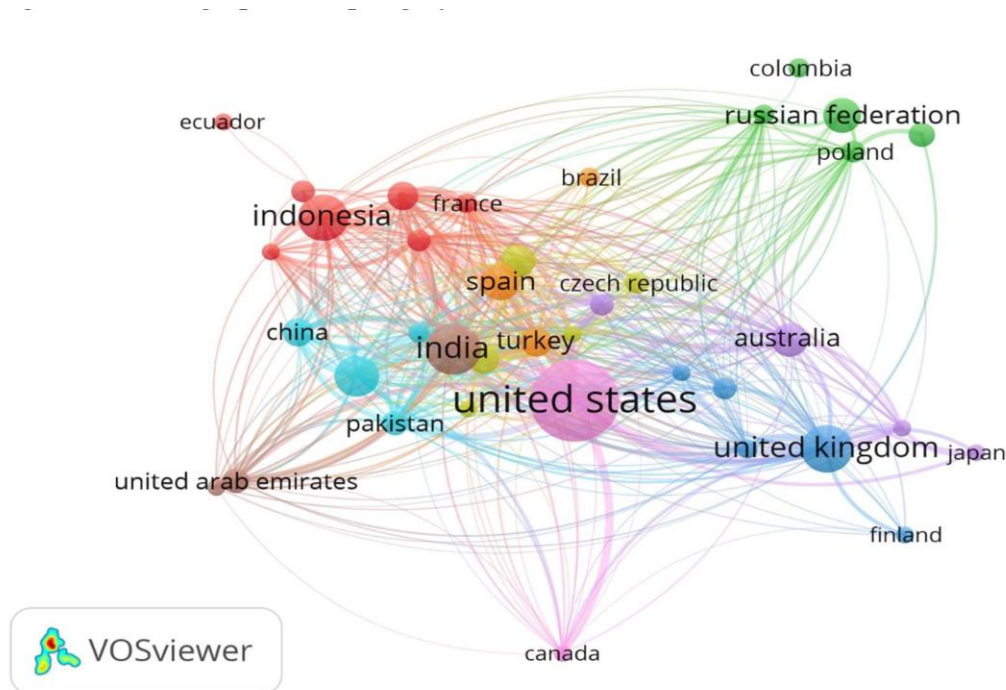


Figure 8: Bibliographic coupling by countries.

Source: Bibliographic coupling by countries (authors' development using R-4.1.0).

5. Discussion

5.1 Theoretical contributions

The research reveals a growing body of academic literature dedicated to the topic of digital and social media marketing in the context of brand equity enhancement by institutions in the field of business and management. After conducting an analysis of publications spanning from 2005 to 2022, it was seen that the rate of publication expansion shown a significant deceleration throughout the course of this timeframe. A significant increase in the quantity of publications was observed starting in the year 2016. Nevertheless, it is imperative to acknowledge the fact that Karen M. Lancendorfer has emerged as the most prodigious author, exhibiting an unparalleled capacity for publication by producing the highest volume of scholarly papers. The realm of academic

investigation seems to be primarily influenced by three eminent scholars, namely Abdullah Al Mamun, Kelley A. O'Reilly, and Momoko Fujita. Regarding the aforementioned journals, it is unsurprising that the majority of the publications have been disseminated through reputable academic journals in the field of educational marketing. Significantly, the journals "Developments in Marketing Science: Proceedings of the Academy of Marketing Science", International Journal of Data and Network Science, Journal of Marketing for Higher Education, and Journal of Research in Interactive Marketing" occupy a distinguished status, with the "Lecture Notes in Computer Science" journal being a notable publication within the realm of higher education. The scholarly discourse surrounding the incorporation of digital and social media marketing in the establishment and enhancement of brand equity by universities has

attained a noteworthy degree of refinement, particularly in the United States, Indonesia, Malaysia, and India. In these regions, a sincere dedication to the acquisition of knowledge and comprehension has propelled this field of study. The results suggest that Malaysia, China, and France are leading the way in terms of collaborative initiatives at both the national and institutional levels.

In contrast, it is worth mentioning that India, Indonesia, Spain, Iran, Australia, Italy, and Brazil exhibit a lack of collaborative associations with other nations in the realm of research publishing. This situation enhances the efficiency of access for associated researchers to engage in collaboration with other academics, thereby fostering joint endeavors in investigating the growing utilization of digital and social media marketing as a means to establish brand equity within the realm of universities. The analysis of authors' keywords pertaining to the adoption of digital and social media marketing for the purpose of establishing brand equity, purchase intention, social media marketing activities, brand equity, digital marketing, social media, and brand awareness is a prevalent approach when contemplating keyword selection.

As a result, the study has effectively answered the seven research questions:

RQ1. What is the annual scientific production of digital and social media marketing articles on brand equity?

RQ2. Who are the most prolific authors publishing research papers on including digital and social media marketing in creating brand equity?

RQ3. Which documents inside the integrated domain have received the highest number of citations?

RQ4. Which journals are considered the most prolific in releasing a high volume of research articles pertaining to the incorporated domain?

RQ5. What is the ratio of research article publishing that involves collaboration between countries?

RQ6. Which countries have the most productive in terms of publication?

RQ7. What are the most trend topics in the context of digital and social media marketing on brand equity?

The findings in this study exceed the existing literature on the elements that promote and impede entrepreneurial success.

5.2 Practical contribution

Although this manuscript is primarily aimed at the scientific community, it is important to acknowledge that the findings could also have practical implications. There has been a significant rise in academic interest in recent years regarding the incorporation of digital and social media marketing in building brand equity for universities. This study adds to our understanding of the factors that positively influence the inclusion of digital and social media marketing in enhancing the brand equity of universities. It has great practical value in providing information for decision-making in different situations. In the current framework, it is important to understand digital and social media marketing to increase awareness among students and improve brand equity. This knowledge has the potential to enhance the effectiveness of entrepreneurial endeavors.

Moreover, it is important to mention that the topic and its further development could gain advantages from a robust collaboration between academics and executives in enterprises. Moreover, engaging in collaboration with others will increase the likelihood of producing ideas that are considered important and influential. As a result, this may also increase the probability of using these techniques to incorporate digital and social media platforms in order to offer solutions within the context of the contemporary world. Identifying renowned scholars and influential academic publications in the field of incorporating digital and social media marketing to enhance brand value can be a valuable resource for professionals and researchers. This can help them find reliable and relevant sources of knowledge. Engaging in partnerships with renowned specialists and sharing research results through reputable academic publications can greatly enhance the visibility and impact of their scholarly pursuits.

6. Conclusion

Our current understanding of the complex patterns in digital and social media marketing can provide valuable knowledge on how government and private



universities can use these strategies to build brand equity. This study provides a pragmatic framework for Higher Education Institutions (HEIs) to develop long-term Social Media Marketing (SMM) plans that would improve the international recognition of the HEIs. Theoretical framework suggests that the utilization of social media has experienced substantial growth in recent years as a result of the pandemic (Tam & Kim, 2019). Hence, it is reasonable to infer that the utilization of social media for brand-related activities has probably escalated due to the onset of the pandemic, as consumers' apprehensions over physical interaction with others have heightened (Knowles et al., 2020). Moreover, within the realm of Higher Education, a significant 81% of potential students utilize social media on a daily basis to seek out pertinent information regarding their desired Higher Education Institutions (HEIs) (Aaron Smith, 2018). Therefore, it is crucial for any Higher Education Institutions (HEIs) to understand how to effectively interact with potential students in the digital realm. An examination of the integration of digital and social media marketing (DSSM) in order to establish brand equity presents a chance for higher education institutions to pinpoint the most impactful content produced on social media and employ branding tactics to appeal to potential students. The findings of this study assist policy makers at Higher Education Institutions (HEIs) by providing insights on brand equity within a global framework. This information can be used to map and design new strategies for HEIs, taking into account the unique characteristics of the national setting (Khoshtaria et al., 2020).

However, the knowledge obtained from these disciplines could be beneficial in advancing our understanding of the evolutionary factors associated with the integration of digital and social media marketing throughout history. Since 2016, there has been a substantial rise in research about the integration of digital and social media marketing in the development of brand equity by universities. This increase can be attributed to improved access to esteemed databases and the widespread availability of low-cost internet. This study makes a valuable contribution to the field of research as it focuses on analyzing the earliest authors and

documents linked to the topic using bibliometric analysis. This study conducted a comprehensive analysis to provide a foundation for future and existing researchers to initiate further investigations on brand equity. This study presents a theoretical framework that enables researchers to establish a connection between the many stages involved in building brand equity through the strategic utilization of digital and social media marketing in the contemporary technological landscape. HEIs should formulate distinct branding strategies by doing a thorough examination of the social media engagement of potential students in each country.

Through our analysis, we have determined that the United States, Indonesia, Malaysia, and India are the countries that produce the most quantity of research articles on entrepreneurship. The business journals "Developments in Marketing Science: Proceedings of the Academy of Marketing Science", "International Journal of Data and Network Science", "Journal of Marketing for Higher Education", and "Journal of Research in Interactive Marketing" have published the highest number of research articles in the respective field. The study's keywords include terms such as social media marketing activities, brand equity, digital marketing, and brand awareness. However, further comparative research is required to examine the impact of incorporating digital and social media marketing on brand equity at various phases of growth. This bibliometric study examines various efforts to analyze the progression of digital and social media marketing strategies in improving the brand equity of various government and private universities over a period of time.

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