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An Analysis Of Research Trends In Entrepreneurial Orientation And Firm Performance

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Abstract

The study explored the area of Entrepreneurial Orientation (EO) and Firm Performance using Bibliometric analysis highlighting the current trends and future agendas. The study utilised Biblioshiny package of R to systematically examine the 693 published journal articles extracted through SCOPUS database, from 1996-2024. The study employed a keywords analysis to represent the most frequent keywords and the trending topics in the area. The results highlighted that there is a consistent increase in research output over the 29 years of research. The articles have been published in more than 274 different sources with an annual average rate of 16.67%. More than 1500 different keywords have been utilised by the authors representing the significant role of the EO in context of firm performance to enhance innovation and technological transformation. The study offers a forward-looking perspective for bridging the gap by highlighting the trends and future scope of research.

Keywords: Entrepreneurial Orientation, Firm Performance, Entrepreneurship, Bibliometric Analysis, Biblioshiny

I. Introduction

Entrepreneurial Orientation (EO) of an individual or a firm represents the decision-making mindset, process and practices of the entrepreneurs (Karami et al., 2023; Ferreira et al., 2017). Until early 1996, there were hardly any research available on Entrepreneurial Orientation, since then the number of publications has seen a steady increase (Lumpkin & Dess, 1996). The research in the field of EO is expanding and gaining attention from the researchers and practitioners (Miller, 2011; Gupta et al., 2021, Martens et al., 2016), clearly visible through the number of publications due to its multifaced effects in terms of innovation, digital transformation, opportunity exploration and exploitation. Bibliometric analysis is useful in mapping the field of EO and Firm Performance, as it provides a systematic mapping of literature as well as data-based insights to understand the vast amount of knowledge (Pessin et al., 2022; Hajek et al., 2022). Bibliometric analysis is useful in identifying trends, tracing themes and their evolution, popular studies, authors, keyword and keywords occurrences etc., which facilitate deriving insights about the subject area (Hassan & Duarte, 2024; Mejia et al., 2021; Huang et al., 2020). Additionally, this study can assist academicians and decision-makers in identifying gaps in the existing literature, thereby leading to more targeted and informed avenues for future research and decision-making in this critical area of the entrepreneurship. Using bibliometric analysis, this paper highlights the key components and present dynamics of EO, making recommendations for further research. By answering the below mentioned research questions, we intend to give a thorough picture of the area.

RQ1: How has the field of EO evolved thus far?

RQ2: According to productivity and citation analysis, which research articles, authors, sources, and nations have the highest influence in the area of EO in context of firm performance?

RQ3: What are the current trends in keyword co-occurrence?

RQ4: What are the new trends and hot themes in the domain of EO and firm performance?

The structure of the study is as follows: First, the paper presents a brief overview of the literature accessible in the topic of entrepreneurial finance. Second, we explained the bibliometric technique used in the present study. Third, we presented and discussed the findings from the bibliometric study, and future research priorities for the topic are proposed. Finally, conclusions and limits are offered.

II. Literature review

In the past few years, EO has gained a lot of attention from researchers and scholars and has evolved as an important area of study in entrepreneurial context (Covin & Wales, 2019). The term “Entrepreneurial Orientation” refers to the processes, practices, strategies and decision-making activities of an organisation that contributes towards new business or new market entries or innovations (Huang et al., 2023; Pittino et al., 2017; Gupta & Batra 2016). Starting a new business or venture is grounded in theory of entrepreneurship, whereas the mechanism, strategies, practices and behaviour to pursue emerging opportunities in the market, is served by the Entrepreneurial Orientation (Huang et al., 2023; Covin & Slevin, 1991). Entrepreneurial orientation represents the strategic orientation, also how innovative, proactive and risk taker an individual or an organisation is (Saiyed et al., 2023; Covin & Slevin, 1989; Grünhagen et al., 2014). Entrepreneurial orientation can be clearly observed with decision making style of the management or entrepreneur, which is demonstrated by the strategic decision and choices made by them (Lyon et al., 2000; Green et al., 2008).

EO of a firm or an individual is their view point towards taking risk, encouraging innovativeness, being proactive to gain competitive edge and become market leaders (Covin and Slevin, 1989). Several researchers have utilised the aspect of EO, both as lower and higher order construct, in context of measuring entrepreneurial Firm Performance (Aftab et al., 2024; Basco et al., 2020; Li et al., 2009; Wang, 2008; Wiklund & Shepherd, 2005).

According to Schumpeter (1934), innovation is the heartbeat of entrepreneurship and innovativeness has been recognised as the critical factor to the entrepreneurial activities. An entrepreneur exhibiting innovativeness, is someone who wants to make the most possible financial gains by coming up with new ideas in areas such as new markets, new manufacturing processes, new types of businesses, new products and services, and untapped sources of supply (Wales et al., 2013; Kusa et al., 2023). The another most important aspect of entrepreneurship is taking risks. It is defined as the extent of uncertainty or the possibility to have unfavourable or unpleasant results in relation to business (Kusa et al., 2023). Proactiveness of a firm refers to the being proactive in identifying opportunities, creating new products and services, forward looking perspective, and to remain ahead of the competitors in the market. It also includes taking decisions towards emerging needs and demands in the market in order to be innovative and survive in the changing business environment (Kusa et al., 2023; Pittino et al., 2017).

EO is consistently highlighted as a critical determinant of Firm Performance by the researchers (Ribeiro et al., 2021; Wahyuni & Sara, 2020; Rauch et al., 2009; Lumpkin & Dess, 1996; Wang, 2008). While the linkage between EO and firm outcomes is often positive, studies indicates that this relationship is frequently influenced by the mediating and moderating factors (Aftab et al., 2024; Chaudhary et al., 2024; Hughes et al., 2022; Lin & Chung, 2023; Jeong et al., 2019). For example, EO can result into improved performance of the firm by enhancing functional performance (Rezaei & Ortt, 2018), developing strong marketing capabilities and market orientation (Sok et al., 2017; Amin et al., 2016) or through enhancing innovations (Kollmann & Stöckmann, 2014).

Further, the previous studies highlights that the firms having higher level of EO are in a better position to create and utilise knowledge, adapt to changing environments, explore and seize opportunities, all of which contributes to improved financial and non-financial performance (Eshima & Anderson, 2017; Dess & Lumpkin, 2005; Wiklund & Shepherd, 2003). However, the influence of EO can be contingent on various factors such as environmental dynamism, type of industry, firm size, and even the leadership style of the CEO (Verdú-Jover et al., 2023; Aftab et al., 2024; Saiyed et al., 2023; Chaudhary et al., 2024). Ultimately, EO allows organisations to gain competitive advantages and enhance their overall financial and non-

financial firm performance (Correia et al., 2023; Elgarhy & Abou-Shouk, 2023; Chen et al., 2023; Yang & Aumeboonsuke, 2022; Anwar & Shah, 2021).

III. Data and Methodology

Bibliometric analysis is a thorough and preferred method for reviewing and analysing vast amounts of scientific data. It reveals how a given field has progressed while additionally offering insights on newly emerging topics within the field (Donthu et al., 2021). However, the technique is rarely applied in business and management research (Preghenella & Battistella, 2021). Bibliometric methods are utilized by the researchers for gaining a comprehensive overview of the field by employing statistical approaches to identify trends and patterns in the research area, author profile, journal and publication patterns, and so on (Donthu et al., 2021; De Bakker et al., 2005; Glanzel, 2003).

Initially, we scanned the database to gather the data for bibliometric analysis. Selection of an appropriate database is important for conducting bibliometric analyses (Moral-Muñoz et al., 2020; Donthu et al., 2021). In the current study, we used data from the Scopus database to explore the discipline of EO, as it extensively covers a wide variety of fields and topics (Paul et al., 2021).

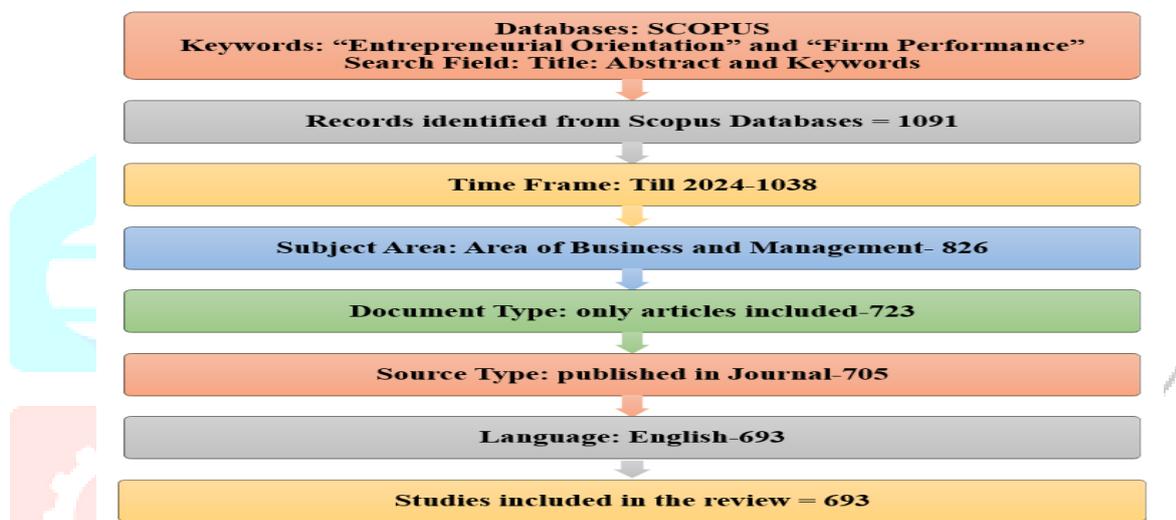


Fig: 1 Framework for data extraction

For the systematic extraction of data, a framework has been utilised by the researchers. The search criteria include searching in the field of keywords, abstracts, and titles, with a concentration on business, management, and accounting area. The screening stage is the next step in the process, during which only journal articles are considered. The screening procedure then moves on to examine language, articles accepted only if they are written in English. The systematic inclusion and exclusion of articles is vital for any study as it ensures that the information gathered is relevant, credible, and up-to-date, as well as that it focuses on the specific topic of interest. The study includes a total of 693 documents. We extracted data using Scopus database using the key term "Entrepreneurial Orientation" and "Firm Performance" in the title, abstract, and keyword search sections. The process of data extraction has been presented above in fig (1).

The study investigated the area of EO in the context of firm performance using bibliometric analysis using Biblioshiny package of R studio to highlight the publication activities, salient authors, documents, countries and keywords. Additionally, the study performed a keyword analysis to represents the trending topics and potential areas of future research.

IV. Results and Discussions

Table (1) below summarizes information collected from 694 documents. These documents were sourced from 274 different journals. The publications annual growth rate in the field of EO is 16.67 %, indicating a rapidly growing area in the field of entrepreneurial research. The average citation count per document is 76.03 showing a high impact of the topic, for a total of 42643 references. There are 1726 authors that have contributed to the field, 78 of whom are the sole authors of their particular works. All these documents contain 1517 keywords mentioned by the authors of these documents, representing the topical major themes of the articles.

Table 1: Information about Data

Main Information About Data	
Timespan	1996:2024
Sources (Journals)	274
Documents	693
Annual Growth Rate %	16.67
Document Average Age	6.92
Average Citations Per Doc	76.03
References	42643
Author's Keywords	1517
Authors	1726
Authors of Single-Authored Docs	78
Article	693

Annual Publication

A total of 693 articles selected for the review for present study, has spread over the time period of 29 years from 1996 to 2024, with a high growth rate of 16.67%. To comprehend the information on annual information in the area of EO and Firm Performance, the overall data has been divided into three phases: i) exploratory, ii) Growth, iii) Expansion.

Table 2: Phases of Annual Publication

Phases	Time Span	Articles	Publication
Phase 1: Exploratory	1996-2010	60	low publication activities
Phase 2: Growth	2011-2020	387	steady growth in articles publication
Phase 3: Expansion	2021-2024	246	rapid increase in articles publication

The first phase i.e., exploratory phase from 1996-2010 has been characterised by low publication activities, as only 60 articles has been published in 15 years, amounting to 8.65% of the total article published. The second phase has been characterised by a steady growth in the publication activities in the area of EO and Firm Performance, where 387 documents have been published in 10 years amounting to 55.84% of the total articles published. The third phase, expansion phase, has been characterised by the rapid growth in the articles count in the field, as 246 articles have been published only in 4 years of time period, representing 35.49 % of total data with almost 9 documents per years. The year wise distribution of documents has been represented in below fig (3). A trend line is used to represent the increasing number of articles per year.

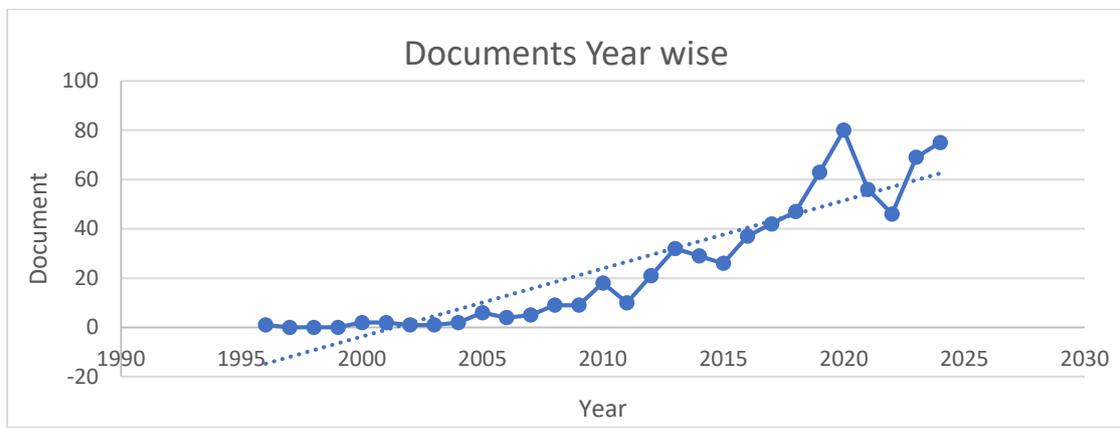


Fig 2: Annual Publication

Top Documents

Table (2), represent the top cited articles by the research community, along with the articles title, publication year, authors and citations received. The analysis of top articles has been done on the basis of citation received by each document and they have been ranked accordingly. The document by Lumpkin & Dess (1996), is the most cited document accumulating more than 6000 citations. The next three articles, (Rauch et al., 2009; Wiklund & Shepherd, 2005; and Lumpkin & Dess, 2001) have received more than 2000 citation each.

Table 2: Top Cited Articles

Rank	Paper	Year	Authors	Source	TC
1	Clarifying the entrepreneurial orientation construct and linking it to performance	1996	Lumpkin, G. T., & Dess, G. G.	Academy of management Review	6163
2	Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future.	2009	Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M.	Entrepreneurship theory and practice	2249
3	Entrepreneurial orientation and small business performance: a configurational approach.	2005	Wiklund, J., & Shepherd, D.	Journal of business venturing	2068
4	Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle.	2001	Lumpkin, G. T., & Dess, G. G.	Journal of business venturing	2019
5	Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses.	2003	Wiklund, J., & Shepherd, D.	Strategic management journal	1857
6	(2004). Innovativeness: Its antecedents and impact on business performance.	2004	Hult, G. T. M., Hurley, R. F., & Knight, G. A.	Industrial marketing management	1540
7	Internal capabilities, external networks, and performance: a study on technology-based ventures.	2001	Lee, C., Lee, K., & Pennings, J. M.	Strategic management journal	1367
8	The effects of strategic orientations on technology-and market-based breakthrough innovations.	2005	Zhou, K. Z., Yim, C. K., & Tse, D. K.	Journal of marketing	1309
9	(2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance.	2006	Walter, A., Auer, M., & Ritter, T.	Journal of business venturing	875
10	Entrepreneurial orientation, learning orientation, and firm performance.	2008	Wang, C. L.	Entrepreneurship theory and practice	717

Top Authors

The below table (3), represent the top authors in the field in terms of publication and citations received. The table is divided into two parts section A and B, where section A represents the ranks of authors as per the number articles published by them and section B shows the authors ranked as per the citation received by them.

Table 3: Top Authors

Section A			Section B		
Rank	Authors	Articles	Author	TC	NP
1	KRAUS S	15	LUMPKIN GT	10784	6
2	HUGHES M	10	HUGHES M	1727	10
3	SUDER M	8	KRAUS S	1535	15
4	EGGERS F	7	WALES WJ	827	7
5	GUPTA VK	7	EGGERS F	511	7
6	KUSA R	7	SHIROKOVA G	376	6
7	WALES WJ	7	GUPTA VK	339	7
8	LUMPKIN GT	6	KUSA R	211	7
9	SHIROKOVA G	6	SUDER M	206	8
10	ANDERSÉN J	5	ANDERSÉN J	182	5

An analysis of contribution of different authors has been done, which reveals that “*Kraus S*” is most prolific author, with 15 articles contributing to the field which have gained total 1535 citation. However, in terms of citations received, “*Lumpkin GT*” stands out with over 10000 citations received only for 6 articles published during the time period. Other prominent authors include “*Hughes M*” (10 articles with 1727 citations) and “*Wales WJ*” (7 articles with 827 citations), who have significantly contributed towards shaping the field of EO in context of firm outcomes.

Top Sources

The table (4), below represent the prominent sources which contributed immensely and shaped the area of EO and firm outcomes in context of entrepreneurship. The influence of journal is measured in terms of citations received by the journal; higher citation means high influence. It can be clearly observed from the table (4), that “*Journal of Business Venturing*” and “*Academy of Management Review*” stand out for citations received only with few articles.

Table 4: Top Sources

Source	TC	NP
JOURNAL OF BUSINESS VENTURING	6511	7
ACADEMY OF MANAGEMENT REVIEW	6163	1
ENTREPRENEURSHIP: THEORY AND PRACTICE	4284	12
STRATEGIC MANAGEMENT JOURNAL	3378	3
INDUSTRIAL MARKETING MANAGEMENT	3331	11
JOURNAL OF BUSINESS RESEARCH	2415	22
JOURNAL OF SMALL BUSINESS MANAGEMENT	1574	11
JOURNAL OF MARKETING	1309	1
INTERNATIONAL SMALL BUSINESS JOURNAL	1023	4
INTERNATIONAL ENTREPRENEURSHIP AND MANAGEMENT JOURNAL	950	16

Top Countries

Table 5: Top Countries

Rank	Country	Freq	TC
1	USA	261	9097
2	INDONESIA	211	541
3	CHINA	172	3830
4	MALAYSIA	132	818
5	SPAIN	98	1624
6	INDIA	92	372
7	UK	89	4460
8	BRAZIL	66	443
9	GERMANY	54	1620
10	AUSTRALIA	47	713

The analysis of country wise production of article revealed that US is leader in research in the area of EO and firm outcomes, with 261 articles having 9097 citations. While countries like Indonesia and China have also contributed to the field quantitatively, but the number of citations received are comparatively low compared to US. On the other side UK with only 89 articles received more than 4000 citation representing influential contribution in the area.

Keyword co-occurrence

“Co-occurrence” analysis represent that how different keywords occurred together in selected articles. Keywords that occur together frequently indicates a thematic relationship (Dhiman & Arora, 2023). Greater the frequency of the keywords the larger the size of the circle. The nodes represent how a keyword is related with other keywords. The following figure (3), extracted from “VOSviewer” software, represent the visualisation of co-occurrence of author’s keywords. 82 out of the 1517 keywords, keywords which have occurred at least five times have been selected for the analysis.

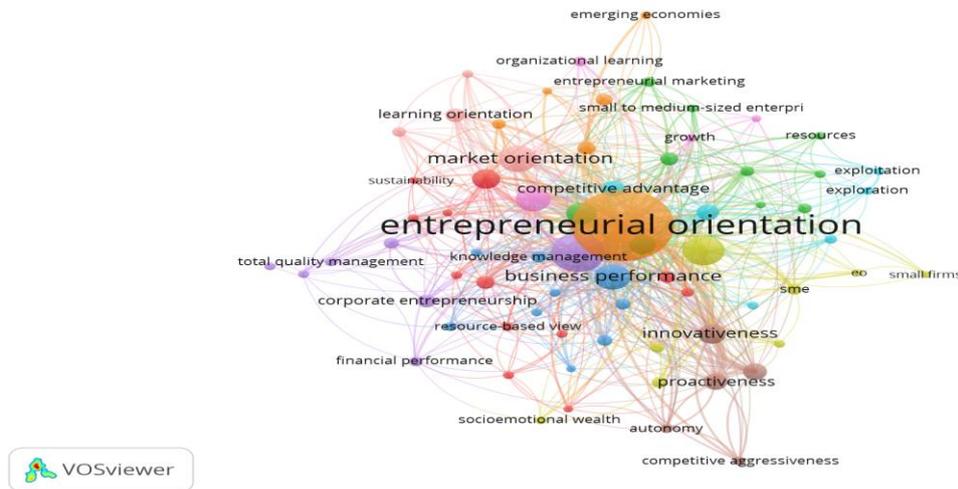


Fig 3: Keyword Co-Occurrence

The analysis created 10 different clusters, discussed below:

Cluster 1: Strategic, Social, and Cultural Foundations of EO

Cluster one is present by red colour in the above diagram, consisting of 12 items in it. “corporate social responsibility”, “culture”, “resources-based view”, “strategic orientation”, and “sustainability” are some of the keywords in the cluster. This cluster highlights the foundational elements that shape the EO with a focus on social responsibility and sustainability, especially in small businesses.

Cluster 2: Strategy & Entrepreneurship

This cluster is presented in green colour. It contains keywords like “competitive strategy”, “strategy”, “customer orientation”, “entrepreneurial marketing”, “innovation” and “networking” etc., The cluster highlights the strategic decision practices by the entrepreneurs.

Cluster 3: Entrepreneurial Leadership in EO context

It is represented by dark blue colour. It consists of keywords like, “entrepreneurial leadership”, “transformational leadership”, “knowledge management”, and “environment hostility”. The focus of the cluster is on highlighting the role of different leadership style in entrepreneurial firms.

Cluster 4: Family Firms, SMEs & Individual EO

Cluster four is highlighted in yellow colour. Some of the keywords of the cluster are, “family firms”, “SMEs”, “small firms”, and “performance. The focus of the cluster is on linkage between EO and firm outcomes in context of family firms and SMEs.

Cluster 5: Entrepreneurship and Firm Outcomes

This cluster is presented in purple colour. This cluster contains keywords like “corporate entrepreneurship”, “firm performance”, “financial performance”, and “total quality management”. The focus of the cluster is on

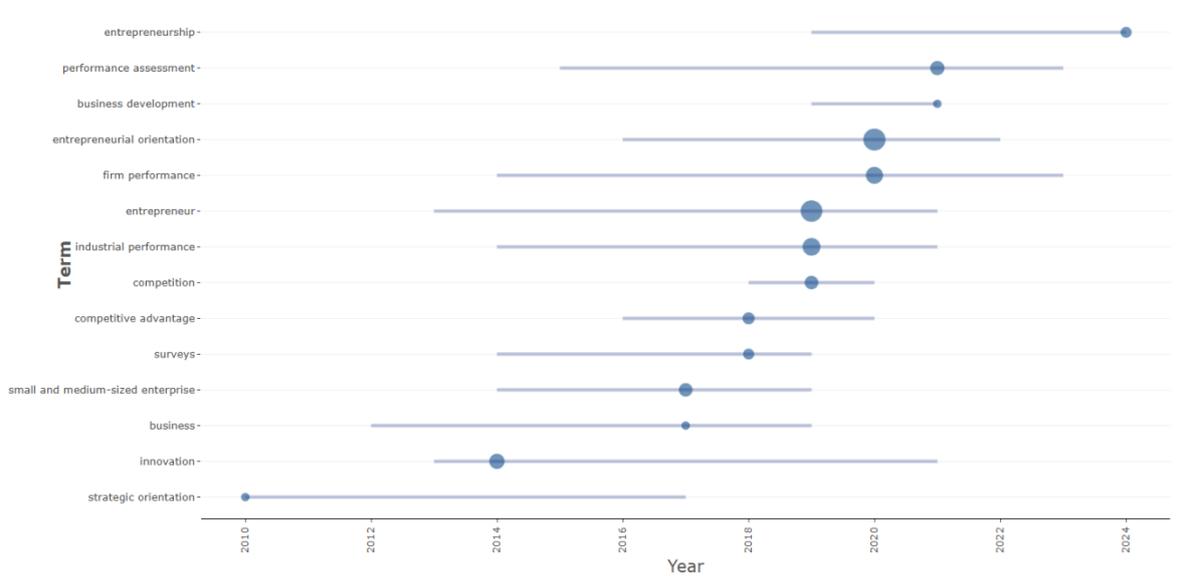


Fig 5: Trending Topics

V. Future research agenda

Entrepreneurial activities hold significant potential for social and economic development of the nation, thus the aspects related to this are important and need to be focused. Providing highlights about the EO and performance of the firm have potential for the academic community, entrepreneurs and policy makers. Studies in the area of EO and firm outcomes has been increasing continuously, especially in context of measuring its impact on Firm Performance, as performance assessment and business development are the hot topics extending through 2024. This continuous discussion indicating a strong interest among scholars in measuring EO's effect. Based on the trends, there is a need to develop lineages between EO and different type of performance of the firm i.e., financial, social and environmental. Longitudinal studies need to be conducted to assess the EO's sustained effect over a period of time. The analysis revealed that EO has been discussed in context of SMEs and Small businesses, but rarely been discussed in case of startups and specific areas like digital startups, fintech, healthtech, edtech etc. Integration of EO with digital and sustainable themes is also not been discussed much in the literature, which require exploration. Combining EO with digital transformation and new technologies like AI, sustainability, and ESG performance metrics could be explored by future studies. New frameworks related to green entrepreneurial orientation and digital entrepreneurial orientation need to be developed to align with the global trends. Moving from surveys to mixed methods, case studies and experimental design, are needed to capture the complexity and provide the rich findings. Some of the latest techniques like text mining and sentiment analysis could also be applied for deeper understating of the phenomenon.

VI. Conclusion and Limitations

The study provided a comprehensive overview of the field, which facilitate in identifying the gaps in the area and facilitating future researchers in the area of EO and Firm performance. The findings of the present study hold significant potential and have implications, as entrepreneurial activities and ecosystem has been an area of interest across the world. The study, covering a period of 29 years in the domain of EO and firm performance, has highlighted the annual publication trends, top cited documents, top sources, top authors, top countries, key word co-occurrence and trending topics in the area. The annual publication trend analysis represented that the field is growing with a 16.67% on an average. The period from 2021-24 has showed a rapid growth in the academic output. The keyword analysis revealed that "innovation", "competitive advantage", "strategic orientation", and "performance assessment" are some of the areas of focus in the field of EO and Firm Performance. As the present study is just served as a base, future studies need to be conducted on EO and how it affects firm outcomes measured in terms of non-financial, financial and sustainability. Also, the antecedents, decision and outcome of EO need to be found so as to ensure the ensure the proper utilisation of firm resources.

Although the study provides an extensive analysis, but it also has some limitation. Firstly, only SCOPUS database has been explored, which may have resulted in exclusion of some seminal work. Also, the analysis is mainly focused on analysing the trends i.e. quantitative analysis of the field, thus lacks the qualitative aspect. Restriction to journal articles may resulted into exclusion of some important work which may be significant for the understanding of the field.

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