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Mapping the evolution of intrapreneurship: A comprehensive bibliometric analysis of global research trends (2000-2024)

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Abstract
The study presents a comprehensive bibliometric analysis of global research trends in intrapreneurship from 2000 to 2024. Drawing upon a dataset of 1,880 open-access documents sourced from the Scopus database, the study employs advanced bibliometric techniques—such as co-word analysis, thematic mapping, co-citation networks, and trend topic visualization—to uncover the intellectual, conceptual, and thematic evolution of the field. Key findings reveal a significant rise in scholarly output post-2015, with notable peaks in 2020-2023, signaling growing academic interest. "Entrepreneurial orientation," "innovation," "corporate entrepreneurship," and "performance" emerge as dominant and recurring themes, while emerging topics such as "sustainability," "SMEs," and "dynamic capabilities" indicate a broadening research scope. The study also identifies leading contributors, influential institutions, and high-impact journals, revealing a geographically diverse and interdisciplinary research community. By highlighting both established and underexplored areas, this research provides a strategic roadmap for scholars and practitioners aiming to advance the theory and practice of intrapreneurship in diverse organizational and regional contexts.

Keywords: Intrapreneur, corporate entrepreneur, entrepreneurial orientation, entrepreneurial behaviour, entrepreneurship, intrapreneurship

Introduction
In the evolving landscape of modern business, intrapreneurship has emerged as a key driver of internal innovation and competitive advantage. Originally introduced by Pinchot (1985) [30], intrapreneurship refers to entrepreneurial behavior by employees within an organization, enabling them to act like entrepreneurs while retaining the security of being employed. This concept bridges the gap between innovation and execution within established firms (Antoncic & Hisrich, 2003; Kuratko *et al*., 2005) [3, 21-22].

Researchers have consistently emphasized that organizations practicing intrapreneurship are more adaptive, agile, and innovation-oriented (Zahra, 1991; Guth & Ginsberg, 1990) [32, 15]. According to Morris *et al*. (2011) [27], intrapreneurship is not merely about generating new business ideas, but about transforming the organizational culture to support risk-taking, proactiveness, and autonomy. Furthermore, Kuratko *et al*. (2014) [34] argued that intrapreneurship is instrumental in achieving strategic renewal, especially in turbulent markets.

Several studies underline that intrapreneurship is closely linked to corporate entrepreneurship, where the focus is on innovation-led growth within existing corporate structures (Covin & Miles, 1999; Zahra & Covin, 1995) [8, 33]. Scholars like Dess *et al*. (2003) [11] and Hornsby *et al*. (2002) [16] stress that supportive organizational structures, leadership commitment, and resource availability are critical antecedents of intrapreneurial behavior. Rigtering and Weitzel (2013) [31] also point to psychological ownership and perceived organizational support as key predictors of intrapreneurial intentions among employees.

Moreover, Floyd and Wooldridge (1999) [13] identified the importance of middle managers in championing intrapreneurial activities. Burgelman (1983) [6] earlier highlighted how internal corporate venturing can emerge through autonomous strategic initiatives from different levels of the hierarchy. Today, in the face of digital disruption and global uncertainty, firms are increasingly viewing intrapreneurship as a tool for organizational resilience and transformation (Christensen, 1997; Covin & Slevin, 1991) [7, 9].

In essence, intrapreneurship enables firms to innovate from within, leveraging employee creativity while avoiding the high failure rates associated with external startups (Antoncic & Hisrich, 2001) [2]. It not only enhances the organization's ability to innovate but also significantly contributes to employee motivation, engagement, and talent retention (Kuratko *et al*., 2010; Ireland *et al*., 2009) [20, 18]. With increasing empirical support and theoretical development, intrapreneurship is now widely acknowledged as a strategic imperative rather than a managerial luxury.

Given this context, the present study aims to fill an important gap by offering a systematic bibliometric review of the global research on Intrapreneurship. The objectives of the paper are as follows: (1) To examine the growth and evolution of scholarly literature between 2000 and 2024. (2) To identify influential authors, journals, institutions, and countries contributing to the field; (3) To analyze thematic trends and conceptual developments through keyword mapping and co-occurrence analysis (4) To highlight regional disparities and underexplored research areas to inform future scholarly and policy-oriented directions. By adopting a bibliometric approach, this study provides not only a structured synthesis of the existing literature but also a strategic roadmap for advancing inclusive, interdisciplinary, and contextually grounded research in the field of Intrapreneurship.

2. Theoretical Framework

Intrapreneurship, a portmanteau of "internal" and "entrepreneurship," refers to the practice where employees within an organization exhibit entrepreneurial behavior by initiating innovation, taking risks, and driving new ventures or processes (Pinchot, 1985) [30]. Unlike traditional entrepreneurs who operate independently, intrapreneurs function within the boundaries of an existing firm, leveraging organizational resources to create value while promoting strategic renewal and competitiveness (Antoncic & Hisrich, 2003; Zahra, 1991) [3, 32].

The theoretical roots of intrapreneurship are grounded in entrepreneurial orientation theory, resource-based view (RBV), and innovation management. Entrepreneurial orientation, encompassing proactiveness, innovativeness, and risk-taking, is often used to explain intrapreneurial behavior at the individual and organizational level (Lumpkin & Dess, 1996) [23]. The resource-based view complements this by emphasizing how intrapreneurs exploit firm-specific resources and capabilities to pursue innovative initiatives (Barney, 1991; Kuratko *et al*., 2005) [5, 21-22].

Intrapreneurship is also closely tied to corporate entrepreneurship and strategic management. It is seen as a means to stimulate continuous innovation, drive growth, and build sustainable competitive advantage in dynamic markets (Ireland, Covin, & Kuratko, 2009) [18]. Organizations that foster an intrapreneurial climate — characterized by autonomy, managerial support, resource availability, and reward systems — are more likely to succeed in developing internal ventures (Hornsby *et al*., 2002; Monsen, Patzelt, & Saxton, 2010) [16, 25].

Furthermore, intrapreneurship plays a crucial role in enhancing employee engagement, knowledge sharing, and organizational learning, particularly in knowledge-intensive sectors (Rigtering & Weitzel, 2013) [31]. It encourages bottom-up innovation and empowers individuals to act as agents of change, thus aligning employee motivation with strategic objectives (Antoncic, 2007; Neessen *et al*., 2019) [1, 28].

In essence, intrapreneurship bridges the gap between individual creativity and corporate strategy. It is increasingly recognized as a driver of innovation-led growth, agility, and resilience in both private and public sector organizations (Hughes & Mustafa, 2017; Audretsch *et al*., 2021) [17, 4].

3. Materials and Methods

This study employs bibliometric analysis to systematically and objectively examine the existing body of literature on Intrapreneurship, focusing on publication trends, thematic evolution, and research performance over a span of twenty-five years (2000-2024). Bibliometric analysis involves the application of statistical and quantitative techniques to evaluate scholarly output, assess the dynamics of research activity, and detect patterns and developments within a specific scientific domain (De Bakker *et al*., 2005) [10]. These tools allow for the systematic exploration of literature in terms of contributions by authors, countries, institutions, and journals (Merigó *et al*., 2017; Montalván Burbano *et al*., 2020; Patel *et al*., 2022) [24, 26, 29]. Additionally, bibliometric reviews ensure a high level of methodological rigor, minimizing subjective bias and errors often associated with narrative or traditional literature reviews (Gomezelj, 2016; Feng *et al*., 2017) [14, 12]. The integration of the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework further enhances the transparency and reproducibility of the review process (Kabeer, 2001) [19]. Figure 1 shows the Prisma framework for the study.

The data was exported from Scopus database. To mitigate researcher bias in data collection, a structured keyword search strategy was applied. The search string used was: ("Intrapreneur*" OR "Corporate Entrepreneur*" OR "Entrepreneurial Orientation" OR "Entrepreneurial Behaviour"). The initial search yielded 9,407 records. In the second stage, the timeframe was limited to publications between 2000 and 2024. Subsequently, the search was refined by restricting subject categories to Business and Management, reducing the dataset to 7,530 documents. In the fourth step, document types were limited to Articles and Review Papers, resulting in 7,530 records. The fifth step applied a language filter, retaining only publications in English, which further narrowed the dataset to 5,876 documents. Finally, only open-access publications were selected, yielding a total of 1,880 documents for final analysis.

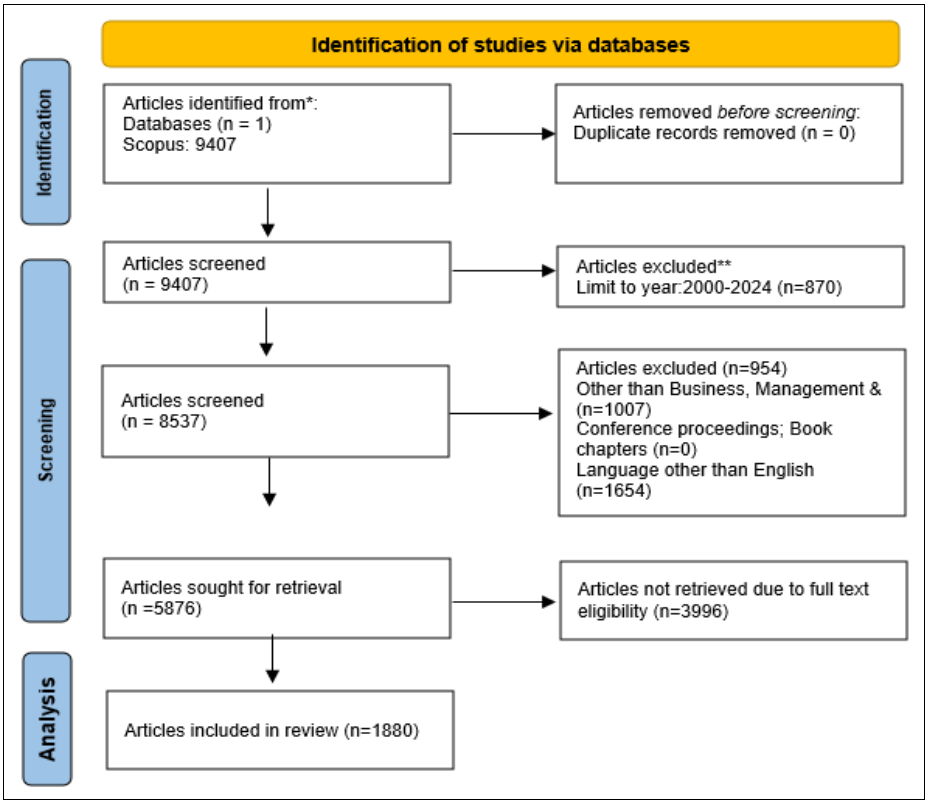

Fig 1: Flowchart of the bibliographic search and selection process

4. Result

4.1. Annual Scientific Production

The annual scientific output reveals a steady yet modest growth in intrapreneurship-related publications from 2000 to approximately 2015. This initial phase is characterized by limited scholarly attention, reflecting the nascent stage of intrapreneurship as an independent research domain. However, beginning around 2016, a noticeable surge in academic productivity is observed, marking the onset of a more mature and widely recognized interest in the field. A significant inflection point appears between 2018 and 2020, during which the number of publications increased sharply. This trend continues into 2023, peaking at over 220 published articles, thereby reflecting a substantial acceleration in research efforts. A steep decline is observed in 2024 can be attributed to incomplete indexing of publications for the ongoing year, a common artifact in bibliometric analyses conducted mid-year. As such, the decline should not be interpreted as an actual reduction in research activity, but rather a temporal limitation in database updates.

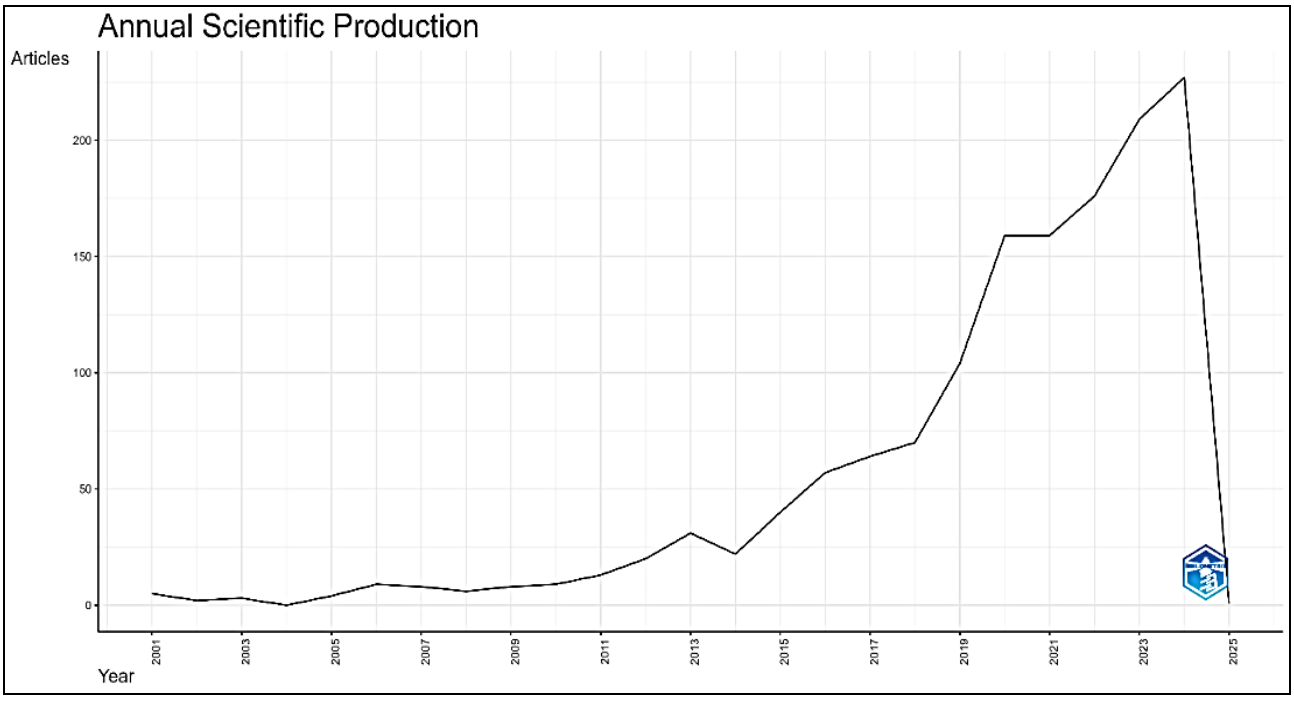

Fig 2: Annual Scientific Production

4.2. Three-Field Plot

The three-field plot gives a clear visual of how key references, authors, and keywords are connected in intrapreneurship research. On the left side, the most cited references include foundational works by Miller (1983), Lumpkin and Dess (1996, 2001) [35, 23], and Covin and Slevin (1989, 1991) [9]. These studies have played a crucial role in shaping the theoretical base of the field, especially in areas like entrepreneurial orientation, innovation, and strategic management within firms. Their repeated appearance across research papers shows their lasting importance and continued relevance. In the middle, leading authors such as Covin, Lumpkin, Hughes, Wiklund, and Kraus stand out for their consistent contributions. Their strong connection with both the classic studies and recent keywords highlights their influence in shaping current discussions on intrapreneurship.

On the right, the most commonly used keywords—such as entrepreneurial orientation, innovation, corporate entrepreneurship, performance, SMEs, and dynamic capabilities—reflect the main focus areas of this research domain. These terms suggest that most studies are centered on how internal innovation and entrepreneurial efforts within organizations influence business performance. The presence of newer keywords like sustainability and absorptive capacity also indicates that the field is gradually expanding into emerging areas.

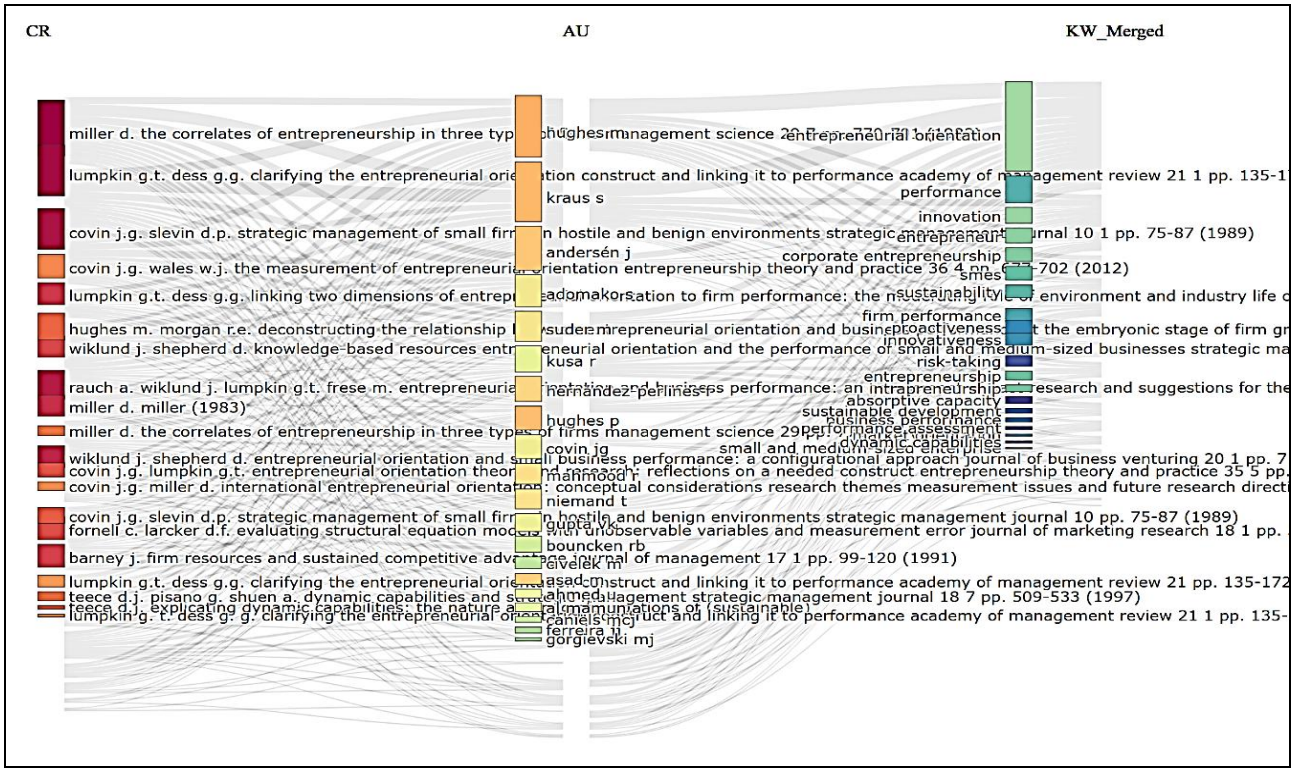

Fig 3: Three-Field Plot

4.3. Most Relevant Sources

The Table1 reveals that Sustainability (Switzerland) is the leading journal, contributing a significant number of publications (114 articles) to the field. This indicates a growing academic interest in exploring intrapreneurship through the lens of sustainability and responsible innovation. Other notable journals include Cogent Business and Management (34 articles) and the Journal of Business Research (31 articles), both of which have also published a considerable volume of research on intrapreneurial activities within organizations. Journals such as the International Journal of Entrepreneurial Behaviour and Research, SAGE Open, and Problems and Perspectives in Management have each contributed over 20 articles, indicating their active role in advancing the discourse. Additionally, specialized journals like the Entrepreneurial Business and Economics Review, Administrative Sciences, and the International Entrepreneurship and Management Journal reflect a strong interdisciplinary interest in the subject.

Table 1: Most Relevant Source

Sources	Articles
Sustainability (Switzerland)	114
Cogent business and management	34
Journal of business research	31
International journal of entrepreneurial behaviour and research	25
Sage open	23
Problems and perspectives in management	21
Entrepreneurial business and economics review	21
Administrative sciences	19
International entrepreneurship and management journal	19
New England journal of entrepreneurship	19

4.4. Sources' Production over Time

The Figure4 depicts sources' production over time provides insights into the publishing trends of key journals in the field of intrapreneurship from 2000 to 2024. Among the journals, Sustainability (Switzerland) shows a remarkable and consistent rise in publication output beginning around 2016, with a steep increase between 2019 and 2023. This sharp growth suggests a significant shift in scholarly focus toward sustainable and responsible innovation within intrapreneurial research. Other journals such as Cogent Business and Management, Journal of Business Research, International Journal of Entrepreneurial Behaviour and Research, and SAGE Open also show steady growth, particularly after 2015. Although their cumulative output remains below that of Sustainability, their upward trends reflect growing engagement with intrapreneurship topics across broader areas like business strategy, organizational behavior, and open-access research platforms.

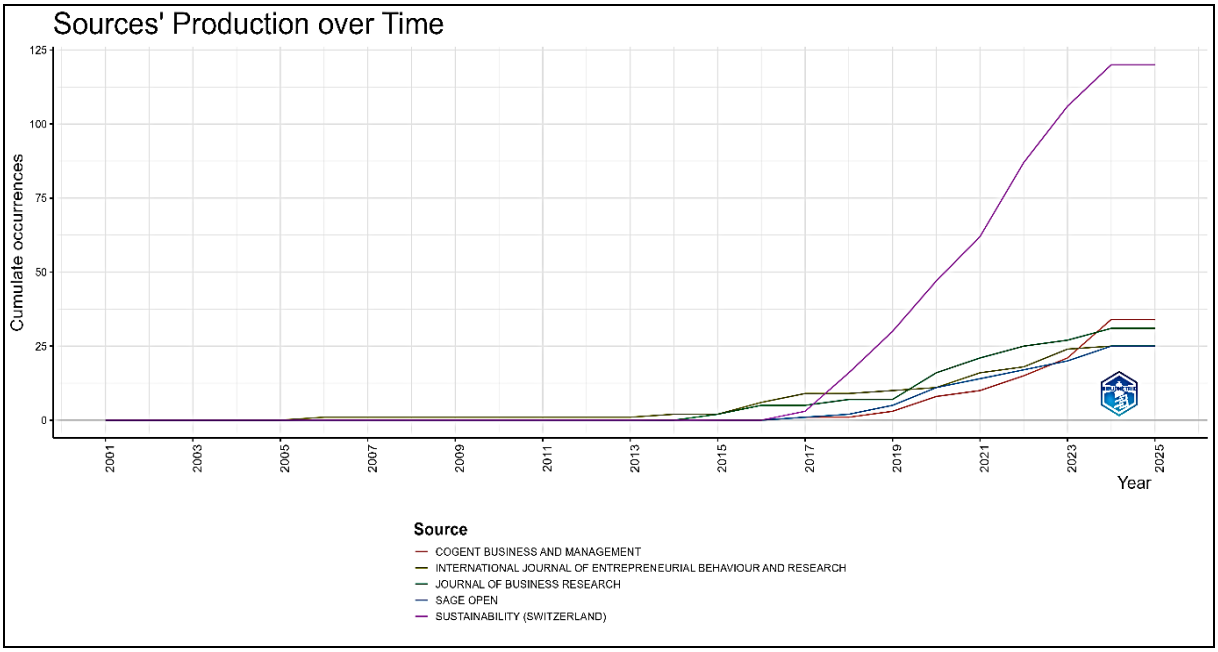

Fig 4: Sources' Production over Time

4.5. Most Relevant Authors

The Figure5 reveals that Hughes M and Kraus S are the most prolific contributors, each with 22 published documents related to the field. Their consistent and high-volume output reflects their strong academic presence and influence in shaping the discourse around intrapreneurial activities, particularly in areas such as innovation, entrepreneurial orientation, and firm performance.

Other notable contributors include Hughes P with 8 publications, followed by Andersén J, Asad M, Hernández-Perlines F, Mahmood R, Niemand T, Suder M, and Adomako S, each contributing 7 or more documents. This distribution suggests a growing but still relatively concentrated authorship network, where a few scholars play a central role in advancing theoretical and empirical insights in the domain.

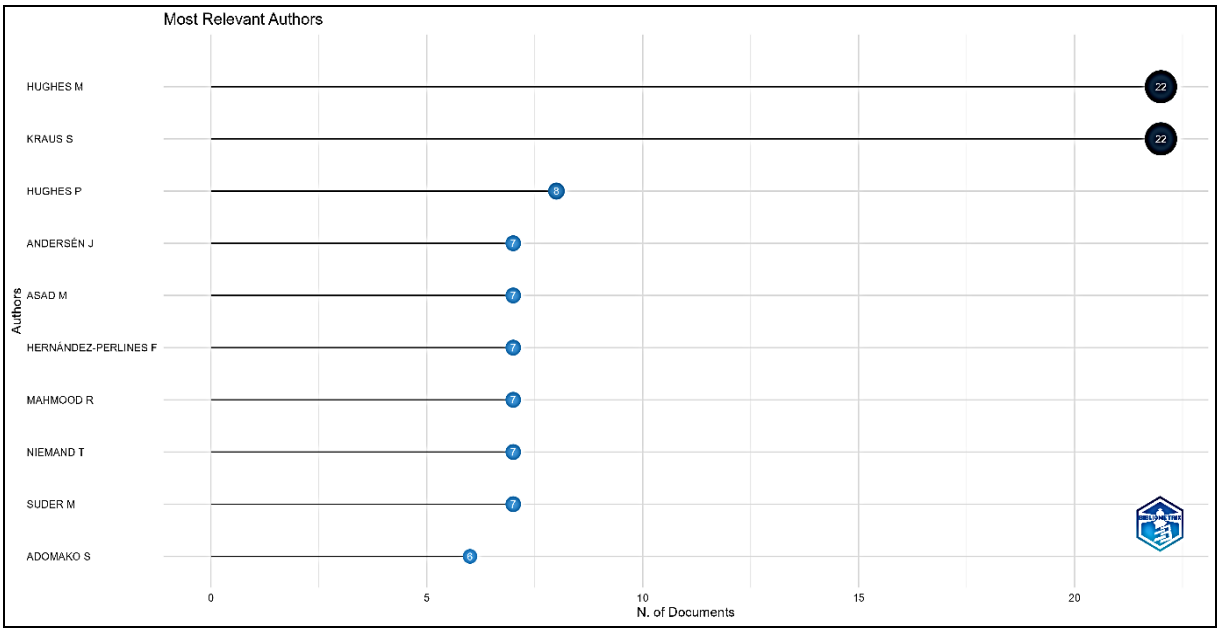

Fig 5: Most Relevant Authors

4.6. Authors' Production over Time

The Figure6 highlights the publishing patterns and impact of leading contributors in the field of intrapreneurship. Among them, Hughes M and Kraus S demonstrate sustained and high-level engagement, consistently publishing over the years with noticeable peaks in output around 2020-2022. The size and color intensity of the circles indicate both the number of articles and their citation impact (TC per year), showing that these authors have not only been productive but have also produced highly cited work.

Other authors, such as Hughes P, Andersén J, Asad M, and Hernández-Perlines F, show a steady contribution pattern, with increased publication activity observed particularly after 2017. Notably, Mahmood R, Niemand T, and Suder M have become active more recently, contributing to the field's current growth phase. The timeline reflects a gradual expansion of scholarly interest, with a rise in both the number of active authors and their research impact, especially in the post-2015 period.

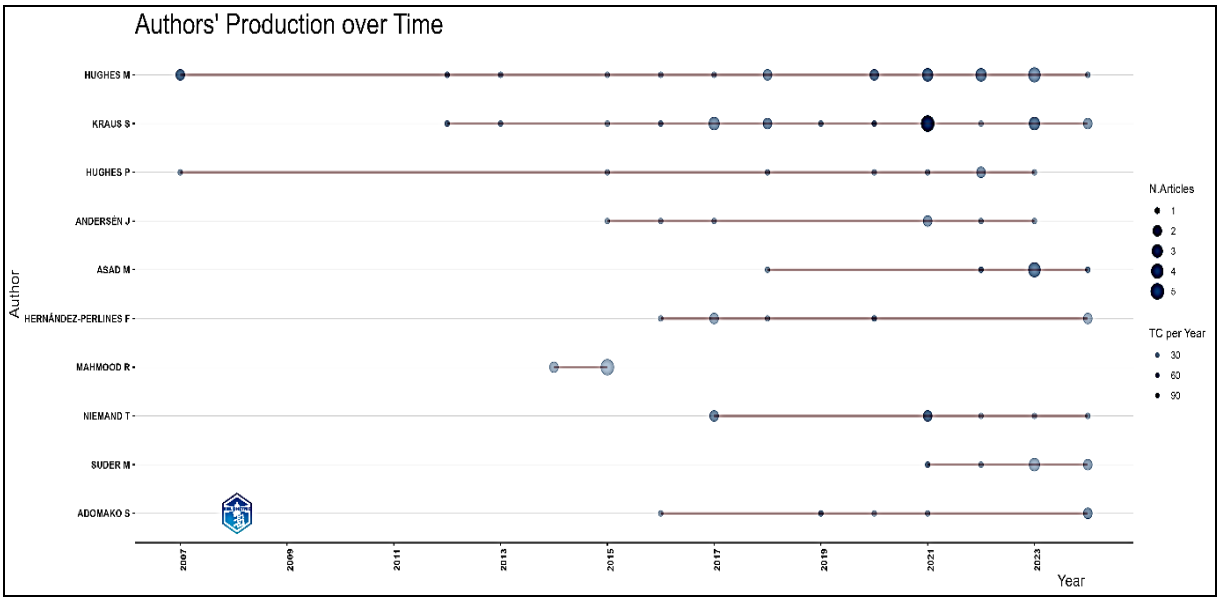

Fig 6: Authors' Production over Time

4.7. Most Relevant Affiliations

The Figure7 reveals that Erasmus University Rotterdam is the most active institution in intrapreneurship research, contributing 30 publications, the highest among all affiliations. This reflects the university's strong research focus on innovation, entrepreneurship, and organizational behavior. Following closely are the Open University of the Netherlands and the University of Valencia, each with 24 articles, indicating their active involvement in advancing scholarly work in the field.

Other institutions with significant contributions include Universiti Sains Malaysia, University of Castilla-La Mancha, Bina Nusantara University, and Loughborough University, all producing between 21 and 22 publications. These universities represent a geographically diverse mix, covering Europe, Asia, and Africa, which highlights the global relevance and interdisciplinary interest in intrapreneurship. Additionally, institutions like Universiti Utara Malaysia, Udayana University, and the University of Pretoria further illustrate the increasing involvement of emerging research centers across regions.

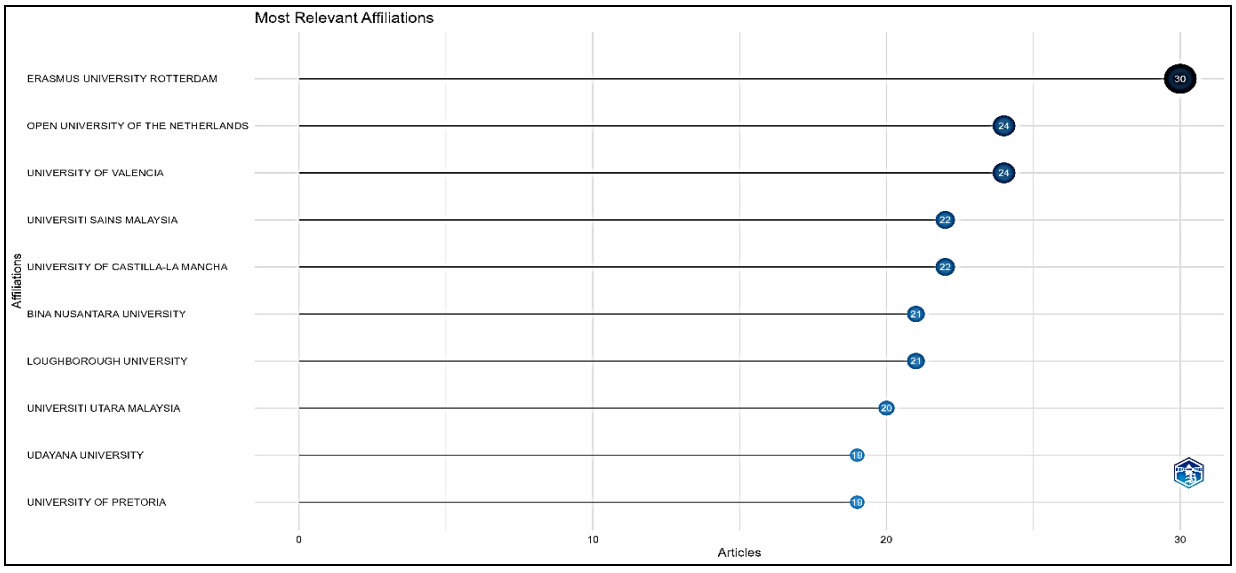

Fig 7: Most Relevant Affiliations

4.8. Affiliations' Production over Time

The longitudinal analysis of institutional research output indicates that Erasmus University Rotterdam has consistently maintained a leadership position in the field of intrapreneurship since around 2012. Its publication count shows a steady and steep upward trend, reaching over 30 articles by 2024, confirming its role as a dominant contributor in this area of study.

Other notable institutions such as the Open University of the Netherlands, University of Valencia, Universiti Sains Malaysia, and University of Castilla-La Mancha also demonstrate increasing research activity over the past decade. While all began publishing in this domain post-2011, their trajectories vary slightly. For instance, the University of Valencia and Castilla-La Mancha experienced more rapid growth in recent years, whereas Universiti Sains Malaysia showed a more gradual but consistent increase.

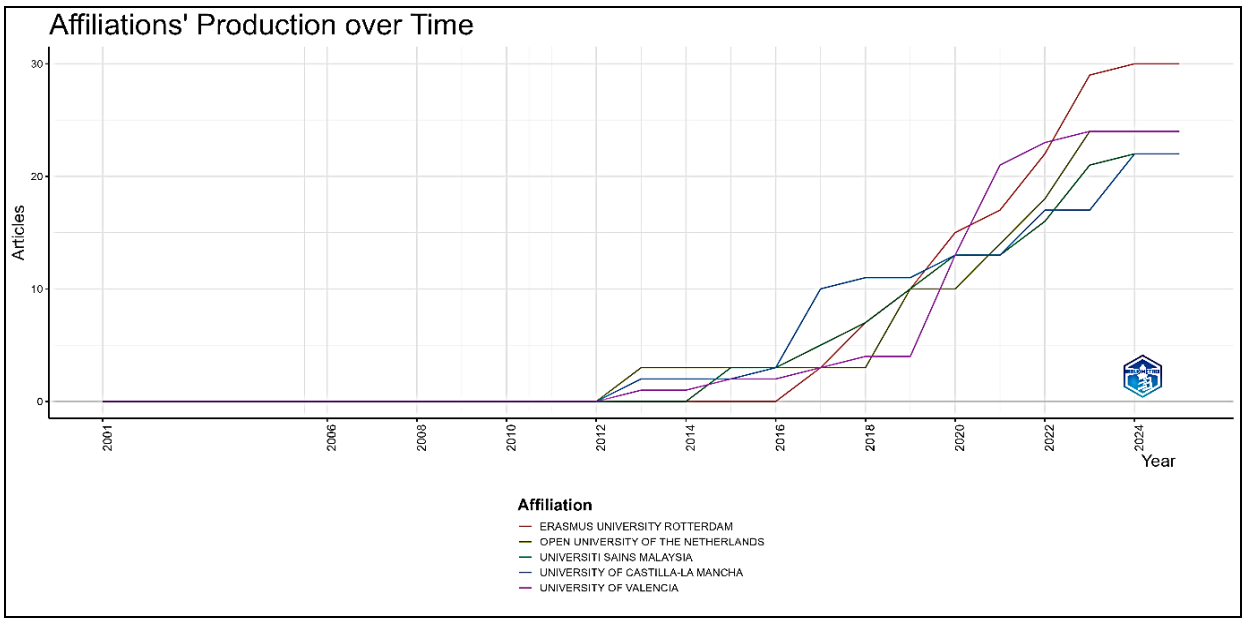

Fig 8: Affiliations' Production over Time

4.9. Countries' Scientific Production

The global distribution of intrapreneurship research from 2000 to 2024 reveals a significant concentration of scientific output across a range of countries, with notable regional variations. The world map visualization highlights the countries most actively contributing to the field, with darker shades indicating higher research output.

According to the frequency data, Indonesia leads with the highest number of publications (399), followed closely by the United Kingdom (374), Malaysia (276), and Spain (264). These countries demonstrate strong institutional engagement with the topic, potentially driven by policy interest or academic prioritization of innovation and entrepreneurship studies.

Other major contributors include China (248), the United States (220), and Germany (171), reflecting the global nature of intrapreneurship research across both developed and emerging economies. Countries like the Netherlands, Brazil, and Italy also make substantial contributions, each exceeding 120 publications. Middle-tier contributors such as South Africa, Portugal, Australia, and Sweden (ranging from 94 to 124 publications) show growing interest in the field. Additionally, countries like India, Poland, Jordan, France, Pakistan, and Finland exhibit emerging participation with publication frequencies between 62 and 81.

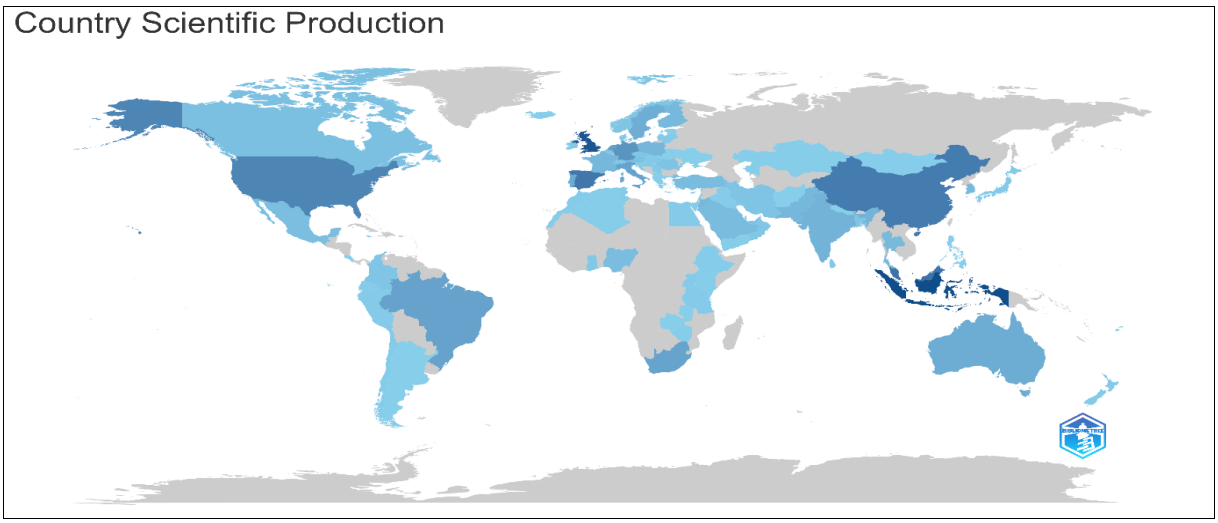

Fig 9: Countries' Scientific Production

4.10. Most Cited Countries

The citation analysis provides insight into the scholarly impact of intrapreneurship research across countries. Total citations (TC) and average article citations reveal not only productivity but also the influence and academic recognition of each country's research output.

The United Kingdom stands out as the most cited country, with 6,180 total citations and an average of 52.4 citations per article, highlighting the high visibility and academic impact of its contributions. The United States follows with 3,177 citations and the second-highest average at 62.3 citations per article, indicating both productivity and strong scholarly influence. Spain (2,881), the Netherlands (2,743), and Germany (2,694) also demonstrate significant citation counts, with average citations ranging between 33.9 and 59.6, suggesting sustained engagement and citation within the academic community. Notably, the Netherlands exhibits a high average article citation rate (59.6), reinforcing the impact of its relatively smaller volume of publications.

Countries such as Canada and Sweden have moderate total citations (1,034 and 1,070, respectively), but Canada holds the highest average article citation among the top 10 countries at 64.6, indicating fewer but highly impactful studies.

In the next tier, countries like Denmark (66.8), Ireland (59.0), and Liechtenstein (77.8) demonstrate exceptionally high average citations despite their lower overall output, suggesting the presence of seminal or highly cited individual works. Lebanon, in particular, stands out with an extraordinary average of 303 citations per article, though this likely reflects a small number of highly cited papers rather than broad national output. Conversely, countries such as Brazil, India, and South Africa show lower average citations (10-23), indicating more modest research impact, despite growing participation in the field.

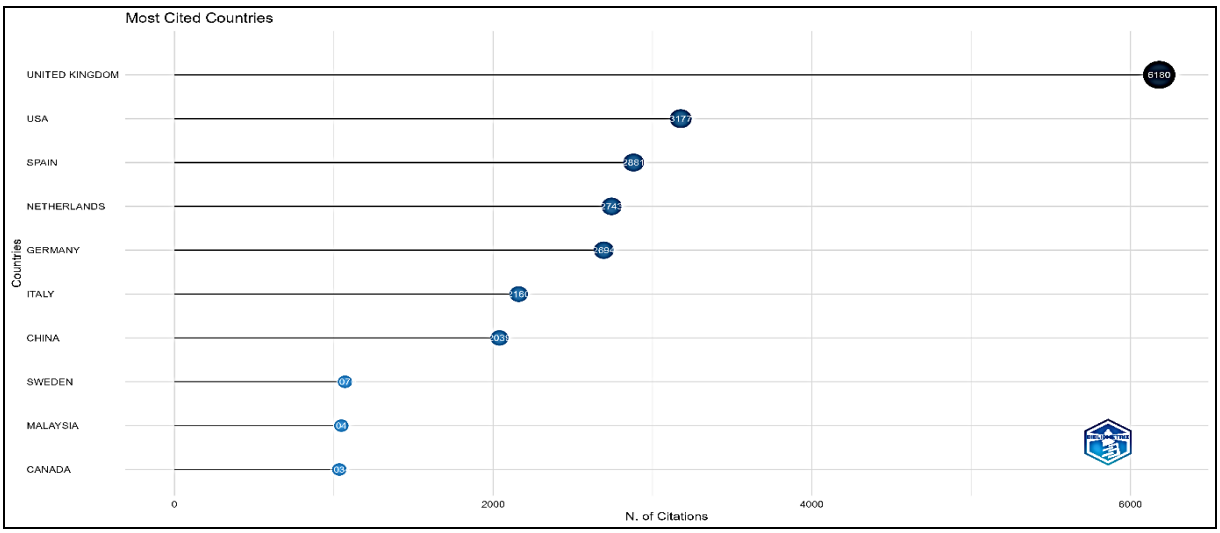

Fig 10: Most Cited Countries

4.11. Most Global Cited Documents

The table highlights the most cited scholarly articles in the field of intrapreneurship, providing insight into the documents with the highest academic impact. Metrics include total citations (TC), citations per year, and normalized citation impact—which adjusts citation counts based on the publication year to enable fairer comparisons.

The most cited document is Abdulrab *et al*. (2021) [36], published in the Brazilian Journal of Operations & Production Management, with 25 citations, averaging 5.00 citations per year and a normalized TC of 0.66. This suggests that the article has gained notable attention relative to its age and likely addresses themes of broad relevance.

Another standout is in the Journal of Innovation and Entrepreneurship, which accumulated 15 citations and an average of 3.75 per year, reflecting consistent scholarly interest. Similarly, Abdelmegeed & Abdelwahed (2022) [37] published in Heliyon has garnered 14 citations, with a normalized TC of 0.70, indicating sustained engagement. Among recent publications, Aadland (2023) [38] in International Journal of Entrepreneurial Behavior & Research and Abreu (2024) [39] in Technovation have shown early traction, accumulating 7 and 3 citations respectively, with relatively high normalized citation rates (0.61 and 0.57). These figures suggest that these papers have the potential to become key references in the field.

Table 2: Most Global Cited Documents

Paper	DOI	Total Citations	TC per Year	Normalized TC
AADLAND T, 2023, INT J ENTREP BEHAV RES	10.1108/IJEBR-07-2022-0607	7	2.33	0.61
ABANTO SES, 2023, REV CIENC SOC	10.33887/rev.cienc.soc.v4n4.4048	2	0.67	0.18
ABD-HAMID Z, 2015, INTERN J ENG BUS MANAGE	10.5772/62500	3	0.25	0.06
ABEIDELMEGED ABDELWAHED NA, 2022, HELIYON	10.1016/j.heliyon. 2022.e09097	6	2.00	0.37
ABRISSAGA D, 2021, J OPEN INNOV-TECHNOL MARK COMPLEX	10.3390/joitmc7020024	10	2.50	0.72
ABDURRAH M, 2021, BRAZ J OPER PROD MANAG	10.14488/bjopm.2021.029	4	1.00	0.29
ABE T, 2025, J INT COUNC SMALL BUS	10.1080/26437015.2024.2412275	0	0.00	0.00
ABIDI O, 2022, J INNOV ENTREPRENEURSHIP	10.1186/s13731-022-00206-7	15	5.00	1.00
ABEIDELMEGED M, 2024, SAGE OPEN	10.1177/2158244024125834	1	1.00	0.38
ABREU M, 2024, TECHNOVATION	10.1016/j.technovation.2024.102996	3	1.50	0.57

4.12. Most Frequent Words

The frequency analysis of keywords provides valuable insight into the thematic landscape and conceptual priorities within intrapreneurship research. The top recurring terms reflect the dominant areas of focus and the interdisciplinary nature of the field.

The most frequently occurring term is "entrepreneurial orientation" (609 occurrences), underscoring its central role in intrapreneurship discourse. This concept, often linked to firm-level strategic posture, appears foundational in understanding how internal entrepreneurial activities are framed and executed within organizations. "Innovation" (160) and "entrepreneur" (153) also rank highly, signifying their relevance in both theoretical and practical explorations of intrapreneurship. These terms suggest that intrapreneurship is largely positioned as a driver of innovation and is tightly connected to individual or team-level entrepreneurial behavior.

Closely related is "corporate entrepreneurship" (151), a term frequently used interchangeably with intrapreneurship, though often emphasizing strategic-level initiatives. Its high frequency supports the view that many scholars treat intrapreneurship as a subset or dimension of corporate entrepreneurship. The keyword "intrapreneurship" itself appears 102 times, indicating growing direct engagement with the concept in recent years.

It is accompanied by general terms like "entrepreneurship" (100) and "SMEs" (95), suggesting that studies extend beyond large corporations to include small and medium-sized enterprises.

Emerging themes include "sustainability" (86), "performance" (76), and "firm performance" (56). These terms reflect increasing attention to the impact and outcomes of intrapreneurial behavior, particularly in relation to sustainable innovation and business success.

Table 3: Most Frequent Words

Words	Occurrences
Entrepreneurial orientation	609
Innovation	160
Entrepreneur	153
Corporate entrepreneurship	151
Intrapreneurship	102
Entrepreneurship	100
SMES	96
Sustainability	86
Performance	76
Firm performance	56

4.13. Word Cloud

The word cloud offers a visual representation of the most frequently used terms in intrapreneurship literature, with word size reflecting frequency and prominence in the dataset.

Unsurprisingly, "entrepreneurial orientation" dominates the visual, aligning with its highest frequency in the quantitative keyword analysis (609 occurrences). Its central and oversized placement reinforces its conceptual significance in intrapreneurship research, often serving as a key determinant of firm behavior and innovation outcomes.

Other prominent terms include "corporate entrepreneurship," "entrepreneur," "innovation," and "intrapreneurship," which are also strongly featured in the quantitative results. Their size in the word cloud suggests their frequent co-occurrence and thematic interrelation, particularly around the drivers and contexts of entrepreneurial activity within organizations.

Words such as "sustainability," "SMEs," "performance," and "firm performance" appear in smaller but still noticeable font sizes, signaling emerging areas of scholarly attention. These terms point to a shift in research focus toward measuring the impact of intrapreneurship and understanding its relevance in different organizational contexts, especially small and medium enterprises.

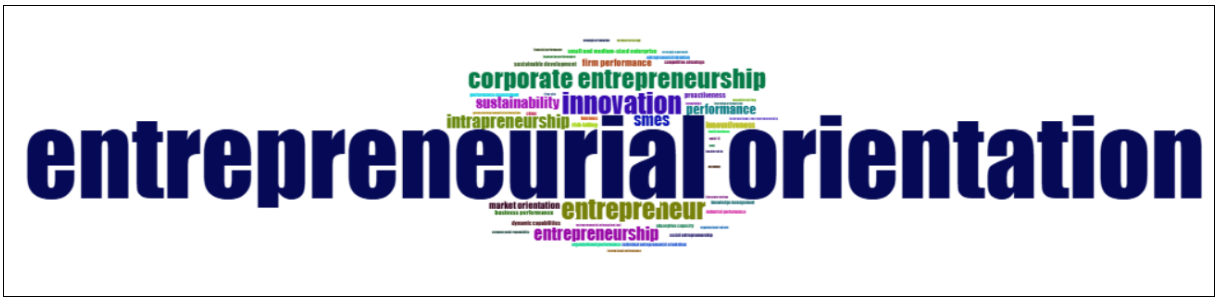

Fig 11: Word Cloud

4.14. Tree Map

The tree map provides a hierarchical and proportionally scaled visualization of the most frequent keywords used in intrapreneurship literature, offering a clear overview of thematic prominence and relative weight within the field.

The largest block, representing "entrepreneurial orientation" (609 occurrences; 24%), reaffirms its dominant role in the literature. This concept consistently emerges as the core theoretical anchor, reflecting its centrality in understanding internal entrepreneurial behavior and strategic posturing within firms. Other significant themes include "innovation" (160; 6%), "entrepreneur" (153; 6%), "corporate

entrepreneurship" (151; 6%), and "intrapreneurship" (102; 4%). These keywords confirm that the field continues to revolve around foundational constructs related to entrepreneurial processes, organizational innovation, and intrapreneurial initiatives at both individual and structural levels.

Further, keywords such as "SMEs" (95; 4%), "sustainability" (86; 3%), and "performance" (76; 3%) indicate growing scholarly interest in applicability, impact assessment, and sustainable development outcomes of intrapreneurial practices—especially in small business contexts. Moderately frequent terms like "firm performance" (2%), "market orientation" (2%), "innovativeness" (2%), and "proactiveness" (2%) show how scholars are integrating traditional entrepreneurial dimensions with firm-level performance indicators. Notably, emergent and niche themes such as "social entrepreneurship," "dynamic capabilities," "absorptive capacity," "leadership," and "covid-19" are also visible, indicating diversification in research interests and responsiveness to contemporary challenges.

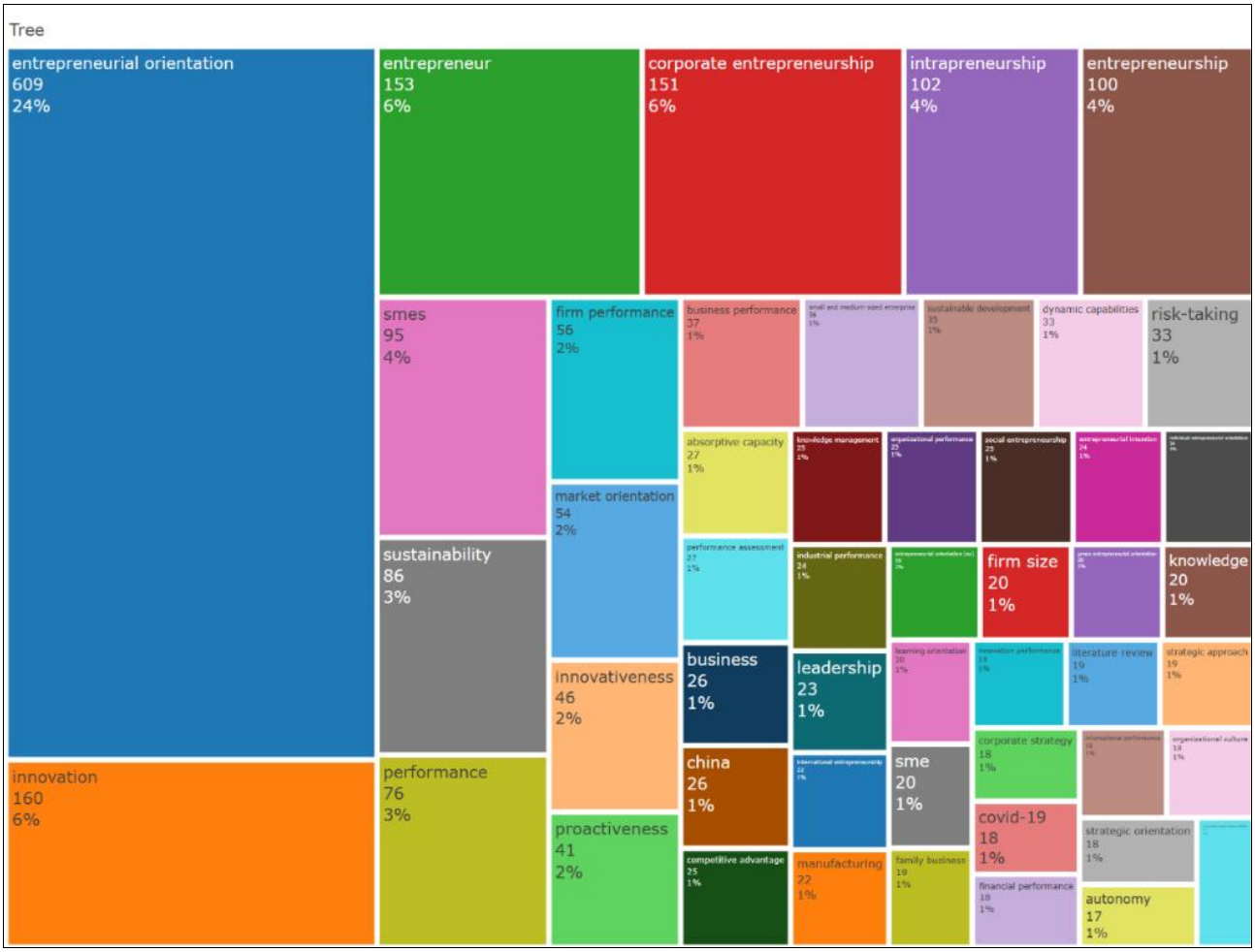

Fig 12: Tree Map

4.15. Trend Topics

The trend topic visualization provides a chronological mapping of the most frequently used and emerging terms within intrapreneurship research over the past two decades. The horizontal bars represent the active period of each term in scholarly publications, while the size of the dots indicates the frequency of each term's usage — with larger circles denoting higher occurrences.

The diagram reveals that some topics, such as "strategy," "growth," "small firms," "organizational structure," and "knowledge creation", began to gain scholarly attention as early as 2011-2013. These foundational concepts have maintained relevance over time, highlighting their importance in building the theoretical base of intrapreneurship studies. For instance, the frequent use of the term strategy reflects its critical role in intrapreneurial decision-making and firm-level innovation practices.

As the field matured, more diversified and interdisciplinary themes began to surface. Terms like "entrepreneurial culture," "environment," "sustainable entrepreneurship," and "strategic entrepreneurship" became increasingly common around 2015-2018, indicating a shift toward examining internal organizational dynamics and external sustainability-oriented challenges. These mid-phase topics illustrate how intrapreneurship research started engaging with broader systemic issues, including environmental responsibility and innovation ecosystems.

In recent years, there has been a noticeable emergence of newer and more context-specific terms such as "green entrepreneurial orientation," "circular economy," "covid-19," "innovation," and "leadership", primarily appearing after 2020. This trend suggests that researchers are responding to contemporary global challenges by integrating topics related to climate change, resilience, crisis management, and digital transformation within the domain of intrapreneurship. The growing prominence of terms like

intrapreneur ships (plural), entrepreneurship, and SMEs during the same period further emphasizes the expanding scope and practical relevance of the field.

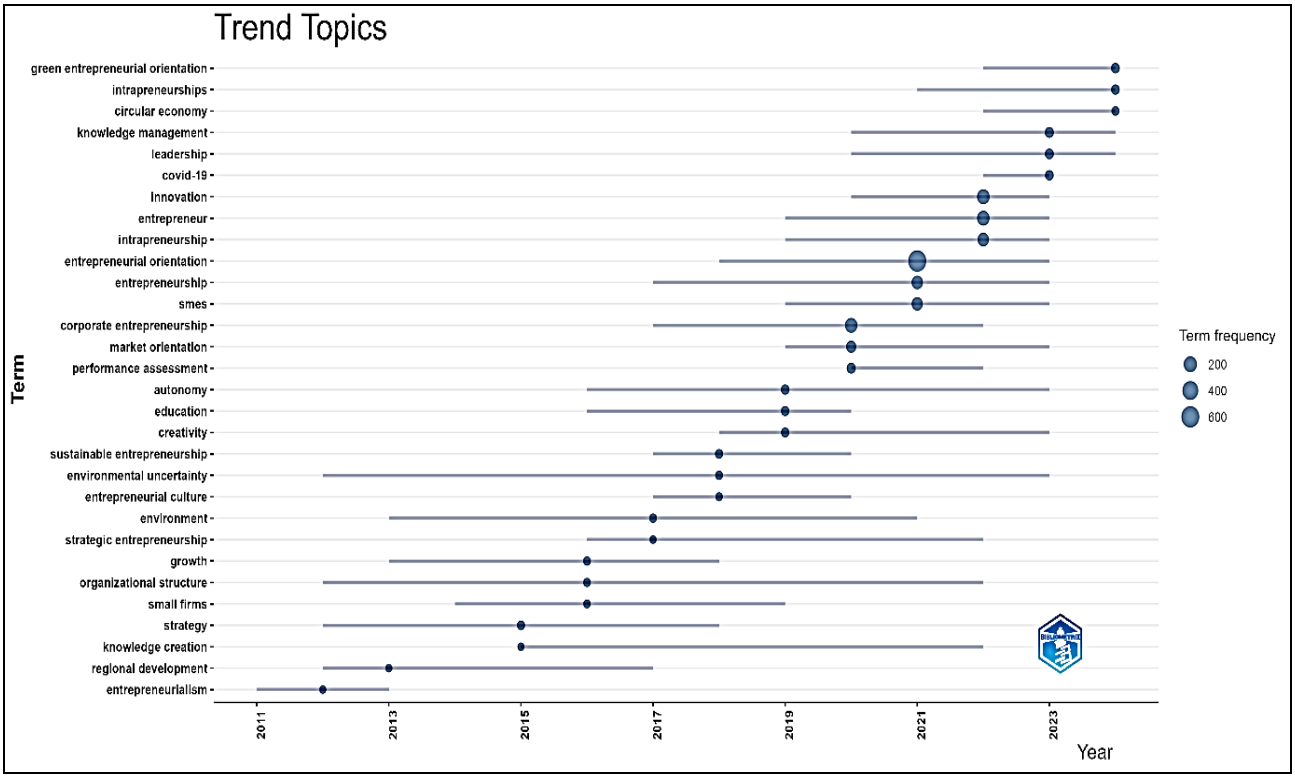

Fig 13: Trend Topics

4.16. Clustering by Coupling

The clustering by document coupling technique identifies groups of research articles that frequently cite similar literature, thereby indicating thematic closeness. The plot maps these clusters based on two key dimensions: Impact (vertical axis) and Centrality (horizontal axis). Impact reflects the academic significance or influence of the cluster, while centrality denotes how well-connected the cluster is to the broader intrapreneurship research domain.

1. **High Impact, Low Centrality Cluster:** This cluster, which lies in the upper-left quadrant of the coupling map, includes the keywords *corporate entrepreneurship*, *intrapreneurship*, and *bibliometric analysis*. *Corporate entrepreneurship* and *intrapreneurship* appear as core topics in this group, indicating that the research focuses on how large firms promote entrepreneurial efforts internally. Although these topics have historical importance and receive significant citations, they appear to be less integrated with recent or broader research trends. *Bibliometric analysis* also features strongly in this cluster, suggesting that while it is an increasingly influential methodological tool, it remains more technical and is not thematically central to the mainstream of intrapreneurship literature.
2. **Emerging Conceptual Core Cluster:** Located near the center of the graph, this cluster includes the keywords *entrepreneurial orientation*, *dynamic capabilities*, and once again, *corporate entrepreneurship*. Among these, *dynamic capabilities* shows strong internal cohesion, suggesting it is becoming a key theoretical base for understanding how firms develop and adapt internal competencies to support intrapreneurial activities. The appearance of *entrepreneurial orientation* in this cluster reflects its conceptual flexibility, as it serves to connect various subfields within intrapreneurship research. Overall, this cluster points to the emergence of a new conceptual foundation where ideas from strategic management, particularly *dynamic capabilities*, are being integrated into intrapreneurship studies, though this integration is still evolving and not yet fully mainstream.
3. **Core Knowledge Structure Cluster:** Positioned in the right-central region of the map, this cluster demonstrates high centrality and includes the keywords *entrepreneurial orientation*, *performance*, and *entrepreneurship*. *Entrepreneurial orientation* stands out once again, underlining its significance as a core linking concept across various research clusters. *Performance* appears closely connected with entrepreneurial orientation, showing that much of the literature aims to evaluate the results of intrapreneurial activities. *Entrepreneurship* rounds out the cluster, serving as the broader framework within which intrapreneurship is usually conceptualized. This highly cited and well-connected cluster represents the backbone of intrapreneurship research and reflects the foundational knowledge structure of the field.
4. **Applied and Practical Focus Cluster:** Found in the bottom-right quadrant of the plot, this cluster represents high centrality but relatively low impact. It is centered around keywords such as *SMEs*, *performance*, and *entrepreneurial orientation*. The research in this group focuses primarily on how intrapreneurial strategies are applied within small and medium-sized enterprises to enhance their performance. Although it does not receive

as many citations as the more theoretical clusters, this area holds strong practical relevance and is well connected with other parts of the literature. It often includes case studies or region-specific research, particularly from developing economies, and highlights real-world outcomes of intrapreneurship initiatives.

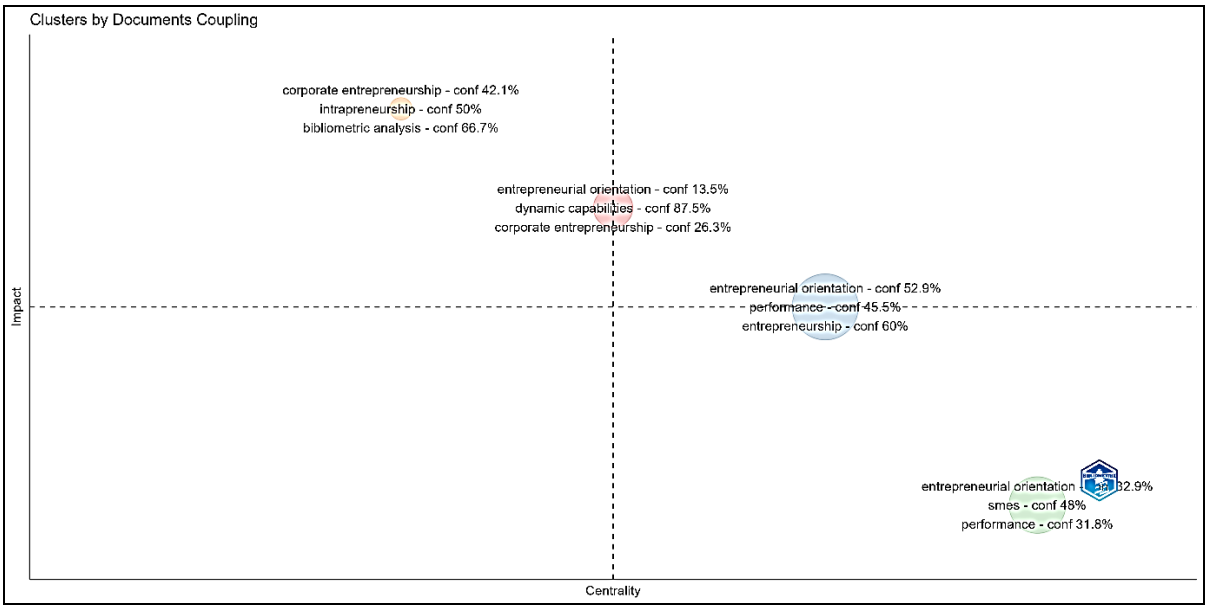

Fig 14: Clustering by Coupling

The network graph as shown by Figure15 illustrates the interconnectedness among publications based on shared references, where each node represents a document and the connecting edges indicate the strength of coupling. Distinct clusters are color-coded to reflect thematic groupings: the central blue cluster is densely concentrated around themes such as entrepreneurial orientation, SMEs, and performance; the green cluster highlights research on organizational learning, strategic change, and innovation; while the red cluster centers on change management, knowledge transfer, and capabilities. Additionally, the orange and purple nodes appear to represent emerging or peripheral themes like bibliometric methods and corporate entrepreneurship. Prominent authors such as Glinyanova (2021) [44]are positioned as key nodes within the network, indicating their influential contributions and central role in linking various research clusters.

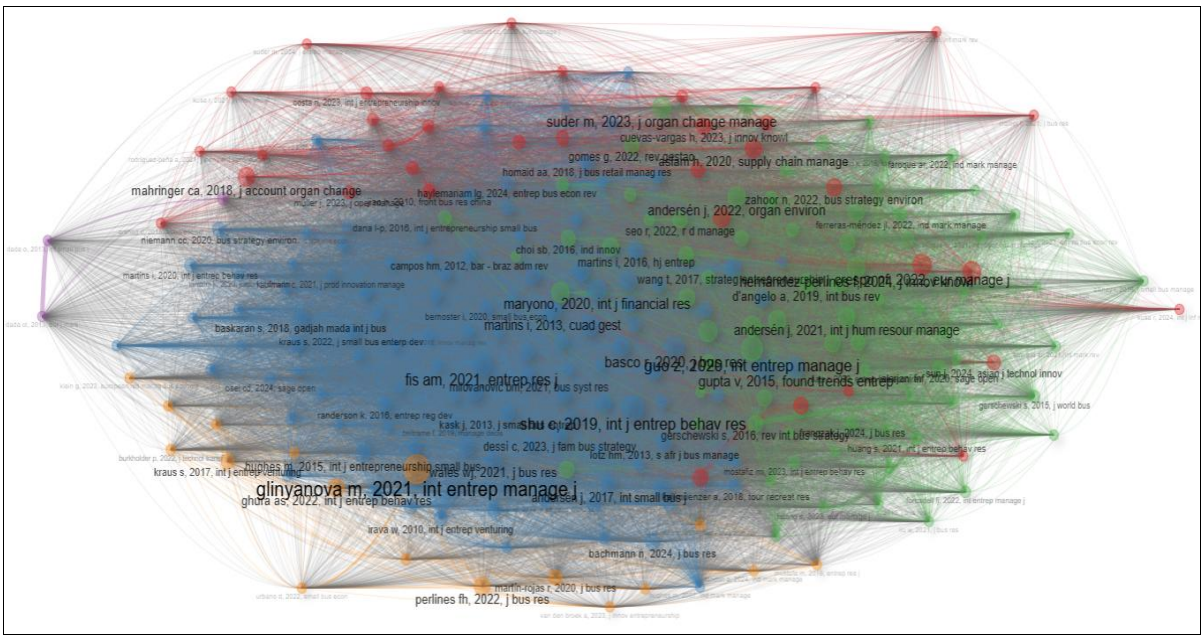

Fig 15: Network Graph for Clustering by Coupling

4.17. Co-occurrence Network

The co-occurrence network visualizations depict the semantic relationships between frequently used keywords in intrapreneurship literature. These maps help identify major conceptual clusters and show how closely various terms appear together across publications, thus uncovering the intellectual structure and thematic focus of the field.

In the network map, three primary color-coded clusters

emerge. At the center of the red cluster, "entrepreneurial orientation" is the most dominant and densely connected term, indicating its central role in intrapreneurship research. This cluster also includes closely linked concepts such as SMEs, business performance, financial performance, dynamic capabilities, competitive advantage, organizational culture, and absorptive capacity. These connections suggest that much of the literature focuses on how entrepreneurial orientation influences firm-level outcomes and internal competencies.

The blue cluster on the right revolves around the term "entrepreneur", reflecting studies focused on innovation performance, leadership, corporate strategy, sustainability, and SME development. This cluster is more outward-looking and policy-relevant, often linked to strategic growth, internationalization, and sustainable development frameworks.

The green cluster, though smaller, highlights emerging themes like autonomy, risk-taking, innovativeness, and social entrepreneurship. These terms are core dimensions of entrepreneurial behavior and are typically framed within psychological or behavioral perspectives on intrapreneurship.

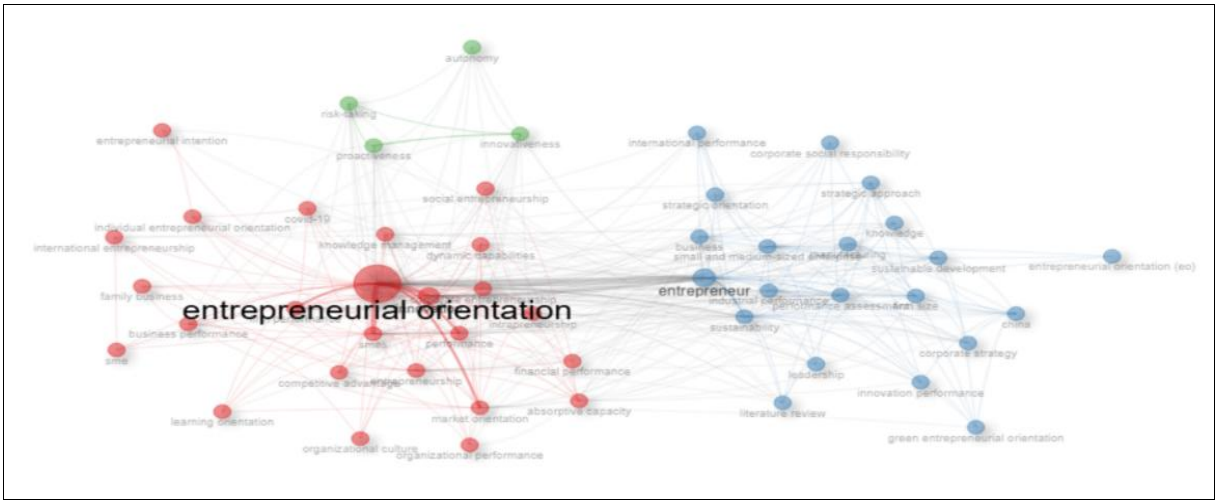

Fig 16: Co-occurrence Network

The density map reinforces these findings by showing keyword concentration through color intensity. Dark red areas indicate higher keyword density and stronger co-occurrence. As expected, the regions around entrepreneurial orientation and entrepreneur show the deepest red shades, confirming their status as the semantic hubs of the field. Peripheral areas such as green entrepreneurial orientation, COVID-19, literature review, and China appear in lighter shades, suggesting emerging interest or more niche research directions.

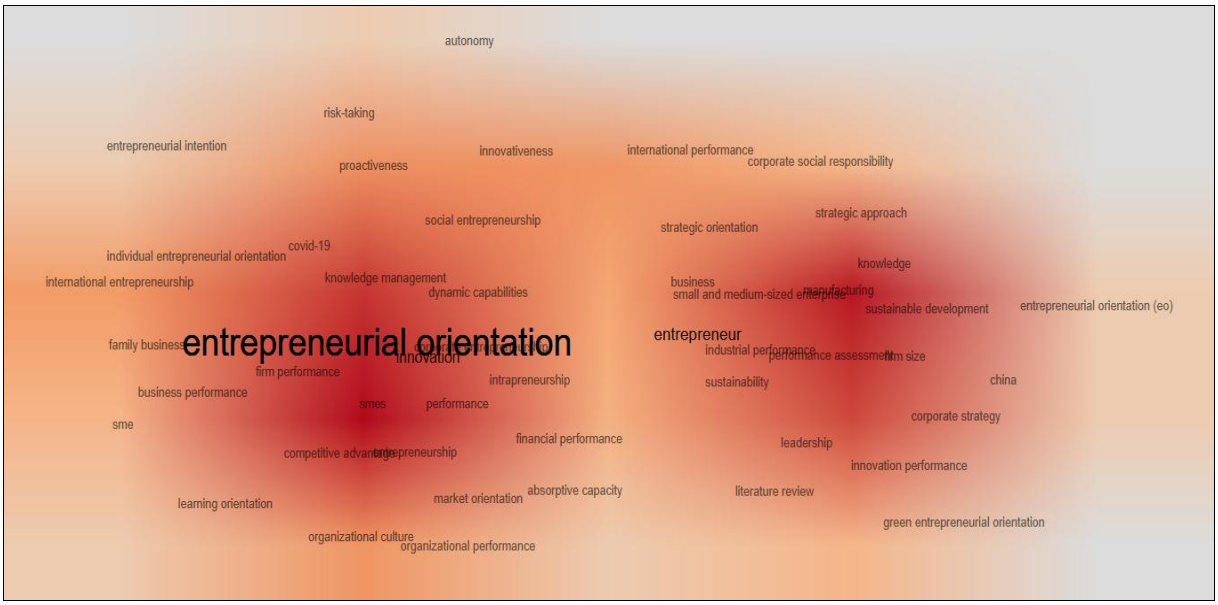

Fig 17: Density map for Co-occurrence Network

4.18. Thematic Map

The thematic map offers a strategic visualization of key research themes in the field of intrapreneurship between 2000 and 2024. It is based on two dimensions: centrality, which reflects the importance of a theme in structuring the field, and density, which indicates the level of development or maturity of a theme. The map is divided into four quadrants: Motor Themes, Basic Themes, Niche Themes, and Emerging or Declining Themes.

A. Motor Themes (Upper-Right Quadrant)
Motor themes are both highly central and highly developed, indicating that they are essential to the field and have been extensively researched. In this quadrant, we observe themes such as innovation, entrepreneur, and sustainability. These themes are pivotal in the discourse of intrapreneurship, acting as engines that drive research forward. Their high centrality shows they are well-connected with other themes, making them influential in shaping theoretical and practical discussions. Simultaneously, their high density reflects that these topics are conceptually well-developed and often studied in depth. Their presence in this quadrant highlights the growing importance of innovation-driven sustainable entrepreneurship, particularly in corporate and institutional settings.

B. Basic Themes (Lower-Right Quadrant)
Basic themes are highly central but show relatively low density. They are foundational to the field but still require further conceptual development. This category includes corporate entrepreneurship, intrapreneurship, and entrepreneurship. These are the core constructs of your study and are clearly central to the literature. However, their lower density suggests that although frequently mentioned and cited, they are not yet as internally cohesive or specialized. This opens avenues for future research to delve deeper into these themes, enhancing theoretical integration and empirical richness. These themes remain critical, serving as the groundwork for more advanced topics like innovation and sustainability.

C. Niche Themes (Upper-Left Quadrant)
Niche themes are well-developed but less central. They are highly specialized and tend to be disconnected from the broader field. Here, we find terms like article, human, and humans. These terms are likely methodological or demographic in nature rather than conceptual anchors. For instance, studies focusing on human behavior or specific populations may be richly detailed but isolated from the main discourse. Their strong internal development makes them valuable within specialized subfields, yet their weak centrality indicates limited influence on the evolution of intrapreneurship research as a whole.

D. Emerging or Declining Themes (Lower-Left Quadrant)
This quadrant features themes that are both low in density and centrality, suggesting they are either emerging areas of study or possibly declining in relevance. Themes like entrepreneurial orientation, SMEs, and performance are located here. Their placement indicates that while these topics may have had historical importance or are gaining early traction, they are currently underexplored or marginal. For instance, entrepreneurial orientation is a valuable lens for assessing intrapreneurship but may not yet be strongly linked across the literature. These topics warrant closer investigation to determine whether they are simply lagging behind or hold potential for future development.

E. Transitional Themes (Center Region)
A few themes like structural equation modeling, education, and university appear near the center, representing moderately developed and connected areas. These themes often function as methodological or institutional supports rather than central conceptual focuses. Their presence underscores the role of academic settings and quantitative techniques in shaping the field, suggesting a need for both methodological rigor and educational emphasis in intrapreneurship research.

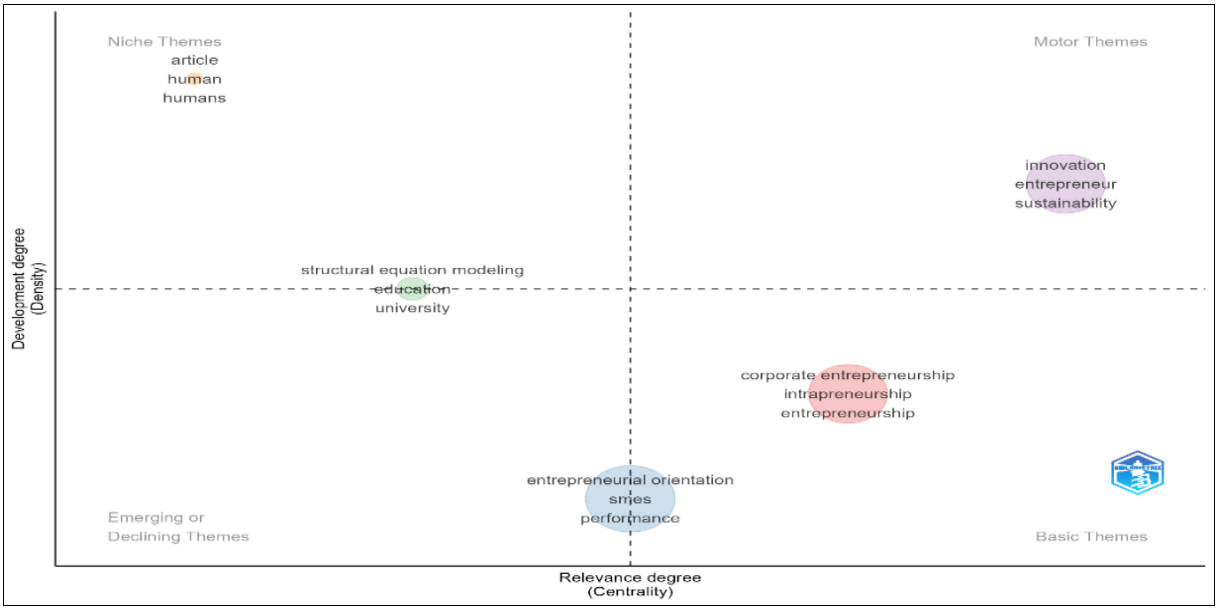

Fig 18: Thematic Map

The keyword co-occurrence network map shows which keywords are most frequently used in intrapreneurship research and how they are connected to each other. In the center of the map, keywords like entrepreneurial orientation, entrepreneur, innovation, and intrapreneurship appear larger and more central, which means they are the most important and commonly used terms in the field. Around these core keywords, several groups or clusters can be seen, where related keywords appear together. For example, one major cluster includes corporate entrepreneurship, intrapreneurship, and entrepreneurship, showing that research often focuses on innovation within organizations.

Another cluster includes keywords like sustainability, innovation, and entrepreneur, indicating growing interest in sustainable entrepreneurship. There are also clusters focused on performance and business outcomes, with keywords such as SMEs, performance, and strategic management. On the outer parts of the network, smaller and less connected keywords are found. These may represent new or emerging areas of research that are not yet widely studied. Overall, the network shows that intrapreneurship research is strongly interconnected, with important keywords linking different research topics. The field is continuously evolving, especially with increasing focus on themes like sustainability, performance, and entrepreneurial orientation.

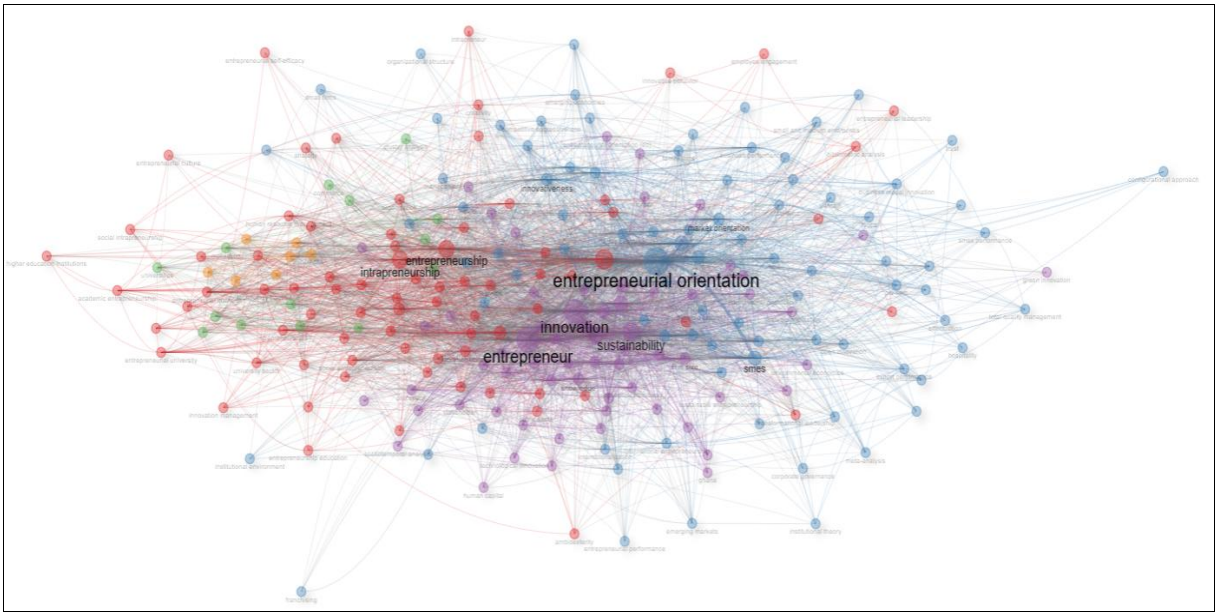

Fig 19: Keyword Co-Occurrence Network Map

4.19. Co-citation Network

The co-citation network visualizes the intellectual structure of intrapreneurship research by identifying which authors are most frequently cited together in academic publications. Each node represents an author, and the links between nodes reflect how often those authors' works are co-cited, signifying shared scholarly influence or thematic proximity.

At the center of the network are Covin, J.G. (1989) [40] and Miller, D. (1983) [35], which are the most prominent and frequently co-cited authors. Their foundational contributions to entrepreneurial orientation and strategic posture have positioned them as core pillars of the field. Their central location and dense interconnections reflect their widespread influence across multiple thematic clusters. The green cluster in the upper-right quadrant includes scholars such as Ireland, Hitt, Zahra, Shane, and Lumpkin (1996), who are known for advancing research on corporate entrepreneurship, strategic entrepreneurship, and entrepreneurial capabilities. This cluster appears to represent more recent and strategy-focused developments in intrapreneurship literature. The blue cluster includes authors like Teece (1986) [41], Zahra (1991) [32], and Podsakoff (1996) [42]. These works emphasize dynamic capabilities, innovation theory, and research methodology, suggesting that this cluster provides theoretical foundations and methodological support to the field. The red cluster to the left features authors like Lumpkin & Dess (1996) **[23]** and Wiklund (2005) [43], representing an influential body of work focused on the dimensions of entrepreneurial orientation (e.g., innovativeness, risk-taking, proactiveness) and its application to firm performance. A purple node, Lumpkin (1996-3) [23], appears as a more isolated citation, potentially pointing to a niche or standalone conceptual contribution that is less integrated into the main network.

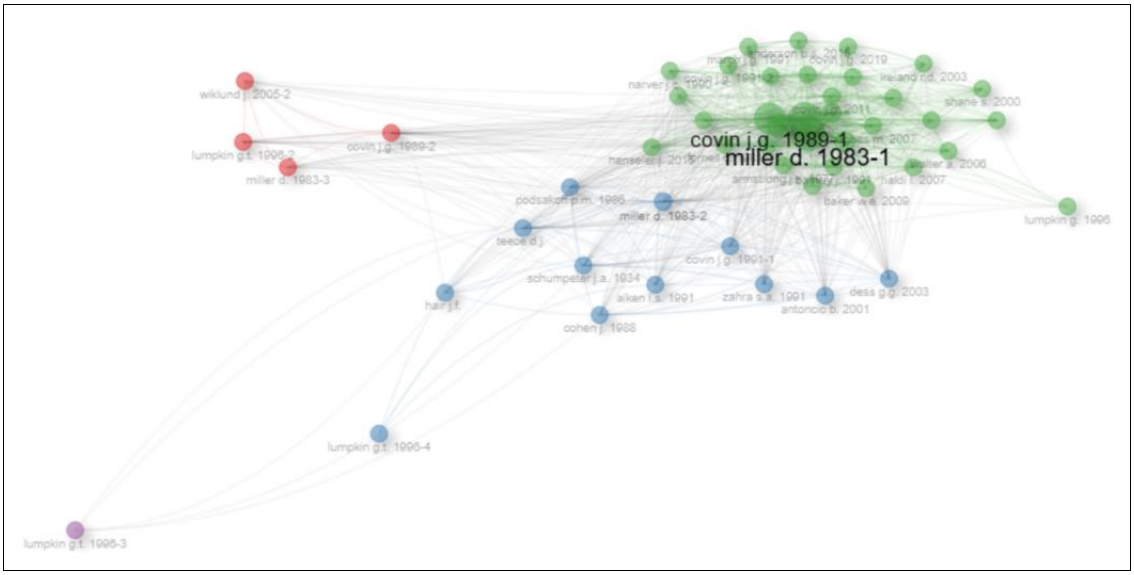

Fig 20: Co-citation Network

5. Conclusion

This study uses data-driven methods to provide a clear and organized summary of intrapreneurship research over the last 25 years. The findings show that interest in this field has grown significantly since 2015, reflecting its increasing importance as a strategy for innovation, adaptability, and competitive advantage. Core topics like entrepreneurial orientation, innovation, and corporate entrepreneurship remain central, while newer themes such as sustainability, SMEs, and dynamic capabilities show how the field is adapting to current business challenges. The use of tools like keyword networks and thematic maps indicates that intrapreneurship research is becoming more developed, with strong theoretical foundations and real-world relevance. Research contributions are now coming from a broader range of countries, including emerging economies, showing wider global participation. However, more work is needed in areas like using diverse research methods, focusing on specific regional contexts, and measuring practical outcomes. This study not only brings together the key developments in the field but also creates a foundation for future research that is interdisciplinary, inclusive, and connected to real-world needs. It aims to guide academics, business leaders, and policymakers in supporting intrapreneurship in an increasingly dynamic and uncertain world.

References

1. Antoncic B. Intrapreneurship: A comparative structural equation modeling study. Industrial Management and Data Systems. 2007;107(3):309-325. https://doi.org/10.1108/02635570710734244
2. Antoncic B, Hisrich RD. Intrapreneurship: Construct refinement and cross-cultural validation. Journal of Business Venturing. 2001;16(5):495-527. https://doi.org/10.1016/S0883-9026(99)00054-3
3. Antoncic B, Hisrich RD. Clarifying the intrapreneurship concept. Journal of Small Business and Enterprise Development. 2003;10(1):7-24. https://doi.org/10.1108/14626000310461187
4. Audretsch DB, Belitski M, Caiazza R. Start-ups and innovation: A cross-country panel analysis. Research Policy. 2021;50(7):104064. https://doi.org/10.1016/j.respol.2021.104064
5. Barney J. Firm resources and sustained competitive advantage. Journal of Management. 1991;17(1):99-120. https://doi.org/10.1177/014920639101700108
6. Burgelman RA. Corporate entrepreneurship and strategic management: Insights from a process study. Management Science. 1983;29(12):1349-1364.
7. Christensen CM. The innovator's dilemma: When new technologies cause great firms to fail. Boston: Harvard Business Review Press; 1997.
8. Covin JG, Miles MP. Corporate entrepreneurship and the pursuit of competitive advantage. Entrepreneurship Theory and Practice. 1999;23(3):47-63.
9. Covin JG, Slevin DP. A conceptual model of entrepreneurship as firm behavior. Entrepreneurship Theory and Practice. 1991;16(1):7-25.
10. De Bakker FG, Groenewegen P, Den Hond F. A bibliometric analysis of 30 years of research and theory on corporate social responsibility and corporate social performance. Business and Society. 2005;44(3):283-317.
11. Dess GG, Ireland RD, Zahra SA, Floyd SW, Janney JJ, Lane PJ. Emerging issues in corporate entrepreneurship. Journal of Management. 2003;29(3):351-378. https://doi.org/10.1016/S0149-2063(03)00015-1
12. Feng Y, Zhu Q, Lai KH. Corporate social responsibility for supply chain management: A literature review and bibliometric analysis. Journal of Cleaner Production. 2017;196:296-307. https://doi.org/10.1016/j.jclepro.2017.05.018
13. Floyd SW, Wooldridge B. Knowledge creation and social networks in corporate entrepreneurship: The renewal of organizational capability. Entrepreneurship Theory and Practice. 1999;23(3):123-143.
14. Gomezelj DG. A systematic review of research on innovation in hospitality and tourism. International Journal of Contemporary Hospitality Management. 2016;28(3):516-558. https://doi.org/10.1108/IJCHM-10-2014-0510
15. Guth WD, Ginsberg A. Guest editors' introduction: Corporate entrepreneurship. Strategic Management Journal. 1990;11(S1):5-15.
16. Hornsby JS, Kuratko DF, Zahra SA. Middle managers' perception of the internal environment for corporate

entrepreneurship: Assessing a measurement scale. Journal of Business Venturing. 2002;17(3):253-273. https://doi.org/10.1016/S0883-9026(00)00059-8
17. Hughes M, Mustafa M. Antecedents of corporate entrepreneurship: A systematic review of the literature. Journal of Strategy and Management. 2017;10(4):381-420. https://doi.org/10.1108/JSMA-01-2017-0017
18. Ireland RD, Covin JG, Kuratko DF. Conceptualizing corporate entrepreneurship strategy. Entrepreneurship Theory and Practice. 2009;33(1):19-46. https://doi.org/10.1111/j.1540-6520.2008.00279.x
19. Kabeer N. Conflicts over credit: Re-evaluating the empowerment potential of loans to women in rural Bangladesh. World Development. 2001;29(1):63-84. https://doi.org/10.1016/S0305-750X(00)00081-4
20. Kuratko DF, Hornsby JS, Goldsby MG. Innovation acceleration: Transforming organizational thinking. Journal of Business Strategy. 2010;31(2):24-33.
21. Kuratko DF, Ireland RD, Hornsby JS. Developing a corporate entrepreneurship strategy. Academy of Management Executive. 2005;19(2):60-71. https://doi.org/10.5465/ame.2005.16965104
22. Kuratko DF, Ireland RD, Covin JG, Hornsby JS. A model of middle-level managers' entrepreneurial behavior. Entrepreneurship Theory and Practice. 2005;29(6):699-716.
23. Lumpkin GT, Dess GG. Clarifying the entrepreneurial orientation construct and linking it to performance. Academy of Management Review. 1996;21(1):135-172. https://doi.org/10.5465/amr.1996.9602161568
24. Merigó JM, Blanco-Mesa F, Gil-Lafuente AM, Yager RR. Thirty years of the International Journal of Intelligent Systems: A bibliometric review. International Journal of Intelligent Systems. 2017;32(5):526-554. https://doi.org/10.1002/int.21859
25. Monsen E, Patzelt H, Saxton T. Beyond simple utility: Incentive design and trade-offs for corporate employee-entrepreneurs. Entrepreneurship Theory and Practice. 2010;34(1):105-130. https://doi.org/10.1111/j.1540-6520.2009.00313.x
26. Montalván-Burbano N, Pérez-Valls M, Plaza-Úbeda J. Analysis of scientific production on organizational innovation. Cogent Business and Management. 2020;7(1):1745043. https://doi.org/10.1080/23311975.2020.1745043
27. Morris MH, Kuratko DF, Covin JG. Corporate Entrepreneurship and Innovation. 3rd ed. Boston: Cengage Learning; 2011.
28. Neessen PCM, Caniëls MCJ, Vos B, De Jong JPJ. The intrapreneurial employee: Toward an integrated model of intrapreneurship and research agenda. International Entrepreneurship and Management Journal. 2019;15(2):545-571. https://doi.org/10.1007/s11365-018-0542-1
29. Patel R, Goodell JW, Oriani ME, Paltrinieri A, Yarovaya L. A bibliometric review of financial market integration literature. International Review of Financial Analysis. 2022;82:102035. https://doi.org/10.1016/j.irfa.2022.102035
30. Pinchot G. Intrapreneuring: Why You Don't Have to Leave the Corporation to Become an Entrepreneur. New York: Harper & Row; 1985.
31. Rigtering JC, Weitzel GU. Work context and employee behavior as antecedents for intrapreneurship. International Entrepreneurship and Management Journal. 2013;9(3):337-360. https://doi.org/10.1007/s11365-013-0253-8
32. Zahra SA. Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. Journal of Business Venturing. 1991;6(4):259-285. https://doi.org/10.1016/0883-9026(91)90019-A
33. Zahra SA, Covin JG. Contextual influences on the corporate entrepreneurship-performance relationship: A longitudinal analysis. Journal of Business Venturing. 1995;10(1):43-58.
34. Kuratko DF, Hornsby JS, Covin JG. Diagnosing a firm's internal environment for corporate entrepreneurship. Business horizons. 2014 Jan 1;57(1):37-47.
35. Miller D. The correlates of entrepreneurship in three types of firms. Management science. 1983 Jul;29(7):770-91.
36. Abdulrab M, Al-Mamary YH, Alwaheeb MA, Alshammari NG, Balhareth H, Al-Shammari SA. Mediating role of strategic orientations in the relationship between entrepreneurial orientation and performance of Saudi SMEs. Brazilian Journal of Operations & Production Management. 2021 Apr 23;18(4):1-5.
37. Al Doghan MA, Abdelwahed NA, Soomro BA, Ali Alayis MM. Organizational environmental culture, environmental sustainability and performance: the mediating role of green HRM and green innovation. Sustainability. 2022 Jun 20;14(12):7510.
38. Krogager Albertsen H, Aadland KN, Johannessen K, Jones R, Aadland E. Associations between the movement environment and preschooler's physical activity and sedentary time in Norwegian preschools. European Early Childhood Education Research Journal. 2023 Jul 4;31(4):562-76.
39. Halim AA, Abreu P, Aglietta M, Allekotte I, Cheminant KA, Almela A, Aloisio R, Alvarez-Muñiz J, Ambrosone A, Yebra JA, Anastasi GA. Large-scale Cosmic-ray Anisotropies with 19 yr of Data from the Pierre Auger Observatory. The Astrophysical Journal. 2024 Nov 13;976(1):48.
40. Covin JG, Slevin DP. Strategic management of small firms in hostile and benign environments. Strategic management journal. 1989 Jan;10(1):75-87.
41. Teece DJ. Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. Research policy. 1986 Dec 1;15(6):285-305.
42. Podsakoff PM, MacKenzie SB, Bommer WH. Transformational leader behaviors and substitutes for leadership as determinants of employee satisfaction, commitment, trust, and organizational citizenship behaviors. Journal of management. 1996 Apr;22(2):259-98.
43. Wiklund J, Shepherd D. Entrepreneurial orientation and small business performance: a configurational approach. Journal of business venturing. 2005 Jan 1;20(1):71-91.
44. Glinyanova M, Bouncken RB, Tiberius V, Cuenca Ballester AC. Five decades of corporate entrepreneurship research: measuring and mapping the field. International Entrepreneurship and Management Journal. 2021 Dec;17(4):1731-57.