

# Family Owned Business and Innovation: A Bibliometric and Science Mapping Analysis

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**Abstract:** *Family businesses are the main drivers of the wealth and they are the major creators of job throughout the world. Innovation and adoption of new technology is necessary for the all kind of businesses. Recent studies on family businesses show that they are more inventive than non-family businesses. This study's primary goal is to use bibliometric measures to analyze innovation in family businesses globally. SCOPUS data is gathered, Science mapping and bibliometric analysis are used to analyze the data.*

**Keywords:** family business, innovation, bibliometric analysis, science mapping, co-citation, bibliographic coupling, co-occurrence

## 1. Introduction

Family business are the main drivers of the wealth and they are the major creators of job throughout the world (Sharma et al.2003). Many researchers are concentrating on the family business research especially in the area of succession planning, business management, professional management, gender issues (Harveston et al., 1997), conflict management (Drury & Drury, 2016), and strategic management (Ghee et al., 2015). Family business research is expanding daily and becoming a more important field of study in business.

Recent studies on family businesses show that they are more inventive than other businesses. According to research, family businesses tend to be more entrepreneurial, which increases their capacity for innovation. This study's primary goal is to use bibliometric measures to analyze innovation in family businesses globally. SCOPUS data is gathered and bibliometric analysis is applied for analyze the data.

### Scope of the study

This study is aims at analyzing the SCOPUS data on family business and innovation using the bibliometric and science mapping tools. This study aims to examine the connections between several family business ideas using different components such as research, countries, citations, journals, publications, researchers, keywords. Bibliographic coupling, co-occurrence analysis, co-citation analysis, and co-authorship analysis utilized to pinpoint the newest developments in family business innovation.

### Research objectives

- 1) Analyze the most important writers, countries, and publications in family business and innovation.
- 2) Analyze the present state in the co-authorship pattern, co-citation pattern, bibliographic coupling pattern, and co-occurrence network in family business and innovation.

## 2. Materials and Method

This article uses science mapping to create a summary of the body of knowledge already available on the subject of innovations in family businesses. Science mapping is a technique for bibliometrically analyzing books and academic articles (Daniels and Thistlethwaite, 2022).

An advanced search is carried out in SCOPUS database by using key word “family business” AND “innovation”. Total of 559 documents were found for the period of 1987 to 2023. Documents are limited to English language and 540 documents are found in English. Documents include 379 journals, 65 book, 54 conference proceedings, 35 book series, and 7 trade journals. All the documents are exported in CSV excel file. Downloaded documents are loaded and processed with the help of VOS Viewer software.

## 3. Results and Discussion

### Analysis of the volume and pattern of publication

Figure 1 makes it abundantly evident that since 2010, when 14 documents were published, publications in the sectors of family businesses and innovation have attracted attention. 26 documents were published in the year of 2014 and 47 documents were published in the year of 2016. Literature on the family business innovation is top in the year 2022 with 92 publications. It is clear that the trends in publishing for family businesses and innovation are growing.

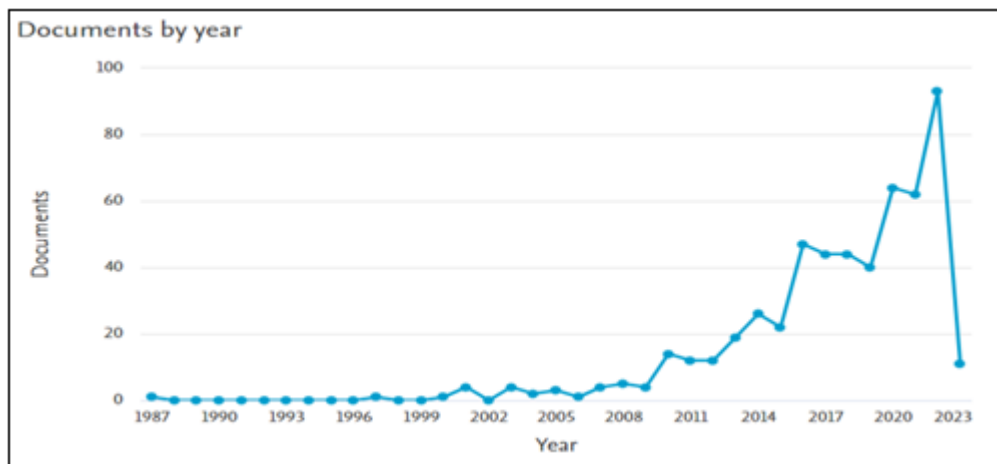


Figure 1: publications in the area family business and innovation

**Top writers and journals**

**Top authors**

De Messis was the most prolific author out of the 158 authors. De Messis was the most prolific author in family business and innovation with 18 documents, 1900 citations, and 40 Total Link Strength (TLS), according to analysis done using the VOS viewer. Kammerlander N came in second with 8 documents, 527 citations, and 16 TLS. Kotlar J. was the third productive contributor in the family business and innovation field, Following Welsh D. with 6 documents, 144 citations, 10 TLS, and Frattini.F with 5 documents, 1169 citations, 16 TLS.

Table 1: Top 5 authors in family business and innovation

SN	Author	Documents	Citation	Total Link Strength
1	De Massis.A	18	1900	40
2	Kammerlander N	8	527	16
3	Kotlar J	6	566	14
4	Welsh D	6	144	10
5	Frattini.F	5	1169	16

**Leading sources**

Table 2 displays the top journals in family business and innovation. The most productive publication is journal of Business Management, which has 36 documents, 392 citations, and 128 TLS, followed by Journal of Family Business Strategy, which has 15 documents, 490 citations, and 77 TLS. Sustainability journal with 13 documents, 97

citations, 33 TLS and journal of business research with 12 documents, 332 citations and 23 TLS are in the third and fourth position in the list respectively.

Table 2: top 5 journals in the field of family business and innovation

SN	Journals	Documents	Citations	TLS
1	Journal of family business management	26	392	128
2	Journal of family business strategy	15	490	77
3	Sustainability Journal	13	97	33
4	Journal of business research	12	332	23
5	Entrepreneurship theory and practice	10	938	91

**Co-authorship of countries**

The country co-authorship analysis reflects the degree of communication and collaboration on family businesses and innovation between the top or most productive countries(van Eck and Waltman,2010). The analysis of country co-authorship is shown in Figure 2. A country's minimal document count is 1, and its minimum number of citations is 5.Out of 81 countries 55 meet the threshold. Out of 55 countries United Kingdom, Italy and United States are top 3 productive countries in the list with the link strength 65, 60, and 60 respectively. United Kingdom has strong connection with the United States, Spain and Germany. It also has strong connection with India, France, Taiwan, Thailand, Canada etc.

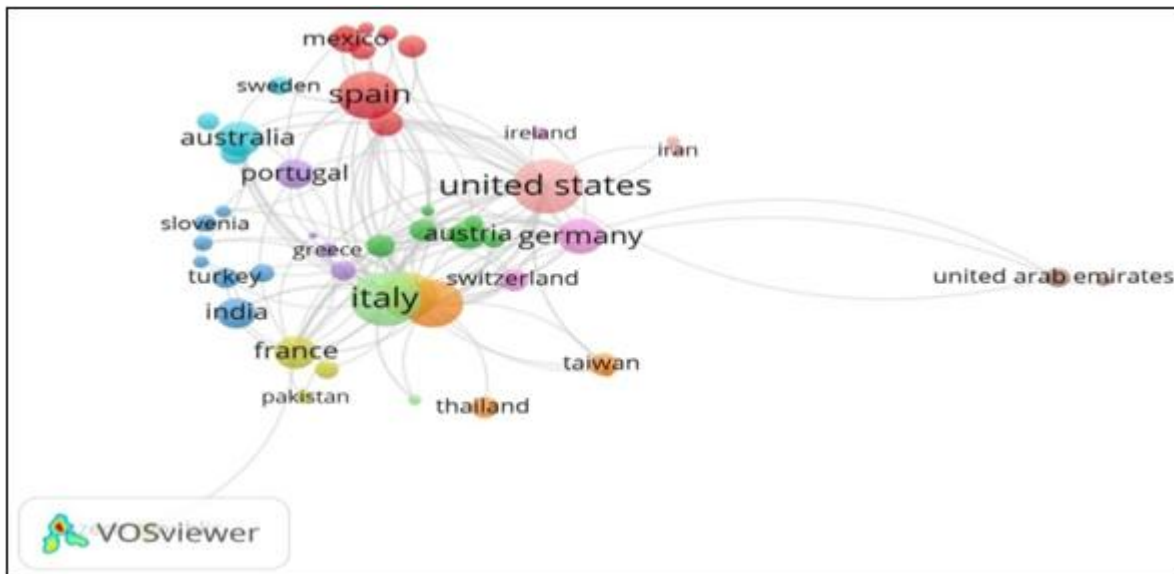


Figure 2: The network of country co-authorship

**Bibliographic coupling of countries**

in a bibliographic coupling method, When two works refer to the same works, the connection between the two referring documents is known as "bibliographic coupling" (van Eck and Waltman,2010). Network of countries with common references are highlighted in the figure 3. Nations with a minimum of two papers and two citations are included in the

study. Out of 81 countries only 53 meet the threshold. Italy, Spain and United Kingdom are in the first three positions respectively. Italy has 72 documents, 2912 citations and 88699 TLS. Spain has 54 documents, 744 citations and 66907 TLS. United Kingdom has 53 documents and 1922 citations and 63008 TLS.

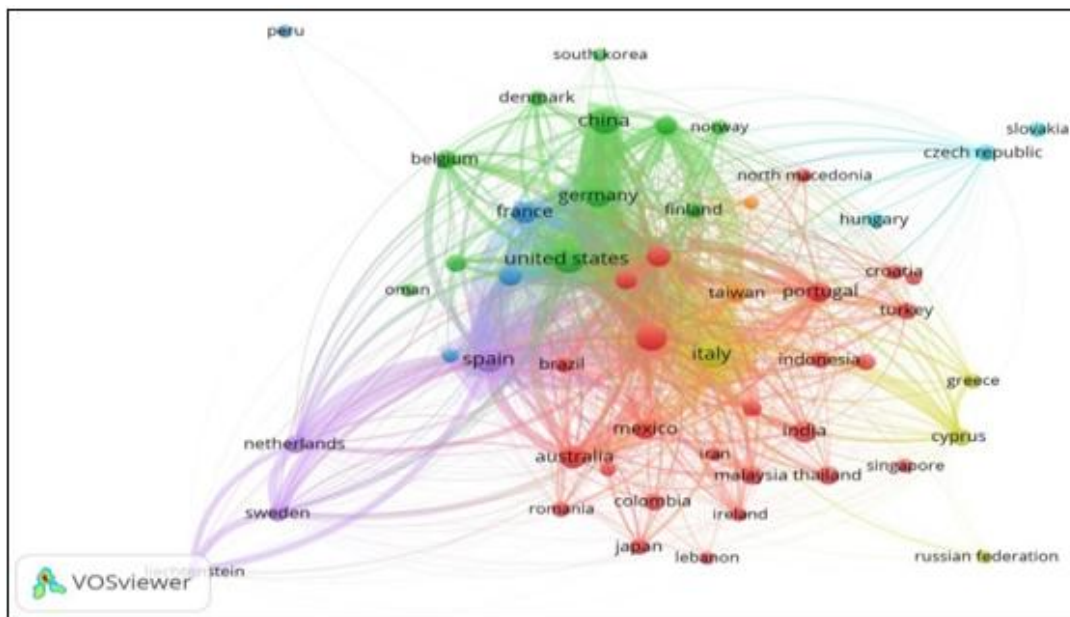


Figure 3: bibliographic coupling of countries

**Co-citation analysis of cited sources**

Two or more documents are considered to be the co-cited if they share at least one other citation. Thematic connections of two or more documents are higher when they have more co-citation power or strength. Table 4 indicates the association of journals based on the citation. Sources with at least 20 citations are taken into consideration. Out of 10375 sources 178 meet the threshold. Among that family business review, entrepreneurial theory and practice, journal of business venturing are in the top 3 positions respectively. Journal of business review is most productive in the field with 2742 citations and 212003 TLS followed by the

entrepreneurial theory and practice with 1606 citations, 166173TLS and journal of business venturing with 821 citations and 131220 TLS.

Table 3: Co-citation analysis of cited sources

SN	Journal	Citations	Total Link Strength
1	Family business review	2742	212003
2	Entrepreneurship theory and practice	1606	166173
3	Journal of business venturing	821	131220
4	Academy of management journal	817	115026
5	Academy of management review	667	113179

### Co-occurrence of Keywords

Figure 7 shows the co-occurrence of keywords in family business and innovation research. Keywords with minimum number of 2 occurrences are considered. Among 1853 keywords only 364 meet the threshold and 20 clusters identified. Among these 364 keywords family business,

innovation, family firms, sustainable development are the top in the list. Family business has 213 occurrences and 812 TLS, followed by innovation with 177 occurrences and 747 TLS, family firms with 70 occurrences and 222 TLS and sustainable development with 25 occurrences and 172 TLS.

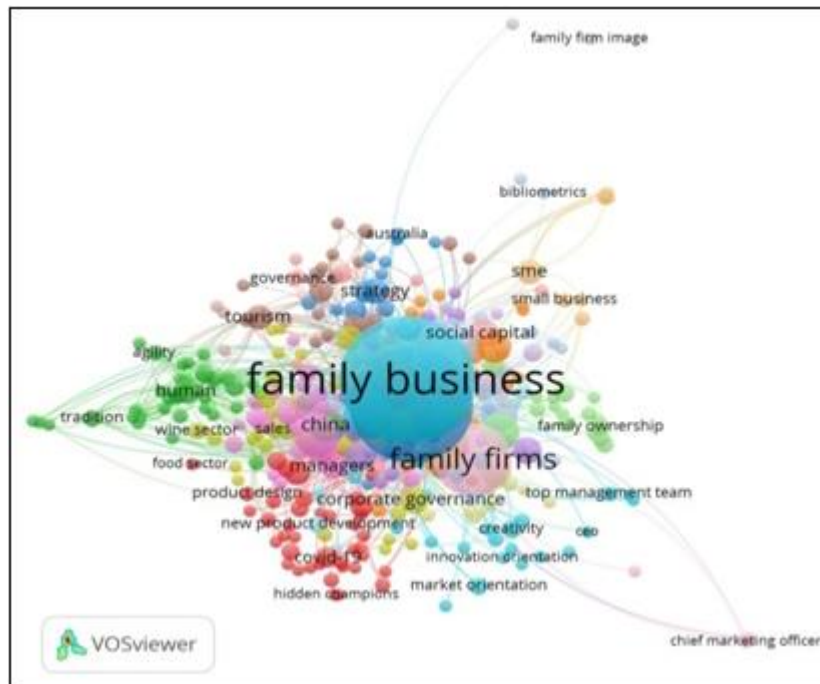


Figure 4: The network map of co-occurrence of key words

## 4. Conclusion

The relationship between family businesses and innovation was investigated in this paper. Study identifies that, number of publications is increasing in this area from the year of 2010. Country with more contributions in the innovation in family business is Italy. De Messis is the author with higher contribution and citation in this area. The maximum number of publications produced in this topic is journal of family business management. Co-authorship analysis indicates that United Kingdom has the greater collaboration with the United States, Spain and Germany. Bibliographic coupling analysis shows that, Italy, Spain and United Kingdom are the productive in this area. Most cited sources based on the co-citation analysis of cited sources are that family business review, entrepreneurial theory and practice, journal of business venturing.

By bibliometric and science mapping analyses, significant information about the family business and innovation has been discovered. Researchers who want to learn more about the research filed of family business and innovation will find this study more beneficial.

## References

- [1] Daniels, J., & Thistlethwaite, P. (2022). Measuring scholarly impact. In *Being a Scholar in the Digital Era*. <https://doi.org/10.51952/9781447329299.ch006>
- [2] Drury, P., & Drury, P. (2016). *Passing the baton Successful succession planning in a family business*.

- <https://doi.org/10.1108/HRMID-02-2016-0016>
- [3] Ghee, W. Y., Ibrahim, M. D., & Abdul-halim, H. (2015). *FAMILY BUSINESS SUCCESSION PLANNING: UNLEASHING THE KEY FACTORS OF BUSINESS*. 20(2), 103–126.
- [4] Harveston, P. D., Davis, P. S., & Lyden, J. A. (1997). *Succession Planning in Family Business: The Impact of Owner Gender*. 10(4), 373–396.
- [5] Sharma, P., Chrisman, J. J., & Chua, J. H. (2003). *Predictors of satisfaction with the succession process in family firms*. 18, 667–687. [https://doi.org/10.1016/S0883-9026\(03\)00015-6](https://doi.org/10.1016/S0883-9026(03)00015-6)
- [6] van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538. <https://doi.org/10.1007/s11192-009-0146-3>