

Family Firm IPOs: A Bibliometric Analysis and Systematic Literature Review

Amit Kumar Singh¹, Prabha Rani² and Rinki Gour^{3*}

¹Professor, Department of Commerce, Faculty of Commerce and Business, Delhi School of Economics, University of Delhi, Delhi.

E-mail: aksingh1@commerce.du.ac.in

²Assistant Professor, Department of Commerce, Shyama Prasad Mukherji College for Women, University of Delhi, Delhi.

E-mail: ar.prabha1983@gmail.com

³Assistant Professor, Department of Commerce, Miranda House (NCWEB), University of Delhi, Delhi.

E-mail: rinkigour.0912@gmail.com

*Corresponding Author

To cite this paper

Singh, A.K., Rani, P., & Gour, R. (2022). Family Firm IPOs: A Bibliometric Analysis and Systematic Literature Review. *Orissa Journal of Commerce*. 43(2), 52-74.

Keywords

Family firm, Initial public offering, Bibliometric analysis, Scopus database, VOS viewer, Systematic literature review

JEL Classification

G30, G32, E44, G34

Abstract: The principal method of raising public funds by a private firm is Initial Public Offerings (IPOs). This area has attracted researcher's attention (40,559 publications) because when private firms go public, they have different decision-making processes, goals, attitudes, performance and corporate governance. We examined the publication trend in the field of family firm IPOs with the help of bibliometric data extracted from Scopus because family-ownership is a prominent feature of firms worldwide. The search string used includes "Family Firm" and a wildcard "IPO", which yielded only 64 peer-reviewed articles written in English Language. Thus, family firm IPOs is an under-researched area but have been growing rapidly. The paper has done bibliometric analysis using VOS viewer software and systematic literature review to objectively identify influential authors, seminal works, emerging topics and directions for future research. The study has identified a significant scope for future research given the limited number of influential articles mainly by developed nations focusing on Agency, SEW(Socio-Emotional Wealth) and Signaling theory only.

1. Introduction

The most popular form of business around the world is family firm or family business. Family firms are owned and managed by generations of a family, related by blood, marriage, or adoption. Studies have investigated the method of raising public funds by a private firm through Initial Public Offering (IPO). Despite its importance for owners and investors, two anomalous behavior - IPO underpricing and post-IPO underperformance is displayed by IPOs. Literature is filled with evidence of IPO

underpricing (Narasimhan and Ramana, 1995; Welch, 1989; Murthy and Singh, 2014) and long-run underperformance of IPOs (Singh *et al.*, 2016; Ritter, 1991). However, studies on family firm IPOs revealed that the IPO underpricing and post-IPO performance of family firms are distinct from non-family firms (Leitterstorf and Rau, 2014; Jaskiewicz *et al.*, 2005; Hearn, 2011). Several studies have been conducted on various aspects of family firm IPOs over the last 31 years (1990-2021). But this topic is in the growing stage as after one publication in 1990, there was no publication till the year 2000 and an upward trend in the publication can be observed from the year 2005 (Figure 2). Thus, publications on “family firm IPOs” are rising in recent years and there is a great scope for further research in this area. Various researchers used different theories to explain the decision of going public by family firms, pricing and post-IPO performance of family firms. Agency theory, Socio-Emotional Wealth (SEW) and Signaling theory are the most widely used theories. Agency theorists claim that family-owned firms do not go for public-issue to get benefits of private control. Going public means dilution of private control and monitoring by external investors, regulators and the market (Helwege and Packer, 2009). Considering IPO pricing, family firms use IPO underpricing as a tool to concentrate ownership among family members because larger IPO underpricing will attract more subscriptions for shares, leading to dispersed ownership by outsiders. Using the same context for the long-run performance of IPOs, agency theorists found that the family firm IPOs underperforms in the long-run supporting private benefit theory because family firms are inclined towards under-investment at the cost of shareholders’ wealth for their own benefit (Kuklinski and Schiereck, 2007). Researchers using signaling theory explained that during the initial public offering, there is high information asymmetry among the participants i.e. issuers, underwriters, investment bankers and investors. The information is not equally shared among these participants, insiders (issuers) have more information than outsiders (potential investors). Family firms are concerned about the reduction of information asymmetry among investors for the success of their IPOs. As a result, family firms use post-IPO retention of their shareholdings as a signal to show their commitment and long-run value creation which reduces the uncertainty and IPO underpricing (Ding and Pukthuanthong, 2013). However, negative perceptions by investors about family ownership might lead to rise in IPO underpricing. They may perceive family ownership as a signal of less aggressive investment strategy and a low-risk taking behavior (Chandler *et al.*, 2019). The theoretical context of Socio-emotional Wealth (SEW) is also gaining attention among researchers. As per this theory, the family firms are willing to sacrifice economic gain to preserve their non-economic utility. Family firms are willing to accept higher IPO underpricing than non-family firms even if that means a reduction of IPO proceeds to protect their SEW (Leitterstorf and Rau, 2014). In the long-run, family firms maintain high leverage to finance their investments instead of going for equity in order to protect their control (Jain and Shao, 2015). Thus, researchers using different theories observed a positive relation (Jaskiewicz *et al.*, 2005), negative relation (Kuklinski and Schiereck, 2007) and cubic relation (Chahine, 2007) between the family firm and the long-term performance of the firm. Each study has provided an insight into this field, but very few studies have systematically reviewed the existing literature on family firm IPOs and there is a dearth of studies that further investigated this literature using bibliometric analysis.

Bibliometric analysis can provide additional understanding in the field of family firm IPOs, not been investigated by previous studies. Bibliometric analysis is gaining popularity among researchers in

the past few years due to the availability of bibliometric data. In this study, we have observed that there have been thousands of research articles published in the area of “IPOs” and “family firms” separately but very few articles explored the area of “family firms IPOs”. We have found only 64 peer-reviewed articles on family firm IPOs extracted from the Scopus database and performed a bibliometric analysis using VOS viewer to objectively identify influential authors, seminal works, trends in publications and emerging topics in this area. We have systematically reviewed the articles on family firm IPOs and organized them into three categories (IPO antecedent, IPO pricing and post-IPO performance) based on their context. This will help us to substantiate the results of bibliometric analysis and to find out the directions for future research.

2. Literature Review

Based on the systematic literature review all research papers can be divided into three categories: IPO antecedent, IPO pricing and post-IPO performance (Figure 1).

2.1. IPO Antecedents

All research papers focusing on the motivation behind a family firm’s decision to go public are summarized in Appendix I. Analysis of the same shows that scholars used mainly two theories - agency theory and Pecking order theory to explain the IPO antecedents. As per Masulis *et al.* (2020) the family firms’ decision to go public is based on financial factors such as opportunities for financial growth. The involvement of non-family members on board increases the chances of reaching the equity market by family firms (Sonfield and Lussier, 2009). The Corporate governance life cycle is claimed as an antecedent of family firms’ decision to go public by Mazzola and Marchisio (2002), who found that the presence of venture capitalists, competitive environment and management ambition are major factors behind going public.

The second line of research investigated the family-level factors behind the decision to go for IPO. Following agency theory, studies claim that the family firms’ intention to retain the private control benefit (Chung *et al.*, 2015; Helwege and Packer, 2009) is an important factor behind the family firms’ decision to remain private. However, young and fast-growing firms prefer to go public (Mahéroul, 2004). Thus, the firm’s age and size of the firm also determine the decision to go for IPO.

2.2. IPO Pricing

Appendix II summarizes all research articles related to IPO pricing, mostly articles compared family firms and non-family firms. Overall, our analysis reveals that most scholars explained IPO pricing using agency theory, signaling theory and socioemotional wealth (SEW) theory.

Articles concentrating on agency theory to explain the IPO pricing decision suggest that family firms exhibit lower underpricing as compared to non-family firms (Huang, 2019; Hearn, 2011; Daugherty *et al.*, 2012; Yang *et al.*, 2020). Scholars have examined the effect of family involvement and the presence of outsider board members on IPO pricing. These studies highlighted that the board independence (González, 2019; Ding and Pukthuanthong, 2013), prestigious underwriter (Ding and Pukthuanthong, 2013), business angel’s ownership (Hearn, 2011) and managerial ownership (Daugherty *et al.*, 2012)

lowers the IPO underpricing in family firms. Studies based on signaling theory claimed that family firms strategically use IPO underpricing to reduce investors' uncertainty around the issue of shares. Family firms reveal their retention of ownership during the time of issue to build investors' confidence in the performance of the firm (Ding and Pukthuanthong, 2013; Chandler *et al.*, 2019). A study based on both agency and signaling theory revealed that the presence of a sound legal environment negatively affects IPO underpricing in family firm IPOs (Huang, 2019).

Studies using institutional theory claimed that the presence of family members who have political ties reduces the level of IPO underpricing in family firm IPOs (Yang *et al.*, 2020). Many studies explored the role of a CEO's characteristics on the pricing of IPOs. Kotlar *et al.* (2018) and Huang (2019) found that the family firm CEO has a negative effect on the IPO underpricing. CEO power (represented by prestige, experience and ownership) positively influences the IPO valuation (Cirillo *et al.*, 2015a). Another theoretical perspective used by scholars is socioemotional wealth (SEW), studies based on this theory suggest that family firms exhibit higher IPO underpricing as compared to non-family firms because they value emotional wealth over economic wealth (Kotlar, 2018; Leitterstorf and Rau, 2014).

2.3. Post-IPO Performance

Appendix III summarizes research articles that are based on family firms and the long-term performance of firm's post-IPO. Our analysis reveals that most articles examined the effect of family status on the long-term profitability, investment choices, survival and growth opportunities in the firm. The remaining articles examined the effect of corporate governance changes, and the presence of outsiders on the long-term profitability of the firm.

Studies examining the role of outsider owners in determining the long-term performance of IPOs claimed that the presence of venture capitalists (Giovannini, 2010) and domestic banks (Lien and Li, 2014) have a positive impact on the long-run performance of a firm. Research-based on the composition of the board demonstrated that independent directors on the board have a positive effect on directors' remuneration whereas the family CEO negatively affects disclosure of remuneration (Hearn, 2013), in line with agency theory. Giovannini (2010) claimed that the presence of a compensation & appointment committee has a positive influence on the performance of a family firm. Changing the CEO that was present during the IPO process negatively affects the performance of the firm (Vaz Ferreira, 2008).

Shifting the focus of research on the relationship between post-IPO performance and family firm status, studies used multiple theories (agency theory, socioemotional theory and signaling theory). Family firm status reduces the investment of the firm in post-IPO liquidity, increases the leverage and reduces R&D investment (Jain and Shao, 2014, 2015), in line with agency theory. However, family firms increase investment in advertisements, in line with a resource-based view (Nikolov and Wen, 2018). Family-controlled firms have a negative post-IPO performance based on a corporate governance life cycle perspective (Lien and Li, 2014). Huang *et al.* (2014) studied the family firm IPOs in China, they found that the family firms going public via IPO have worse earnings quality as compared to firms going public via takeovers. Scholars using different theories observed a positive relation (Jaskiewicz *et al.*, 2005), negative relation (Kuklinski and Schiereck, 2007) and cubic relation (Chahine, 2007) between the family firm and the long-term performance of the firm.

3. Objectives of the Study

The objectives of this study are:

- To analyze the trend and volume of publications on family firm IPOs.
- To identify the top journals and countries publishing in this domain.
- To recognize the top influential authors contributing to this field.
- To identify emergent topics/keywords and directions for future research.

4. Research Methodology

In this study, the research articles on family firm IPOs were extracted from the Scopus database. Scopus database is the largest database of peer-reviewed articles, books and conference papers. It provides all information about the journals, articles, authors, citations, affiliations, etc. Bibliometric data extracted from the Scopus database is analyzed using VOS viewer. A systematic literature review is used to find out the research gap in the existing literature and directions for future research.

5. Data Analysis

5.1. Defining the Appropriate Search String

For bibliometric analysis, the first step taken by a researcher is to formulate an exact query string (Tunger and Wilhelm, 2013). The query string used to collect bibliometric data from Scopus is “Family Firm” and 12 other variants of this construct AND a wildcard “IPO” and its 7 variants which yielded 64 peer-reviewed articles written in the English Language. Articles returned from this query string contain articles only on family firm IPOs as the Boolean operator “AND” is used. Additionally, we searched for “Family firm” and “Initial Public Offering” separately, yielded 7,119 and 40,559 articles respectively, to get the magnitude of papers when the boolean operator is dropped. This shows that “Family Firm IPO” is an under-researched area. Table 1 presents all constructs and associated query strings used in the study.

Table 1: Constructs and Search Strings

<i>S. No.</i>	<i>Constructs</i>	<i>Search String</i>	<i>Outcome</i>
1.	Family Firm	TITLE-ABS-KEY (“Family Firm” OR “Family Business” OR “Family enterprise” OR “Family company” OR “Family owned enterprise” OR “Family owned business” OR “Family owned company” OR “Family managed company” OR “Family managed enterprise” OR “Family managed business” OR “Family controlled business” OR “Family controlled enterprise” OR “Family controlled company”) AND (LIMIT-TO (LANGUAGE , “English”)) AND (LIMIT-TO (DOCTYPE , “ar”) OR LIMIT-TO (DOCTYPE , “re”) OR LIMIT-TO (DOCTYPE , “cp”))	7,119

2.	Initial Public Offering	TITLE-ABS-KEY (“IPO” OR “Initial Public Offering” OR “Listing” OR “Going Public” OR “Public Issue” OR “New Issue” OR “Post-Issue” OR “Pre-issue” OR “New Listing”) AND (LIMIT-TO (DOCTYPE , “ar”) OR LIMIT-TO (DOCTYPE , “cp”) OR LIMIT-TO (DOCTYPE , “re”)) AND (LIMIT-TO (LANGUAGE , “English”))	40,559
3.	Family Firm and Initial Public Offering	(TITLE-ABS-KEY (“IPO” OR “Initial Public Offering” OR “Listing” OR “Going Public” OR “Public Issue” OR “New Issue” OR “Post-Issue” OR “Pre-issue” OR “New Listing”) AND TITLE-ABS-KEY (“Family Firm” OR “Family enterprise” OR “Family business” OR “Family company” OR “Family owned business” OR “Family owned enterprise” OR “Family owned company” OR “Family managed business” OR “Family managed enterprise” OR “Family managed company” OR “Family controlled business” OR “Family controlled enterprise” OR “Family controlled company”) AND (LIMIT-TO (DOCTYPE , “ar”) OR LIMIT-TO (DOCTYPE , “cp”) OR LIMIT-TO (DOCTYPE , “re”)) AND (LIMIT-TO (LANGUAGE , “English”))	64

Source: Authors’ Own Compilation from Scopus

The steps involved in the selection of relevant articles for this study are shown in Figure1. We used the two groups of search strings ‘Family firm’ and ‘IPO’ combined with AND to search for articles that include these two search strings together either in the title and/or abstract and/or keywords. This search string yielded 80 documents which are further filtered to include only peer-reviewed articles and conference papers published in the English language, providing only 64 articles on family firm IPOs. For the systematic literature review, these articles are further classified into three categories: IPO antecedents, IPO pricing and post-IPO performance.

5.2. Initial Data Statistic

The trend of publication in the area of family firm IPOs is shown in Figure 2. After one publication in 1990, there was no publication in this area till the year 2000 and an upward trend in the publication can be observed since 2005. Publications in the early 2000s can be linked to the dot-com bubble leading to more articles by researchers investigating the IPO decision. After 2002, policy changes and Sarbanes-Oxley Act regulated the financial market in order to protect the interest of shareholders which boosted the interest of scholars in this area. The publications in 2008 and 2014 can be attributed to the financial crisis. The greatest publication in 2018-2019 can be due to policy-making intervention. This graph shows that this field of study is still in the growing stage and expansion period as the number of publications is rising in recent years.

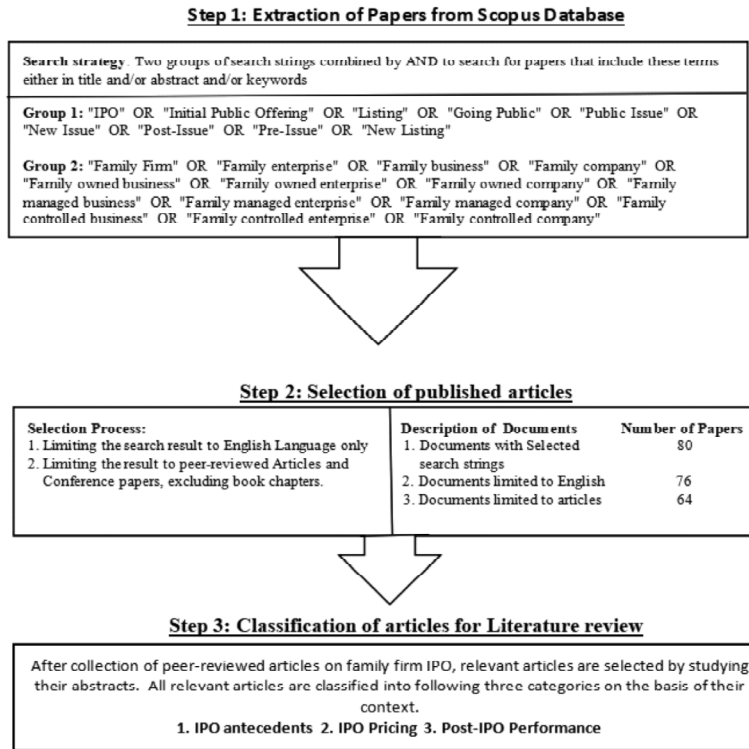


Figure 1: Research Steps

Source: Authors' Own Compilation

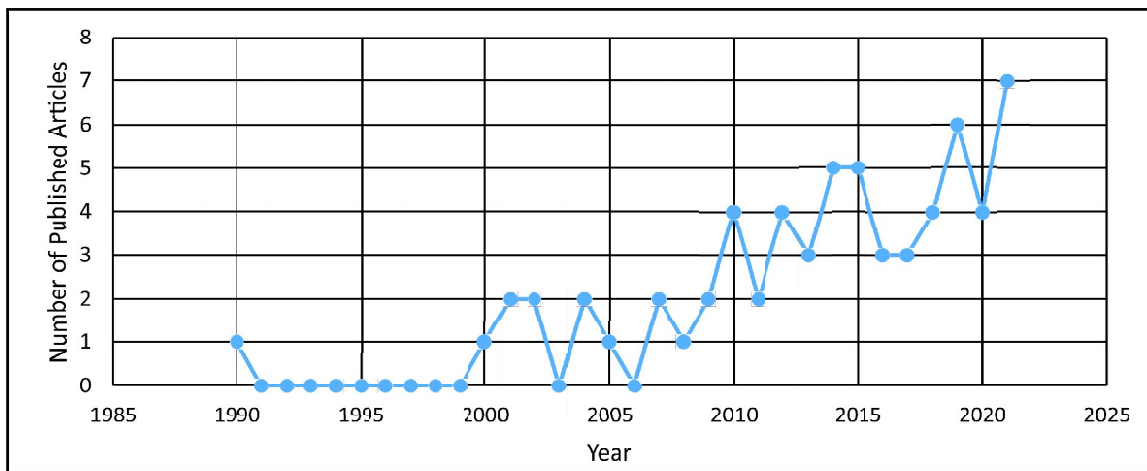


Figure 2: Trend in Publications on Family Firm IPOs

Source: Authors' Own Compilation

5.3. Bibliometric Analysis

Several software packages are available and used by researchers for bibliometric analysis to derive a meaningful conclusion from the bibliometric data of published articles. Some of the most popular software packages are Gephi, Biblioshiny, VOS viewer and BibExcel. In this study, VOS viewer was used due to its high degree of flexibility in using data from various sources such as Scopus, Web of Science. VOS viewer has functionality for zooming, searching and scrolling which facilitate the detailed examination of large maps.

The input data files used in VOS viewer should be in CSV format containing the bibliometric data about the peer-reviewed articles. We have analyzed the following information extracted from the Scopus database: authors, publication year, title, journal title, author keywords, country affiliation and citation. Journal's performance, Author's influence, Country affiliation and Author keywords statistics are drawn from bibliometric analysis using VOS viewer are presented in the following sections.

5.3.1. Journal's Performance and Quality of Publications

Data related to the performance of Journals and quality of published articles (linked with 64 peer-reviewed articles on family firm IPOs) was taken from the Scopus database. The initial statistics show that 34 journals have contributed 64 published articles on Family firm IPOs. The majority were on family business (16 articles), management (15 articles), governance (4 articles) and the remaining journals related to finance. Table 2 shows the performance of journals and the quality of articles published in these journals. Journal's performance is indicated by CiteScore (CS), SCImago Journal Rank (SJR) and the quality of published article is indicated by Source Normalized Impact per Paper (SNIP). The CS of a journal is a measure reflecting the average number of citations (over four years) to recently published articles in that journal. SJR measures the scientific influence of journals that accounts for both the number of citations received by the journal and the prestige of the journal from where the citations come. SNIP measures the citation impact of a journal which is calculated by weighting the citations of the journal based on the total citations in the journal's designated subject or subjects. From table 2 it can be observed that "Entrepreneurship: Theory and Practice" is the most valuable journal as its CS, SJR and SNIP value is the highest. The next best journals are "Academy of Management Journal" and "Strategic Management Journal". The high quality of journals gives assurance of greater visibility, greater quality and greater reputation to the articles published in these journals.

Table 2: CS, SJR and SNIP Values of Journals

<i>S. No.</i>	<i>Journal Title</i>	<i>CS</i>	<i>SJR</i>	<i>SNIP</i>
1.	Family Business Review	9.7	2.947	3.379
2.	Pacific Basin Finance Journal (PBFJ)	3.2	0.697	1.521
3.	International Entrepreneurship and Management Journal (IEMJ)	7.5	1.338	2.309
4.	Journal of Financial Intermediation	6.3	5.445	3.376
5.	Managerial Finance	1.5	0.271	0.656

contd. table 2

<i>S. No.</i>	<i>Journal Title</i>	<i>CS</i>	<i>SJR</i>	<i>SNIP</i>
6.	Management Decision	5.5	0.923	1.358
7.	Journal of Corporate Finance (JCF)	4.9	1.894	2.665
8.	Journal of Family Business Strategy (JFBS)	7.1	1.557	1.818
9.	International Review of Financial Analysis	4.9	1.270	1.907
10.	Journal of Asian Finance, Economics and Business	2.6	0.369	1.033
11.	Corporate Governance: An International Review	3.7	0.866	1.241
12.	British Journal of Management	6.8	2.407	2.317
13.	International Journal of Economics and Business Administration	1.9	0.289	0.821
14.	Cross Cultural and Strategic Management	3.8	0.545	0.918
15.	Journal of Family Business Management	2.9	0.518	0.970
16.	Academy of Management Journal	14.2	11.193	4.233
17.	Applied Economics	2.3	0.569	1.029
18.	Journal of International Studies	3.7	0.494	1.250
19.	Journal of Entrepreneurship in Emerging Economies	3.6	0.645	1.427
20.	European Management Journal	6.4	1.365	2.247
21.	China Journal of Accounting Studies	0.2	0.11	0.12
22.	Managerial Auditing Journal	3.1	0.422	1.009
23.	Strategic Management Journal	12.5	11.035	3.882
24.	Entrepreneurship: Theory and Practice	17.7	5.365	4.836
25.	Journal of Business Economics and Management	3.5	0.485	1.064
26.	Research in International Business and Finance	4.9	0.767	1.825
27.	Journal of Multinational Financial Management	4.5	0.743	1.358
28.	Journal of Asian Public Policy	2.5	0.377	0.941
29.	Journal of Business Finance and Accounting	3.3	1.282	1.738
30.	International Review of Law and Economics	1.2	0.442	0.927
31.	International Review of Financial Analysis (IRFA)	4.9	1.27	1.907
32.	Journal of Management Studies (JMS)	9.2	4.398	3.037
33.	International Journal of Entrepreneurship and Small Business (IJESB)	1.7	0.448	0.75
34.	Journal of Management and Governance	2.6	0.473	0.973

Key: CS = CiteScore, SNIP = Source Normalized Impact per Paper and SJR = SCImago Journal Rank.

Source: Authors' Own Compilation from Scopus

5.3.2. Author's Influence

VOS viewer is used to analyze the frequency of appearance of authors and articles that they have authored or co-authored. Table 3 presents the top 10 authors who have contributed research articles in the area of family firm IPOs along with the number of published articles and citations count. From the table, it can be seen that Cirillo and Romano topped the list as they contributed the maximum number of publications. Whereas Le Breton-Miller and Vismara are the highest cited authors.

Table 3: The Top 10 Authors' Contributing Publications and Number of Citations

S. No.	Authors	Number of Publications	Citations
1.	Cirillo, A.	5	52
2.	Romano, M.	4	52
3.	Vismara, S.	3	106
4.	De Massis, A.	2	95
5.	Hearn, B	2	30
6.	Jain, B.A.	2	32
7.	Kotlar, J.	2	95
8.	Le Breton-Miller, I.	2	122
9.	Lussier, R.N.	2	64
10.	Maherault, L.	2	57

Source: Authors' Own Compilation using Scopus and VOS viewer

Figure 3 shows the network visualization chart of co-authors using VOSviewer. It can be observed from the links shown in red that Cirillo, Vigano, Mussolino and Romano have co-authored with each

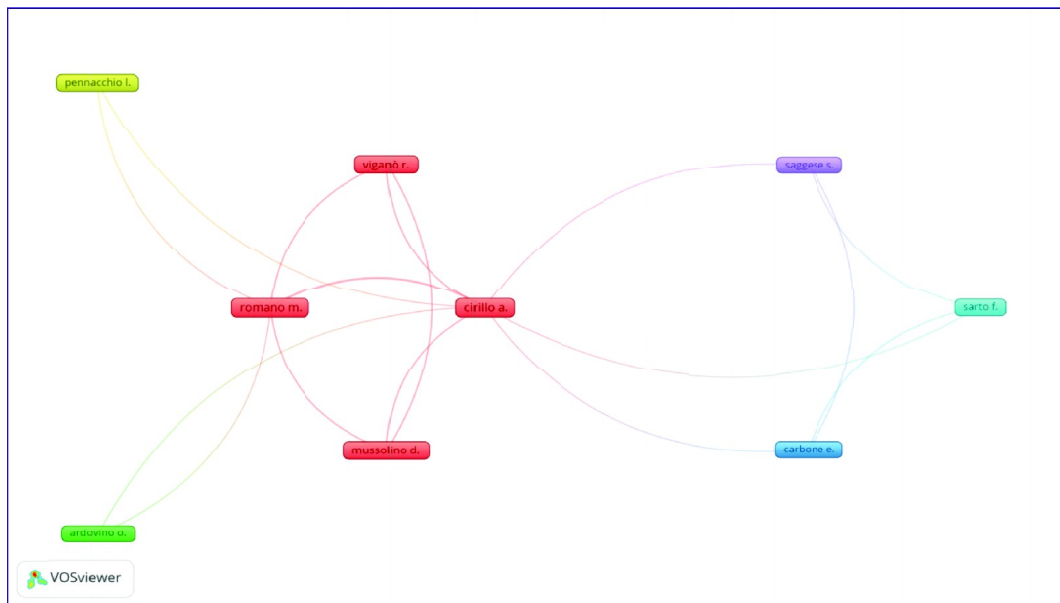


Figure 3: Network Visualization of Co-Authorship of Authors

Source: Authors' Own Compilation using VOS viewer

other more number of papers. Cirillo has the highest links with other authors like Pennacchio, Ardovino, Carbone, Saggase and Sarto. Vigano and Mussolino have co-authored with Cirillo and Romano only.

5.3.3. Country affiliation Statistics

Table 4 outlines the top 10 countries that contributed the maximum number of publications in the area of family firm IPOs. From the table, it can be observed that developed countries have a significant number of publications as compared to emerging countries. The United States contributed the maximum number of research articles followed by Italy, Germany, China, Hong Kong, United Kingdom, Canada, France, Lebanon and Spain. Articles from developed countries (US, UK, Italy, and Canada) are more cited as compared to articles from developing countries (China and Hong Kong).

Table 4: The Top 10 Countries Contributing Articles and Number of Citations

S. No.	Country	Number of Articles	Citations
1	United States	21	700
2	Italy	11	541
3	Germany	7	208
4	China	5	32
5	Hong Kong	5	20
6	United Kingdom	4	125
7	Canada	3	135
8	France	3	74
9	Lebanon	2	28
10	Spain	2	94

Source: Authors' Own Compilation using Scopus and VOS viewer

Network analysis of countries contributing articles on family firm IPOs is shown in Figure 4. This can be observed from Figure 4 that the US is the most co-occurred country. Germany, Spain, Netherlands and Denmark have contributed co-authored publications.

Studies have been done on Switzerland, Philippines, Taiwan, Lebanon and United States together.

5.3.4. Keyword Occurrence

A similar study is conducted using VOS viewer to identify the most frequently occurred author keywords in the selected articles. The top 10 frequently used author keywords are summarized in table 5. It can be seen that the most frequently used keywords are Family firms and Initial Public Offering because they were the search strings used in the study. Other keywords mostly used in the articles are corporate governance, Agency theory, Family firm governance, Survival analysis, Family leadership, Venture Capital and Firm Value.

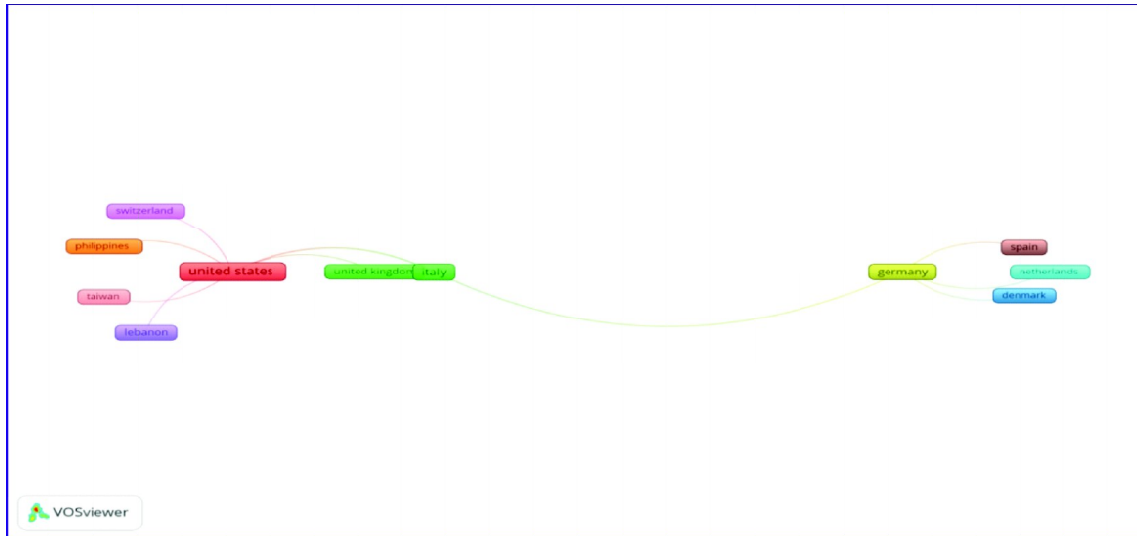


Figure 4: Network Visualization of Countries Contributing Articles on Family Firm IPOs

Source: Authors' Own Compilation using VOS viewer

Table 5: The Top 10 Frequently Occurred Authors' Keywords

S. No.	Author Keywords	Occurrences
1.	Family firms	20
2.	Corporate Governance	13
3.	Initial Public Offering	13
4.	Agency theory	7
5.	Family firm governance	3
6.	Survival analysis	2
7.	Board of directors	2
8.	Family leadership	2
9.	Venture Capital	2
10.	Firm Value	2

Source: Authors' Own Compilation using Scopus and VOS viewer

Network analysis of co-occurrence of keywords is shown in Figure 5 created using VOS viewer. It can be observed from the figure that the family firm word is connected with Five groups of co-occurred keywords with 15 links and total link strength of 27. Corporate Governance is the second most frequently used and co-occurred word with 8 links and 13 total link strength with words like family firm, agency theory, venture capital and IPO performance. Co-occurred authors' keywords are further analyzed based on the association between the words. The output provided by VOS viewer

shown in Figure 5 shows five such groups of words. One group shown in red consists of keywords like Family firm governance, family leadership, Survival analysis and IPO, the other group consists of keywords like ownership structure, agency problem, business group and delisting shown in green.

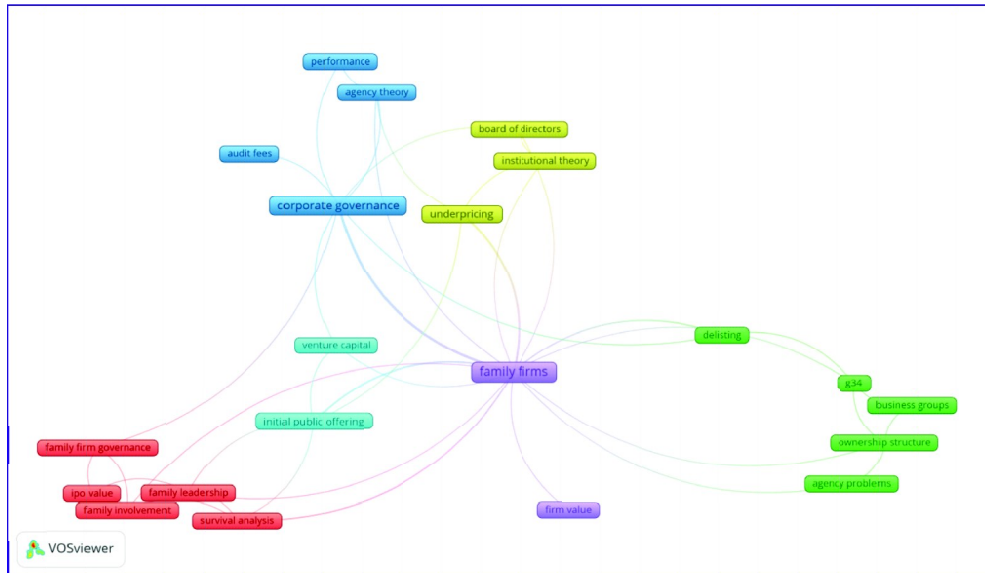


Figure 5: Network Visualization of Co-Occurrence of Authors' Keywords

Source: Authors' Own Compilation using VOS viewer

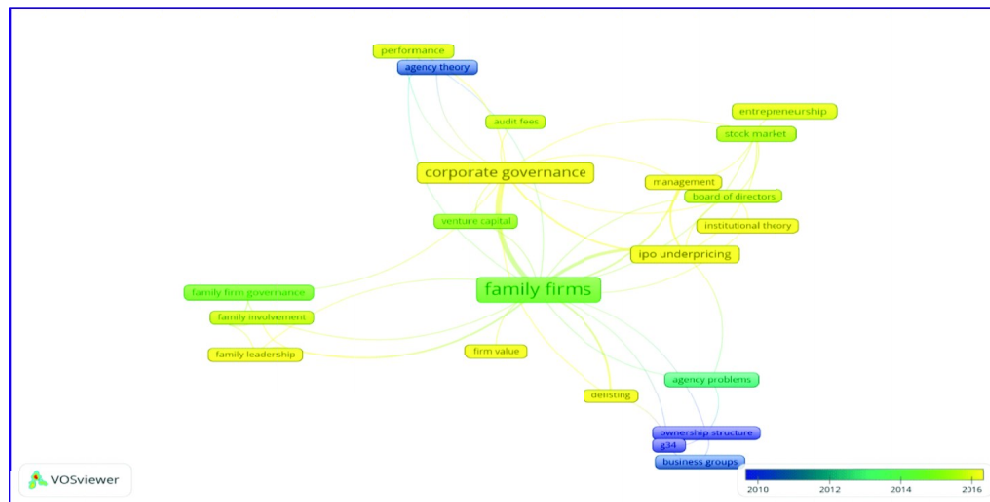


Figure 6: Thematic Map of Authors' Keywords

Source: Authors' Own Compilation using VOS viewer

The thematic map shown in Figure 6 reveals that the agency theory and ownership structure was the most popular author's keyword before 2014. Post-2016 focus of scholars shifted to corporate governance, entrepreneurship, IPO underpricing and performance. Thus, we can conclude that role of corporate governance in family firm IPOs is an emerging topic among researchers.

6. Result and Discussion

Bibliometric analysis reveals that despite a large number of publications has been done on family firm and IPOs separately, family firm IPOs is an under-researched area that is gaining momentum in recent years. The top journals publishing higher-quality articles on family firm IPOs are "Entrepreneurship: Theory and Practice", "Academy of Management Journal" and "Strategic Management Journal". The most influential authors are Cirillo and Romano, contributed the maximum number of publications whereas Le Bretton-Miller is the highest cited author because of one article in a top journal ("Entrepreneurship: Theory and Practice"). Thus, publication in top journals leads to higher visibility and citation as compared to other journals. Country affiliation statistics reveal that the United States is the major contributor of publications in this area followed by Italy and Germany. This shows that developed countries are major contributors to family firm IPO literature as compared to developing countries due to financial crisis, policy changes and governance measures taken in these developed nations which aroused scholarly attention. The most frequently occurred authors' keywords are Corporate Governance and Agency Theory revealed by keyword analysis whereas thematic analysis reveals that corporate governance, entrepreneurship, underpricing and long-run performance of family firm IPOs are emerging topics among researchers which are supported by literature review.

The systematic literature review reveals that family firms face a dilemma between private control benefits and the need to go public for the growth of the firm. Family firms tend to remain private (Helwege and Packer, 2009). However, in the long-run excessive family control lead to a reduction in survivability and profitability. Thus, financial factors are the motivation behind family firms' decision to go public (Mazzola and Marchisio, 2002). A literature review of articles comparing the IPO underpricing in family and non-family firms reveals that most articles examined the effect of family status, family involvement and family heterogeneity on IPO underpricing. Existing studies based on agency theory found a negative relationship between IPO underpricing and family firm (Yang *et al.*, 2020; Huang, 2019; Daugherty *et al.*, 2012; Hearn, 2011) Whereas studies focusing on SEW, stewardship and signaling theory observed a positive relation (higher underpricing) to safeguard emotional endowment by family firms (Leitterstorf and Rau, 2014; Cirillo *et al.*, 2015a; Cirillo *et al.*, 2015b; Kotlar *et al.*, 2018; Chandler *et al.*, 2019). Good corporate governance i.e. presence of independent directors, non-family CEO, and venture capitalist reduces IPO underpricing in family firms. The third classification comprises articles studying the long-term performance of family firms post-IPO. Previous studies claimed that family firms are reluctant to diversify, depend more on leverage, underinvest in R&D, and retain control to achieve their family goals. Thus, family firm IPOs significantly underperform as compared to non-family firms. Agency theory, signaling theory and socioemotional wealth are mostly used as theoretical perspectives among scholars.

7. Conclusion

Bibliometric analysis and systematic literature review revealed that very limited work has been done on the IPO antecedents i.e. the motivation behind family firms' decision to go public. Most studies have used agency, signaling and socioemotional wealth theory for explaining the short-term and long-term performance of IPOs. Resource dependence theory can be a new perspective for future studies. As per resource dependence theory, directors are an important source of networks and information which can significantly influence the performance of firms. Thus, the effect of interlocks provided by family directors and/or non-family directors, on the pricing and performance of family firm IPOs can be explored by scholars in the future. Our analysis also reveals that all these studies are based on financial factors. Thus, future studies can explore non-financial factors behind family firms' decision to go for an initial public offering and can examine the effect of non-financial factors on the post-IPO performance of family firms. Developed countries like US, Germany and Italy are the major contributors of published articles on family firm IPOs. Thus, there is a scope to empirically test these results in developing countries like India. Overall, the family firm IPOs is an under-researched area. There is a significant scope for future research in this area given the limited number of influential articles.

References

- Chahine, S. (2007). Block-holder ownership, family control and post-listing performance of french IPOs. *Managerial Finance*, 33(6), 388-400.
- Chandler, J. A., Payne, G. T., Moore, C., & Brigham, K. H. (2019). Family involvement signals in initial public offerings. *Journal of Family Business Strategy*, 10(1), 8-16.
- Chung, J., Cho, H., & Kim, W. (2015). Is cross-listing a commitment mechanism?: The choice of destinations and family ownership. *Corporate Governance: An International Review*, 23(4), 307-330.
- Cirillo, A., Romano, M., & Pennacchio, L. (2015). All the power in two hands: The role of CEOs in family IPOs. *European Management Journal*, 33(5), 392-406.
- Cirillo, A., Mussolino, D., Romano, M., & Viganò, R. (2017). A complicated relationship: Family involvement in the top management team and post-IPO survival. *Journal of Family Business Strategy*, 8(1), 42-56.
- Cirillo, A., Romano, M., & Ardovino, O. (2015). Does family involvement foster IPO value? Empirical analysis on italian stock market. *Management Decision*, 53(5), 1125-1154.
- Daugherty, M. S., & Jithendranathan, T. (2012). Underpricing of IPOs of U.S. family controlled businesses. *International Research Journal of Finance and Economics*, 90, 193-206.
- Ding, H., & Pukthuanthong, K. (2013). Legitimacy signals and family IPO performances. *Journal of Business Economics and Management*, 14(1), 156-181.
- Giovannini, R. (2010). Corporate governance, family ownership and performance. *Journal of Management and Governance*, 14(2), 145-166.
- González, M., Guzmán, A., Tellez-Falla, D. F., & Trujillo, M. A. (2019). Governance, sentiment analysis, and initial public offering underpricing. *Corporate Governance: An International Review*, 27(3), 226-244.
- Hearn, B. (2011). The performance and the effects of family control in north african IPOs. *International Review of Financial Analysis*, 20(3), 140-151.

- Hearn, B. (2013). The determinants of director remuneration, executive tenure and individual executive disclosure in north african IPO firms. *Research in International Business and Finance*, 27(1), 162-182.
- Helwege, J., & Packer, F. (2009). Private matters. *Journal of Financial Intermediation*, 18(3), 362-383.
- Huang, Q., Cheng, M., Li, W., & Wei, M. (2014). Listing approach, political favours and earnings quality: Evidence from chinese family firms. *China Journal of Accounting Studies*, 2(1), 13-36.
- Huang, W., Li, J., & Zhang, Q. (2019). Information asymmetry, legal environment, and family firm governance: Evidence from IPO underpricing in china. *Pacific Basin Finance Journal*, 57(C), 1-12.
- Hülsbeck, M., Meoli, M., & Vismara, S. (2019). The board value protection function in young, mature and family firms. *British Journal of Management*, 30(2), 437-458.
- Jain, B. A., & Shao, Y. (2014). Family involvement and post-IPO investment policy. *Family Business Review*, 27(4), 287-306.
- Jain, B. A., & Shao, Y. (2015). Family firm governance and financial policy choices in newly public firms. *Corporate Governance: An International Review*, 23(5), 452-468.
- Jaskiewicz, P., González, V. M., Menéndez, S., & Schiereck, D. (2005). Long-run IPO performance analysis of german and spanish family-owned businesses. *Family Business Review*, 18(3), 179-202.
- Kota, H. (2018). Independent director: An oxymoron. Retrieved from <http://www.daihyioneer.com/columnists/oped/independent-director-an-oxymoron.html>
- Kotlar, J., Signori, A., De Massis, A., & Vismara, S. (2018). Financial wealth, socioemotional wealth, and IPO underpricing in family firms: A two-stage gamble model. *Academy of Management Journal*, 61(3), 1073-1099.
- Kuklinski, J., & Schiereck, D. (2007). Long-run performance of initial public offerings in the german stock market: The family business experience 1977 to 1998. *Corporate Ownership and Control*, 4(4 D), 357-396.
- Le Breton-Miller, I., & Miller, D. (2013). Socioemotional wealth across the family firm life cycle: A commentary on “family business survival and the role of boards”. *Entrepreneurship: Theory and Practice*, 37(6), 1391-1397.
- Leitterstorf, M. P., & Rau, S. B. (2014). Socioemotional wealth and IPO underpricing of family firms. *Strategic Management Journal*, 35(5), 751-760.
- Lien, Y., & Li, S. (2014). Professionalization of family business and performance effect. *Family Business Review*, 27(4), 346-364.
- Mahéroul, L. (2004). Is there any specific equity route for small and medium-sized family businesses? the french experience. *Family Business Review*, 17(3), 221-235.
- Masulis, R. W., Pham, P. K., & Zein, J. (2020). Family business group expansion through IPOs: The role of internal capital markets in financing growth while preserving control. *Management Science*, 66(11), 5191-5215.
- Mazzola, P., & Marchisio, G. (2002). The role of going public in family businesses' long-lasting growth: A study of italian IPOs. *Family Business Review*, 15(2), 133-148.
- Murthy, B. K.V., & Singh, A.K. (2014). Short-Run performance of IPO market in India. *International Journal of Financial Management*, 4(2), 11-22. 30.
- Murthy, B. K.V., Singh, A.K., & Gupta, L. (2016). Long-Run performance of IPO market in India. *International Journal of Financial Management*, 6(1), 17-27.
- Narasimhan, M. S., & Ramana, L. V. (1995). Pricing of initial public offerings: Indian experience with equity issues. *The ICAI Journal of Applied Finance*, 1(1), 26-39.
- Nikolov, A. N., & Wen, Y. (2018). Does family involvement matter post IPO? adding value through advertising in family firms. *Journal of Family Business Management*, 8(3), 218-234.

- Ritter, J. R. (1991). The long-run performance of initial public offerings. *The Journal of Finance*, 46(1), 3–27.
- Sonfield, M. C., & Lussier, R. N. (2009). Non-family-members in the family business management team: A multinational investigation. *International Entrepreneurship and Management Journal*, 5(4), 395-415.
- Tunger D., & Wilhelm, J. (2013). The bibliometric community as reflected by its own methodology. *Journal of Scientometric Research*, 2(2), 92-101.
- Vaz Ferreira, J. (2008). Determinants of performance of closely - held (family) firms after going public: The role of the ownership structure, economy, changes in top management, partial sale, equity concentration after the IPO and shareholders in management. *Corporate Ownership and Control*, 5(2 A), 55-67.
- Welch, I. (1989). Seasoned Offerings, Imitation Costs, and the Underpricing of Initial Public Offerings. *The Journal of Finance*, 44(2), 421–449.
- Yang, J., Ma, J., & Doty, D. H. (2020). Family involvement, governmental connections, and IPO underpricing of SMEs in china. *Family Business Review*, 33(2), 175-193.

Appendix 1: Highlights of Article on Family Firm IPOs: 'IPOs Antecedents'

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Antecedents/Predictor variables	Criterion Variable	Country	Findings
1	Masulis et al. (2020)	Family business group expansion through IPOs: The role of internal capital markets in financing growth while preserving control	Pecking Order theory	12,793 IPOs of Business Groups (1997-2007)	Firm growth motivations	NA	multiple	Family firms raise new equity through IPO to avoid a loss of control in particular when they present a greater rate of internal capital accumulation.
2	Chung et al. (2015)	Is Cross-Listing a Commitment Mechanism?: The Choice of Destinations and Family Ownership	NA	1201 cross-listings (1994-2008)	Private benefits of control	NA	multiple	Family firms choose to cross-list in the locations with weaker investor protection in order to retain private control benefits.
3	Sonfield & Lussier (2009)	Non-family-members in the family business management team: A multinational investigation	NA	593 IPOs	Non-Family manager in family firm	Going public	multiple	Presence of non-family manager in family business increases the chances of going public.
4	Helwege & Packer (2009)	Private matters	Agency Theory	181 private firms (1996)	Private benefits of control	NA	US	Family-owned firms tend to remain private to maintain private benefits of control.
5	Mahérault (2004)	Is there Any Specific Equity Route for Small and Medium-Sized Family Businesses? The French Experience	Agency Theory	131 IPOs (1987-1999)	Firm age and Family heterogeneity	NA	France	Small and medium sized family firm follow equity route for dilution whereas young and growing firms prefer to go public
6	Mazzola & Marchisio (2002)	The Role of Going Public in Family Businesses' Long-Lasting Growth: A Study of Italian IPOs	Corporate Governance Life Cycle	37 IPOs (1995-1998)	Private equity involvement	ROI, Going Public	Italy	IPO leads to growth and profitability in the long-run. Competitive environment and management ambitions are major factor behind going public.

Source: Authors' Own Compilation

Appendix II: Highlights of Articles on Family Firm IPOs: 'IPO Pricing'

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Predictor variables	Criterion Variable	Country	Findings
1	Yang et al. (2020)	Family Involvement, Governmental Connections, and IPO Underpricing of SMEs in China	Institutional Theory	577 IPOs (2004-2014)	Family involvement	underpricing	China	Chinese family firms exhibits less IPO underpricing as compared to non-family firms. Family member's political ties enhances the negative relation between family involvement and IPO underpricing.
2	Huang(2019)	Information asymmetry, legal environment, and family firm governance: Evidence from IPO underpricing in China	Agency Theory and Signaling Theory	506 IPOs (2007-2014)	Family status, family CEO and Legal environment	underpricing	China	Chinese family firms exhibits less underpricing as compared to non-family firms. underpricing is negatively related to the good legal environment in the region. Family CEO negatively affects Underpricing in FB. The positive effect of a non-family CEO on Underpricing is mitigated by the increase in the percentage of family directors.
3	González (2019)	Governance, sentiment analysis, and initial public offering underpricing	Agency Theory	193 IPOs (2000-2014)	Board Size, Board Independence and Tone of Corporate communications (Firm level)	underpricing	Latin America	Large board positively affects underpricing whereas independent board mitigates it. Tone in corporate communications is a signaling mechanism in IPOs. Reputation effect (family ownership) is priced by the market valuation of the IPO.
4	Chandler et al. (2019)	Family involvement signals in initial public offerings	Signaling Theory	153 IPOs (2009-2012)	Family involvement	Underpricing	US	Disclosing family presence in the IPO prospectus positively affects IPO underpricing.
5	Kotlar et al. (2018)	Financial wealth, socioemotional wealth, and IPO underpricing in family firms: A two-stage gamble model	Financial wealth and Socioemotional wealth	1,807 IPOs (1995-2011)	family status and family firms heterogeneity and CEO characteristics	Underpricing	Europe	Disclosing family presence in the IPO prospectus positively affects IPO underpricing.
6	Cirillo et al. (2015a)	All the power in two hands: The role of CEOs in family IPOs	stewardship theory	77 IPOs (2000-2014)	CEO power indicated by: structural, expert ownership, expert and prestige	Underpricing	Italy	CEO power positively influence the IPO valuation. If the CEO is a family member, the relationship is more strengthened.

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Predictor variables	Criterion Variable	Country	Findings
7	Carillo et al. (2015b)	Does family involvement foster IPO value? Empirical analysis on Italian stock market	stewardship theory	113 IPOs (2000-2011)	demographic variables including family firm status, family involvement in managerial positions and family generations.	Underpricing	Italy	Family firm status positively influences the IPO valuation. The beneficial effect of family control is mainly attributable to the first generation
8	Letterstorf & Rau (2014)	Socioemotional wealth and IPO underpricing of family firms	Socioemotional wealth	153 IPOs (2004-2011)	family status	Underpricing	Germany	Family firms exhibits higher IPO underpricing as compared to non-family firms
9	Ding & Pukthuanthong (2013)	Legitimacy signals and family IPO performances	Signalling Theory	258 IPOs (1962-2005)	corporate governance and family firm status	underpricing	Taiwan	Board independence, family ownership and prestigious underwriter negatively affects IPO underpricing in family firms whereas the effect is positive for non-family firms.
10	Yu & Zheng (2012)	IPO Underpricing to Retain Family Control under Concentrated Ownership: Evidence from Hong Kong	Agency Theory	151 IPOs (2002-2006)	Family involvement	underpricing	Hong Kong	IPO underpricing is positively associated with family involvement
11	Daugherty et al. (2012)	Underpricing of IPOs of U.S. family controlled businesses	Agency Theory	236 IPOs (1996-2004)	Family status	underpricing	US	Family controlled firms exhibit lower underpricing than Non-family controlled firms. The Family controlled firms paid higher underwriting fees for a less prestigious Investment Banker but experienced less underpricing.
12	Hearn (2011)	The performance and the effects of family control in North African IPOs	Agency Theory	63 IPOs (2000-2009)	Family involvement	underpricing	North Africa	Family firms exhibits lower underpricing as compared to non family firms.

Source: Authors' Own Compilation

Appendix III: Highlights of Articles on Family Firm IPO: 'IPO Performance'

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Predictor variables	Criterion Variable	Country	Findings
1	Hilsbeck (2019)	The Board Value Protection Function in Young, Mature and Family Firms	Signaling Theory, Resource Based View	446 IPOs (1995-2015)	Family status	Tobin's Q	Germany	Effect of Board value protection is more in family firms. The positive effect of board value protection on Tobin's Q is more in mature family firms.
2	Shen (2018)	Family business, transgenerational succession and diversification strategy: Implication from a dynamic socioemotional wealth model	Socioemotional wealth	Theoretical	Family firm heterogeneity	underpricing and diversification	Hong Kong	family firms are less likely to diversify than the non-family firms. Presence of second generation increases the likelihood of diversification in family firms.
3	Nikolov & Wen (2018)	Does family involvement matter post IPO? Adding value through advertising in family firms	Resource-based view (RBV)	2000 companies (2000-2010)	family status, advertising and RBV	ROA and Tobin's Q	US	family firms earn higher return on their advertising investment as compared to non-family firms.
4	Cirillo et al. (2017)	A complicated relationship: Family involvement in the top management team and post-IPO survival	Socioemotional wealth	113 IPOs (2000-2011)	Family firm heterogeneity and family CEO	survival	Italy	Presence of family members on top management reduces the likelihood of post-IPO survival whereas family CEO weakens this relationship. Involvement of family generation negatively affects survival of firm.
5	Jain & Shao (2015)	Family Firm Governance and Financial Policy Choices in Newly Public Firms	Agency theory and Socioemotional wealth	1245 IPOs (1997-2008)	family status, family firms heterogeneity and CEO characteristics	profitability	US	Family firms maintain higher post-IPO leverage, longer debt maturity structure and are reluctant to raise post-IPO capital relative to non-family firms.
6	Lien and Li (2014)	Professionalization of Family Business and Performance Effect	Corporate Governance Life Cycle	205 IPOs (2000-2009)	Family involvement	Tobin's Q	Taiwan	Family control have a negative effect on the post-IPO performance.
7	Jain & Shao (2014)	Family Involvement and Post-IPO Investment Policy	Agency theory and Socioemotional wealth	1475 IPOs (1997-2004)	family status, family firms heterogeneity and CEO characteristics	market return	US	family firms underinvest in post-IPO liquidity, acquisition spending and R&D expenditures, more likely to overinvest in capital spending in comparison to similar non-family firms.

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Predictor variables	Criterion Variable	Country	Findings
8	Huang et al. (2014)	Listing approach, political favours and earnings quality: Evidence from Chinese family firms	Alignment Theory and Entrenchment Theory	488 IPOs (2003-2008)	Going Public through IPO and takeover	Corporate financial reporting	China	Family firms going public via IPO have worse earnings quality as compared to firms going public via takeovers. Political favour to family firms negatively affects the financial reporting.
9	Hearn (2013)	The determinants of director remuneration, executive tenure and individual executive disclosure in North African IPC firms	Agency Theory	69 IPOs (2000-2010)	corporate governance and family firm	director remuneration, executive tenure and likelihood of individual executive salary disclosure	North Africa	Presence of independent directors on board positively affects the director's remuneration and job tenure in family firms. Family CEO negatively affects the disclosure of remuneration.
10	Giovannini (2010)	Corporate governance, family ownership and performance	Agency, stewardship and contingency theory	56 IPOs (1999-2005)	corporate governance and family firm	BHAR	Italy	Presence of venture capitalists, large board size and appointment of compensation & appointment committee positively affects board independence. Board independence positively affects performance, while involvement of family on board negatively affects performance.
11	Vaz Ferreira (2008)	Determinants of performance of closely-held (family) firms after going public: The role of the ownership structure, economy, changes in top management, partial sale, equity concentration after the IPO and shareholders in management	Agency Theory	25 IPOs (1989-2004)	Family firm heterogeneity and CEO characteristics	Operational, social and financial performance using Sales efficacy, ROS, Capital structure, BHAR	Portugal	Family involvement in firms after going public positively affects the performance and operating efficiency. Changing the CEO that was present during the IPO process negatively affects the performance of firm.

S.No.	Authors/Year	Article Title	Underpinning Theory	Data	Predictor variables	Criterion Variable	Country	Findings
12	Chahine (2007)	Block-holder ownership, family control and post-listing performance of French IPOs	NA	163 IPOs (1996-2000)	family firm and block-holder ownership	BHAR (1 Year)	France	Negative but weak relationship was observed between block-holder ownership and post one year IPO performance. Family ownership and one year BHAR have cubic relationship.
13	Kuklinski & Schiereck (2007)	Long-run performance of initial public offerings in the German stock market. The family business experience 1977 to 1998	Agency Theory and Rent protection Theory	174 IPOs (1977-1998)	Family firm	BHAR (3 years)	Germany	Family firms IPOs underperform in the market supporting the rent protection theory.
14	Jasiewicz et al. (2005)	Long-run IPO performance analysis of German and Spanish family-owned businesses	Alignment Theory and Entrenchment Theory	196 IPOs (1990-2001)	Family firm heterogeneity	BHAR	Germany and Spain	Non-family firm IPOs perform insignificantly better. In family-owned businesses, strong family involvement has a positive impact on BHAR, whereas the age of the firm has a negative influence.
15	Mazzola & Marchisio (2002)	The Role of Going Public in Family Businesses' Long-Lasting Growth. A Study of Italian IPOs	Corporate Governance Life Cycle	37 IPOs (1995-1998)	Going Public	ROI	Italy	IPO leads to growth and profitability in the long-run. Competitive environment and management ambitions are major factor behind going public.

Source: Authors' Own Compilation