

## A Bibliometric Review on the Initial Public Offerings of Small and Medium Enterprises

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### ABSTRACT

The study aimed at outlining the IPO literature with special focus on initial public offerings of small and medium enterprises. The study used the past 21 year's bibliometric data to analyze the literature development in the field. The study identified the areas of corporate governance, valuation, earning management, intermediary's reputation and venture capital financing as the key area for future research potential.

**Key words:** Bibliometric, IPO, enterprises, small, medium

### INTRODUCTION

The small and medium enterprises (SMEs) play a pivotal role in shaping the economy of a nation through generating local employment and contributing a large sum through exports of a country. However, one of the key challenges, SMEs face is funding their growth and sustaining in the volatile business environment. Therefore, various developed and developing markets are providing the funding opportunities to SMEs through their special public issue platforms such as AIM, Chinext, Alternext, NSE-Emerge and BSE SME IPOs. Most of the studies of main board IPOs discuss about the firms decision to go public, role of venture capital financing, private equity, IPO pricing, earning management and corporate governance on the impact of short and long run performance of these firms. Due to the distinct regulatory environment, relaxed norms and different visions of the SME platforms the results of these IPO bound SMEs are volatile and inconsistent with the results of main board firms. Hence, this gap provides an opportunity to review the development of SME IPO literature till present time and identify the fields that provide space for future research.

Similarly, the literature on initial public offerings (IPO) widely discusses about the valuations and performance of the main board IPO firms. However, the literature on the public

issues of small businesses is limited in nature. Thus, the study aimed at outlining the IPO literature with specifically focusing on the initial public offerings of small and medium enterprises. The study used the literature of past two decades and employed bibliometric analysis to outline the literature and developments in the field of SME IPOs.

### METHODOLOGY

The study used the bibliographic data from the Scopus database using the combination of keyword search such as "SME IPO", "small and medium enterprises", "initial public offering", "IPO", "small business", "public issue" and "small business IPOs. The search resulted in 112 articles from 2001 to 2022 that further reduced to 70 articles after removing the duplicates and manually removing the articles not matching the aim of the study. Similarly, the study used biblioshiny from R and Vos-Viewer to analyze the bibliographic data. The co-occurrence of keywords and bibliometric coupling to create different theme clusters were using the reference data of selected articles and frequency of any two words coming together. Furthermore, to identify the pivotal articles of various themes through citation data, important journals that contributed in the relevant field and countries that had maximum number research done in the area of SME IPOs.

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**RESULTS AND DISCUSSION**

Before 2010, on an average, only one article was published in the field of SME IPOs that considerably increased to five articles a year post 2010 (Fig. 1). The year 2020 had the highest number of article published with the count of 11 articles. Contrarily, there were four years in which not a single article was published in the same field. Fig. 2 indicates the publications of top authors overtime based on the global and local citations. The result indicated two articles in 2004, three articles from 2010 to 2014, two articles from 2012 to 2015, two articles from 2011-13, one article in 2016, and eight articles from 2018 to 2022 (Arora and Singh, 2019, 2020b, 2021; Ghalke *et al.*, 2018, 2022; Qiu *et al.*, 2018; Yang *et al.*, 2020) as the highest number of published articles by the authors in the field. Some of the key areas that had been explored with regards to SME IPOs were corporate governance, merger and acquisition, under pricing, IPO performance, and bankruptcy, industry such as biotech and SME platform such as Chinext.

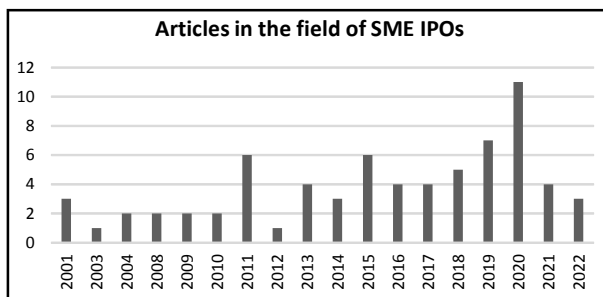


Fig. 1. Annual production of articles.

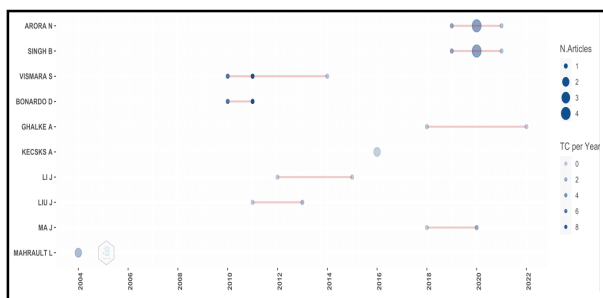


Fig. 2. Top author's publications.

The study employed bibliography coupling to create theme clusters based on the reference data of selected articles. In order to create thematic clusters, first the study filtered the articles with the condition of at least one citation and linking with other network.

Therefore, the study finalized five theme clusters with 35 articles post-treatments (Fig. 3). Each bibliometric theme was colour coded in red as cluster 1, green as cluster 2, blue as cluster 3, yellow as cluster 4 and purple as cluster 5.

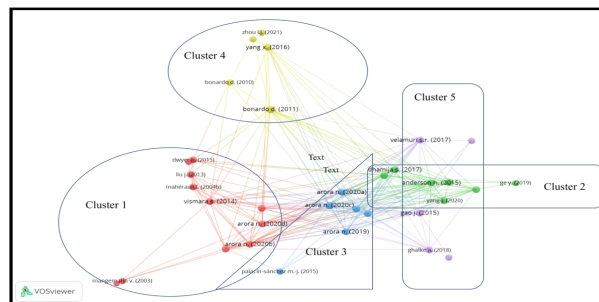


Fig. 3. Thematic clusters based on bibliometric coupling.

The cluster 1 identified the first research theme on SME IPOs consisting of 11 key articles that discussed about corporate governance and issues of distinct regulatory environment. The studies of Palacin-Sánchez *et al.* (2019) and Arora and Singh (2020) suggested the positive impact of board age, size and independence on underpricing level in SME IPOs and reduced under pricing in case the presence of a female board member (Arora and Singh, 2020c). Similarly, the funds generated from these IPOs helped SMEs funding their growth that profits all the stakeholders (Kutsuna *et al.*, 2016; Liu and Jin, 2018). However, thin trading, lack of underwriters, poor benchmark performance, and low liquidity caused poor operating and long run performance of these SMEs (Dwyer and Kotey, 2015; Laokulrach, 2019).

The cluster 2 included seven articles that discussed about the IPO underpricing and gave special focus on the aftermarket performance of SME IPOs in short run. In which, Dhamija and Arora (2017) and Bhattacharya (2017) found the Indian SME IPOs less underpriced than mainboard IPOs. On contrary, the Chinese markets were highly underpriced and factors such as political connections, IPO pricing, CEO's attributes and irrational investor behaviour were the main determinants of IPO underpricing in Chinese market (Wang *et al.*, 2018; Ge *et al.*, 2019; Zou *et al.*, 2019; Yang *et al.*, 2020).

The cluster 3 included six key articles that discussed about the role of underwriters and their impact on firm performance. The lack of

SME recognition caused information asymmetry in IPO market, hence, they needed the support of reputed underwriters to signal the IPO quality and promote their public issue. Arora and Singh (2020, 2020a, 2021) found the positive significance of underwriter reputation on the oversubscription, underpricing and long run performance of Indian SME IPOs. However, this often held till two year periods and the SME IPOs reflected underperformance in third year.

The cluster 4 included five articles that discussed about the role of SMEs valuation and venture capital funding on the performance of IPOs in the short and long run. Small firms lacked merger and acquisition opportunities due to lack of attractiveness, however, going public enhanced their valuation in the eyes of investors and gave a better short run performance that lacked in the aftermarket. Despite of information asymmetry, the angel investors were more likely to identify better performing firms at early stage and this boosted their performance in short and long run (Yang and Wang, 2016; Zhou *et al.*, 2021).

The cluster 5 included five articles that discussed about the importance of ownership structure and earnings management in shaping the IPO performance. Numerous companies did earnings management to list at specific exchange or to reflect the strong book value of the firms. When executives faced the pressure, they often opted for the earnings management (Campa and Camacho-Miñano, 2015). Ghalke *et al.* (2018) found the evidence of higher earnings management in case of SMEs than mainboard firms. Similarly, Velamuri and Liu (2017) found an inverse relationship between the long run performance and the ownership reputation of venture capitalist and underwriters.

## CONCLUSION

The study aimed at outlining the IPO literature with special focus on initial public offerings of small and medium enterprises. The study used the past 21 years bibliometric data to analyze the literature development in the field. The article employed bibliometric coupling to identify various thematic clusters and potential field of research. The study identified the areas of corporate governance, valuation, earnings management, intermediary's reputation and

venture capital financing as the key area for future research potential. However, the researchers can explore the use of artificial intelligence and machine learning to calculate the IPO performance and determine the factors that impact the performance of SMEs IPOs. Similarly, future studies can focus on the role of regulatory bodies in shaping the performance of IPO bound firms. The role of corporate social responsibility on the performance of SME IPOs can also be considered as a future research question. Furthermore, the role of investor sentiments in the success of SME IPOs may be considered.

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