

DIVIDEND POLICY: A BIBLIOMETRIC ANALYSIS



Divya Saini ^(a) Priti Sharma ^(b)

^(a) Research Scholar, Department of Commerce, MDU Rohtak, India; E-mail: divyasaini759@gmail.com

^(b) Assistant Professor, Department of Commerce, MDU Rohtak, India; E-mail: pritisrm04@gmail.com

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ABSTRACT

The dividend is one of the controversial topics in Financial Management which mean earnings of management how much amount is distributed to the shareholders and what percentage is retained in the business. The main objective of the study is to provide a comprehensive overview of previous studies related to the topic of Dividend Policy in the context of statistical analysis of published articles/documents around the world. For this purpose, Bibliometric Analysis was conducted through the Bibliometrix library and the Biblio-Shiny platform of RStudio. The web of Science database was used for the collection of data on the topic of Dividend Policy. The search was made in the web of science database with the keywords "The dividend policy", "Dividend payouts", "Determinants" and "Lintner model" covering the period of 20 years from 2002 to 2022. The publications/documents/articles included in the study were written by 839 authors from all over the world. The Bibliometric Analysis of the collected data indicates that the Dividend Policy has a significant contribution to scientific production. In 2011, there was a great increment in the number of publications and since 2018 the publications are continuously increasing. USA, UK and China are the pre-eminent countries having significant contributions to research on Dividend Policy.

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INTRODUCTION

With the advancement of economic scenario, investment in different sectors of economy is rapidly increasing. Due to increase in investment, there is increase in return also. These returns are the earnings for the companies. These earnings can be utilized in different ways like retained in business for growth purpose or it may be distributed to the investors (Dong et al., 2005). The amount which is dispersed to the shareholders for their investment is known as Dividend. Joshua warner (2019) "A dividend is money that is regularly paid by a business to its shareholders using profits, cash reserves or even debt". Dividend policy refers to the financial policies regarding payment of dividend. It refers to firm's decision about its earnings, which mean how much of its earnings is distributed among equity shareholders & how much is retained in business. Dividend payouts decision is considered as an integral part of firm's financial ecosystem (Mensa et al., 2014).

Dividend decision is like a puzzle which remain unsolved as different researchers have different viewpoints regarding dividend policy. In words of Black (1976) "the harder we look at the dividend picture, the more it seems like a puzzle, with the pieces that just do not fit together". Dividend is one of the controversial topics of study as different researchers have different point of view like: Dividend policy is affected by executive stock option holdings & stock options (De Cesari & Ozkan, 2015), growth opportunities (Flavin & O'Connor, 2017), creditor rights & culture (Byrne & O'Connor, 2017), bank risk taking (Onali, 2014), new CEO compensation (Chen et al., 2019), restricted monetary policies (Pandey & Bhat, 2007), corporate social responsibilities (Cheung et al., 2018), leverage (Cooper & Lambertides, 2018), family control, tangibility & firm size (Yousaf et al., 2019), Institutional ownership & board composition (Abdelsalam et al., 2008), profitability (Renneboog & Trojanowski, 2007) and many more variables. Lintner (1956) proposed that dividend depends upon current earnings and lagged dividend of firms. Renneboog and Trojanowski (2011) reveals that dividend payout decisions of firms are affected by liquidity needs of directors. Michaely and Roberts (2011) in their study disclose that Ownership structure and incentives are the main factors that play an important role in determining dividend policy. Some of the firms those paying dividend, now they stop paying (Michaely & Moin, 2022). There are no appropriate sets of factors

¹ Corresponding author: ORCID ID: 0000-0002-9798-1436

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influencing dividend policy of all the firms because dividend policy is highly volatile to various factors like firm & market characteristics and alternative forms of dividend (Baker & Weigand, 2015).

The main purpose of this study is to focus on following questions related with dividend policy over the year 2002-2022. These are as under:

- RQ 1 – what is the statistical result of the study in context of document type, document content, authors and author’s collaboration?
- RQ 2 – what are the important keywords (Author keywords and Keywords plus) related with the study? and also to find out the co-occurrence between keywords.
- RQ 3 – Which source is most significant in terms of publishing articles related with the study?
- RQ 4 – Who are the main contributing Authors related with the study?
- RQ 5 – Which country or Institution have highest contribution in the study? And also, to find out the Co-citation network of papers and sources related with Dividend Policy.

MATERIALS AND METHODS

Bibliometric Analysis of Study

The word Bibliometric was first propounded by Otlet (1934) which means “the measurement of all aspects related to the publication and reading of books and documents”. It is a statistical method which is used for analysis of books, articles, documents and other publications on basis of scientific data. It is a quantitative method for describing, monitoring and evaluating the published research articles/documents. Various software available for Bibliometric Analysis but the present study is based on R software. It was carried out through Bibliometric library and Biblio-Shiny platform of RStudio. Biblio-shiny is shiny application which gives a web-interface for the purpose of bibliometric analysis. It depicts comprehensive outlook of Dividend policy like authors, author’s collaborations, citation, co-citation, journal, affiliated institutions, top countries, keywords and co-occurrence of keywords etc.

Data Collection

The data for the study had been collected through web of science database as on January 28, 2022 covering a period of 20 years from 2002 to 2022. In web of science database, the search was made through following words “Dividend Policy” or “Dividend Payouts” and “Determinants” and “Lintner Model”. This search gave a core collection of 2435 results, then after certain refinement on basis of publication years, web of science categories, document types, language etc., it was reduced to 1004 results. On basis of important keywords, a total of 415 articles which were written by 839 authors, was selected for Bibliometric Analysis performed through Bibliometric library and Biblio-Shiny platform of RStudio. Figure 1 describe the workflow of study as firstly the main keywords were identified for search in web of science database and 415 articles were selected after certain refinements. After that collected data were analyze through bibliometrix library and biblio-shiny platform of R studio.

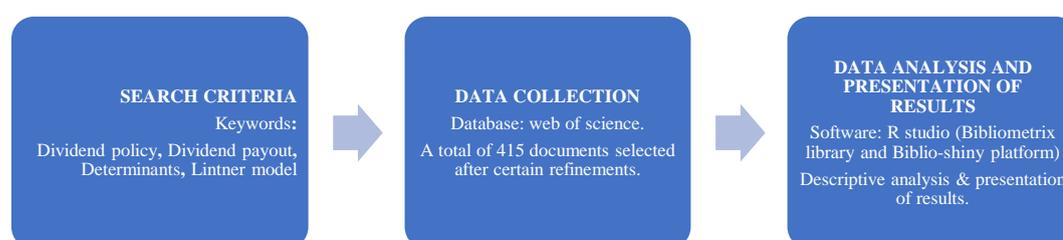


Figure 1. Workflow of study

RESULTS AND DISCUSSIONS

Statistical Results

Table 1 elucidate the main information about the study that was analyze through R studio. This table is based on data extracted from web of science database, which is the most widely used, oldest and authoritative database for publications & citations. This study comprised a total of 415 documents, which consists of published articles, articles from book chapters, early access and proceeding papers. It covers a total timespan of 20 years from 2002 to 2022. The 415 documents in the study were published by 839 authors from different institutions and countries around the world with average citations 29.13 per document and the authors collaboration index is 2.22. The documents used in this study includes a sum total of 8614 references, 654 keywords plus and 888 author’s keywords.

Table 1. Information about Study

Description about Data	Results
Time Duration	2002-2022
Sources	66
Documents	415
Average years from publication	7.82

Figure 5 depicts the word growth of keywords. It is the graphical representation of keywords associated with dividend policy. These are Agency cost, corporate governance, determinants, disappearing dividend, earnings, information, investment, ownership, payout and policy. It shows growing tendency of these keywords over the time period from 2002 to 2022.

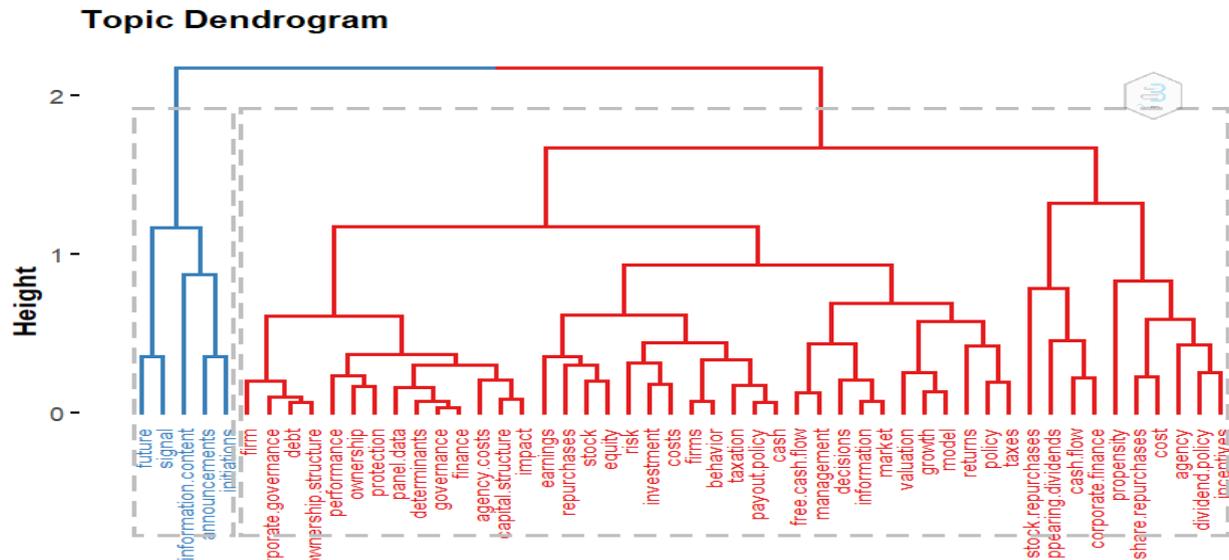


Figure 6. Dendrogram of keywords plus

Figure 6 shows the Dendrogram of keywords plus. Dendrogram is like a tree plot consisting of hierarchical relation between different keywords. The analysis of dendrogram is based on the height at which the keywords are connected. The blue lines show the keywords related with dividend policy and the red lines shows the factors determining the dividend policy. The words at same height have similar significance.

Source’s Significance

In field of research, sources are the online platform where one can get access of articles, documents, books, journal etc. There are various journals available but the quality journals are those whose impact factor is higher. The impact factor of journal is measured with the help of h index which is based upon publications and citations of particular journal.

Figure: 7 portrays the source significance on basis of number of publications and value of h index. It shows that the JOURNAL OF CORPORATE FINANCE has 58 highest number of publication and also the value of h index of this journal is highest. The most significant source for the study of Dividend Policy is “Journal of Corporate Finance” followed by “Managerial Finance”, “Journal of Business Finance & Accounting” and “Journal of Financial Economics” etc.

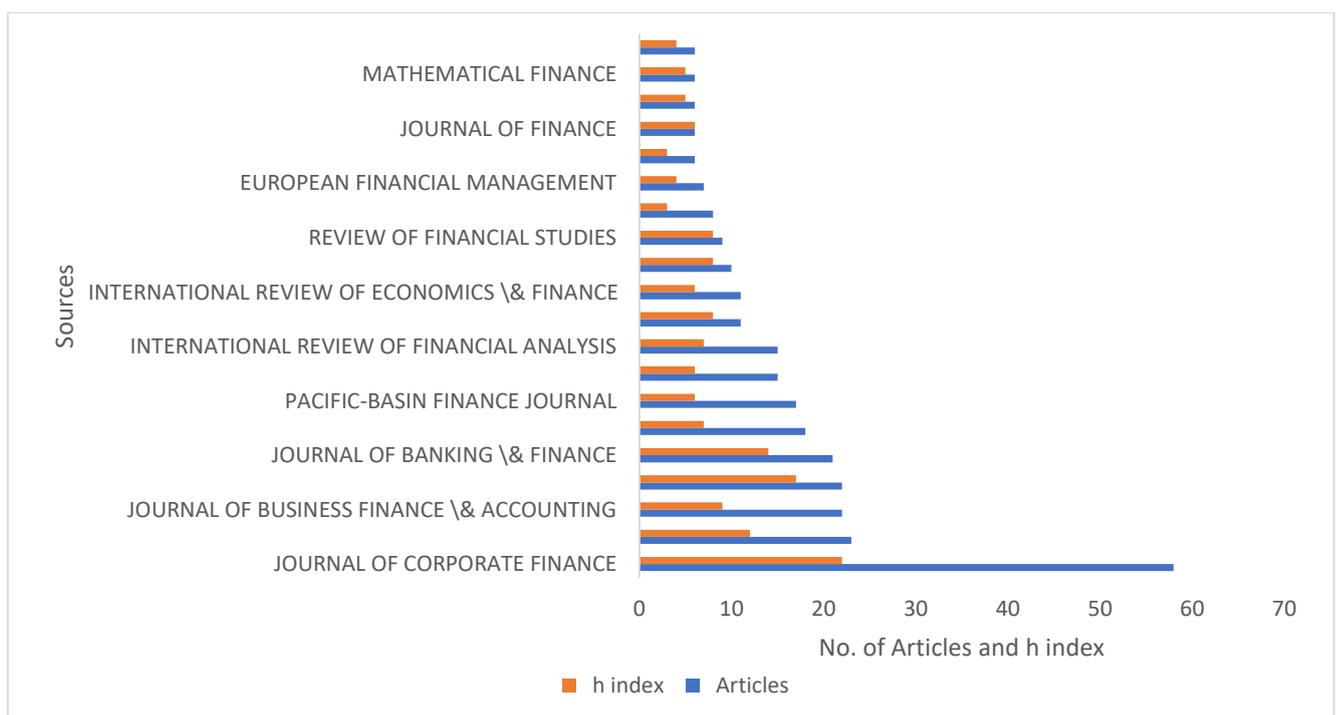


Figure 7. Main Source/Journal (Top 20)

Figure 8 represent most local cited top 20 journals. The larger value of citations indicates the quality and impact of particular source. The Journal of Financial Economics has highest numbers of citations 2956 which is followed by Journal of Finance has 2622 numbers of citations. As shown in Figure: 7 “Journal of Corporate Finance” has highest value of h index and articles but its local citation is 613 only.

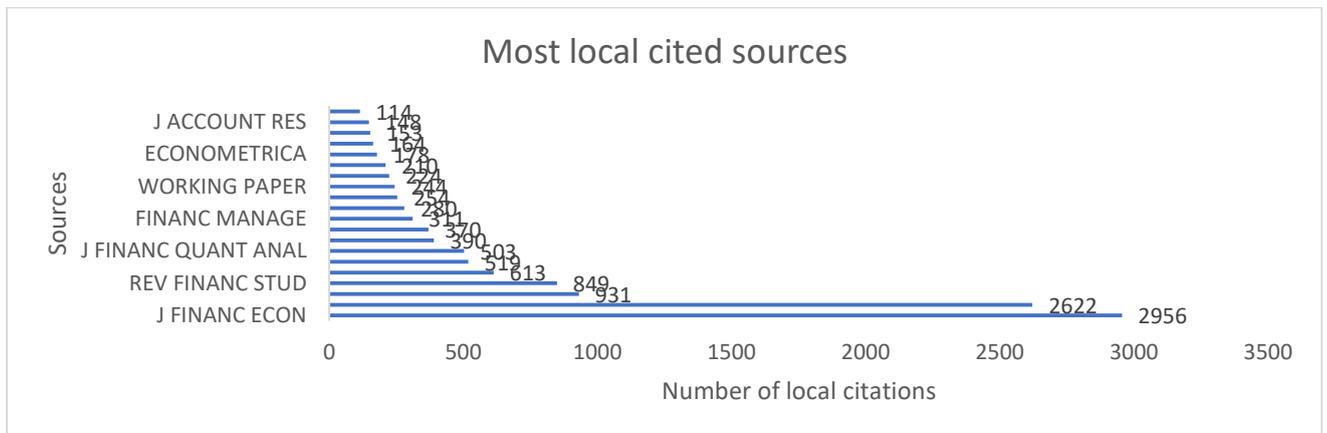


Figure 8. Most Local Cited Sources (Top 20 sources)

Top Authors

Top Authors or the main authors who have highest contribution in study can be identified through number of publications, citation score, value of h index etc. The study includes a total of 415 documents written by 839 authors. Figure: 9 depicts the total citations of top 20 Authors. It depicts that MICHAELY R from Cornell University, Johnson school of management, USA has highest total citations 2023, BRAV A of Duke University, Fuqua School of Business, USA, GRAHAM JR of Duke University, Durham, USA & HARVEY CR have same number of citations 831. MICHAELY, R. also have highest number of publications and greater value of h index.

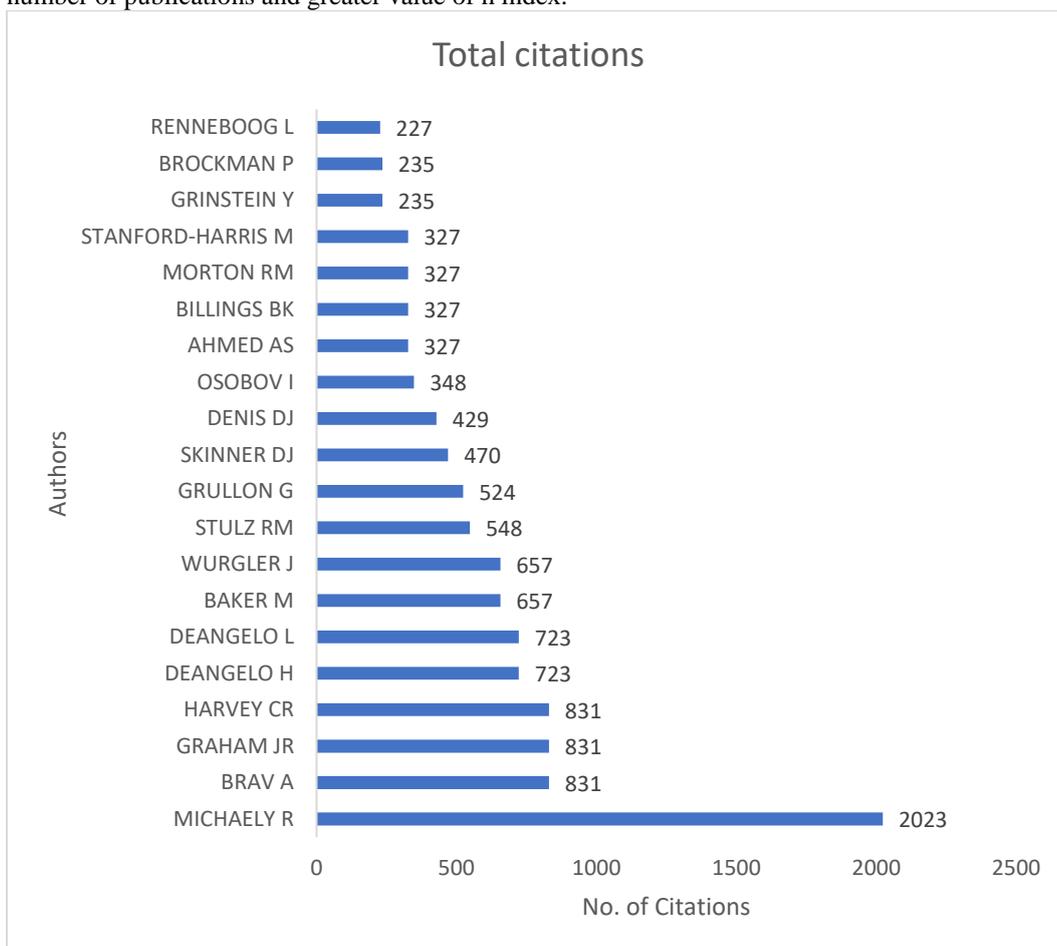


Figure 9. Most cited Authors (Top 20)

Figure 10 portrays relevance of top 20 authors by number of citations of their particular article. The citation score of any article represents its significance. Brave, A. et al. (2005) from Duke University of USA has highest number of

citations 821 on their article titles as “Payout policy in the 21st century”. The second highest citation 548 is of DeAngelo et al. (2006) from university of southern California, USA in their document titled as “Dividend policy and the earned/contributed capital mix: a test of the life cycle theory”. There are many other authors who have splendid citation score like Baker and Wurgler (2004) in their article titled as “A catering theory of dividends”, Grullon and Michaely (2002) etc.

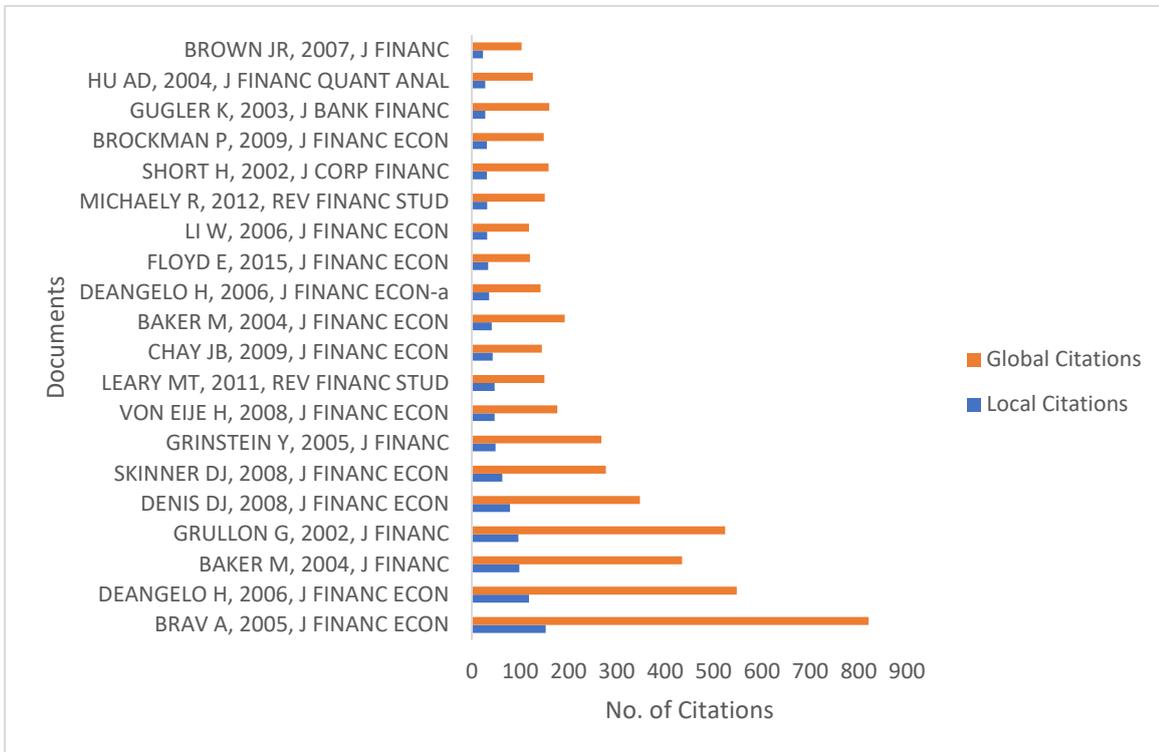


Figure 10. Relevance of authors by number of citations and particular article (Top 20)

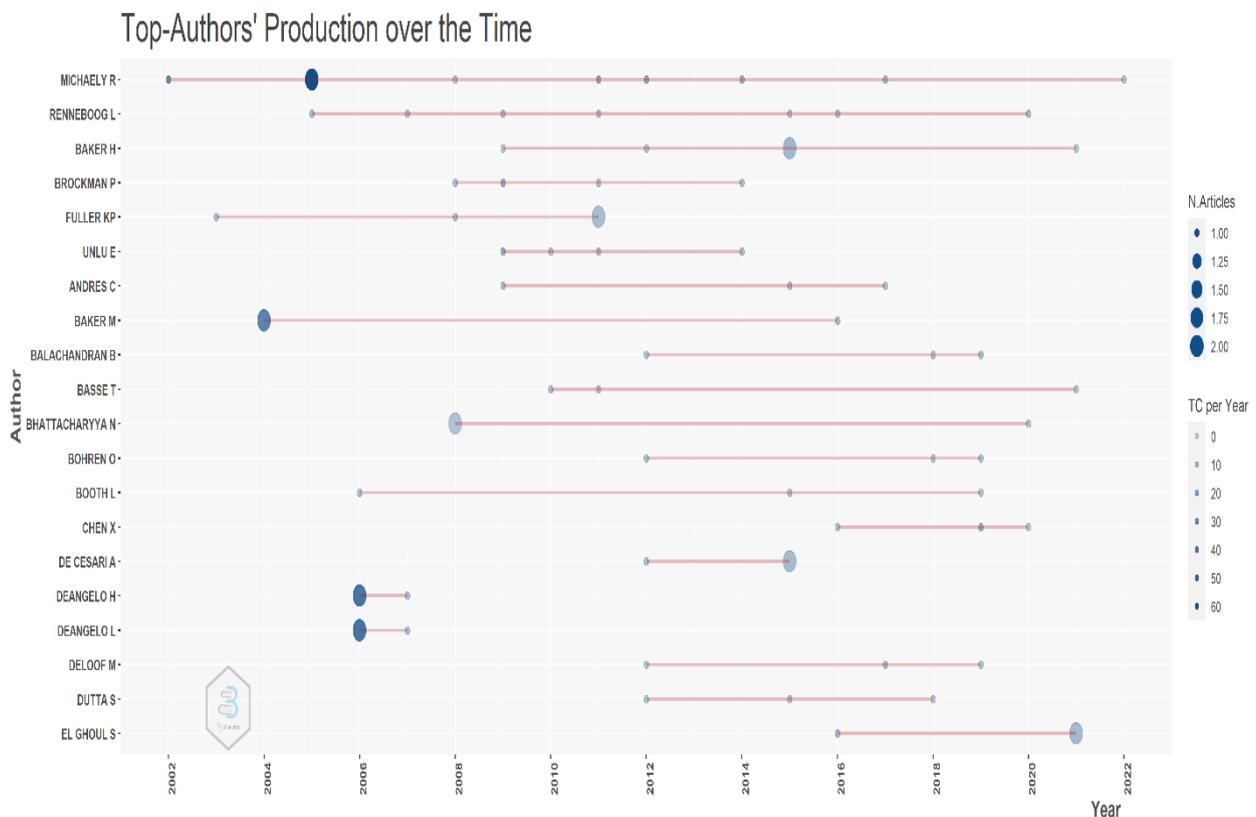


Figure 11. Time evolution of Authors (Top 20)

Figure 11 clearly shows the production of top 20 authors over the time period of 20 years from 2002 to 2022. The author Michaely, R. of Cornell university, Johnson School of Management, USA has greatest contribution in field of

research related with the topic dividend policy over the years from 2002 to 2022. He published an article on titled “Dividend, share repurchase and substitution hypothesis” in 2002 having citation score 524, in 2004 titled as “The information content of share repurchase program” having citation score 298, in 2022 titled as “Disappearing and reappearing dividends” and many more. Another author Renneboog, L. of Tilburg university, Netherland worked for 15 years from 2005 to 2020, he wrote an article titled as “When do German firms change their dividend?” in 2005, “How relevant is dividend policy under low shareholders protection?” in 2020 etc. There are many other authors who have significant contribution in the field of research related with Dividend policy like Baker and Weigand (2015) etc.

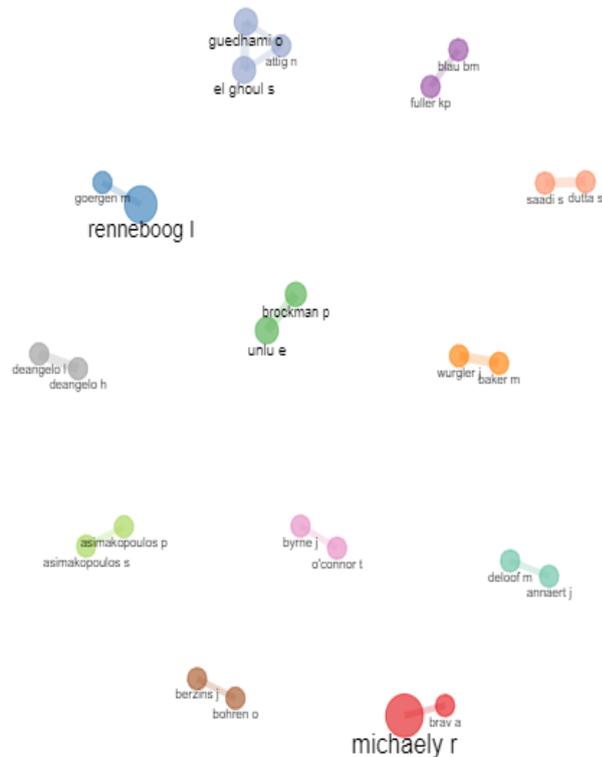


Figure 12. Collaboration network of authors

Figure 12 represent the collaboration network between different authors. It shows the collaborative work of authors with the help of different colors clusters. Grey color cluster shows the collaborative work of DeAngelo et al. (2008) of university of southern California, USA. They jointly worked on an article in 2006 titled as “The irrelevance of the MM dividend irrelevance theorem” and in 2008 titled as “Reply to Dividend policy: Reconciling DD with MM”. The green color cluster indicate the collaborative work of Brockman and Unlu (2009). They jointly work on the document in 2009 named as “Dividend policy, creditor rights and the agency cost of debt” and Brockman and Unlu (2011) on “Earned/contributed capital, dividend policy and disclosure quality: An international study”.

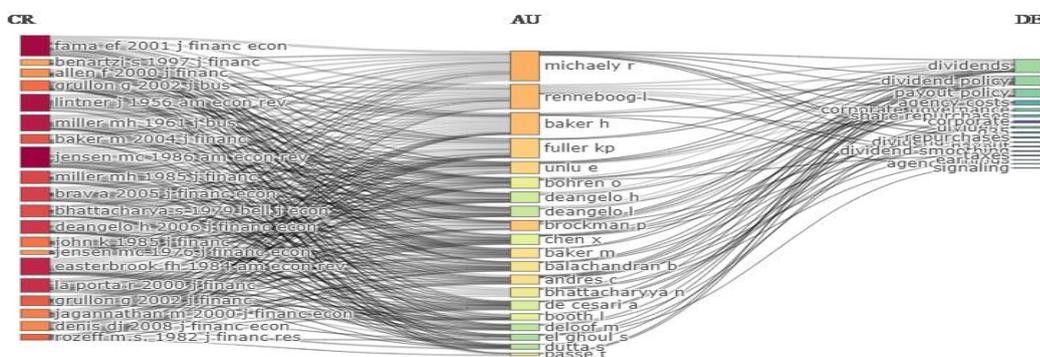


Figure 13. Three-Fields Plot: References-Authors-Keywords

Figure 13 depict the interconnection between references, authors and keywords with the Three-Fields Plot. Under this, there are three sections the left section represents the references, middle one indicates the authors and the right section represent the keywords used in the studies. The grey lines between these sections shows the inter-relation between references, authors and the keywords. The main keywords used by different authors are dividend, dividend policy, payout policy, agency cost, dividend smoothing etc.

Top Institutions

Various authors have significant contribution in field of research on Dividend policy. They have affiliations with different universities and institutions. Figure: 14 clearly portrays the top 20 affiliated institutes, University of Missouri, Columbia, Missouri has highest number of published articles. The other universities like Harvard University (Cambridge, United States), Cornell University (Ithaca, United States) and Tilburg University (Netherlands) also have great number of published articles.

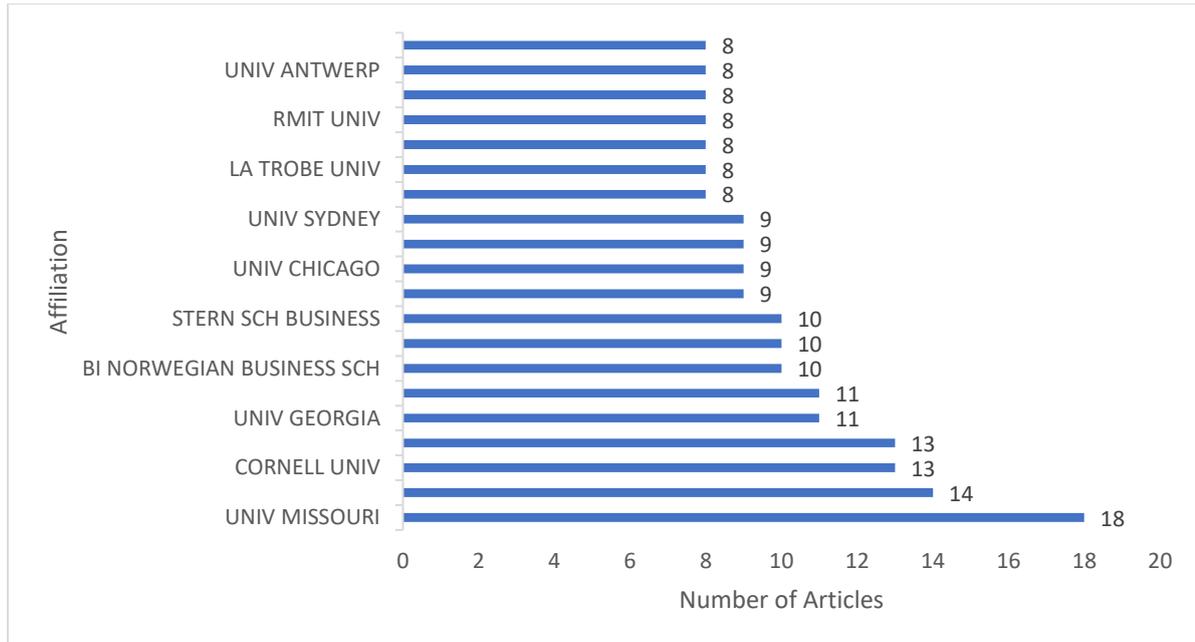


Figure 14. Top 20 Affiliation of Institutes

Figure 15 represent the Collaboration network of institutes. It is shown through different color clusters. The green color cluster shows the collaborative work of Cornell University (Ithaca, United States and Duke University (Durham, USA).

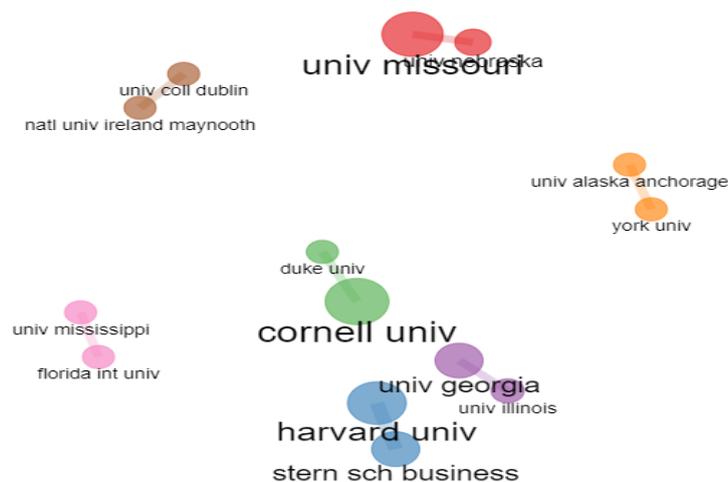


Figure 15. Collaboration network of institutes

Top Countries

USA has highest numbers of publications on the topic Dividend Policy both in terms of single country publications and multiple country publications as shown in Figure 16. The contribution of other countries like United Kingdom, China, Australia and Canada is also appreciable.

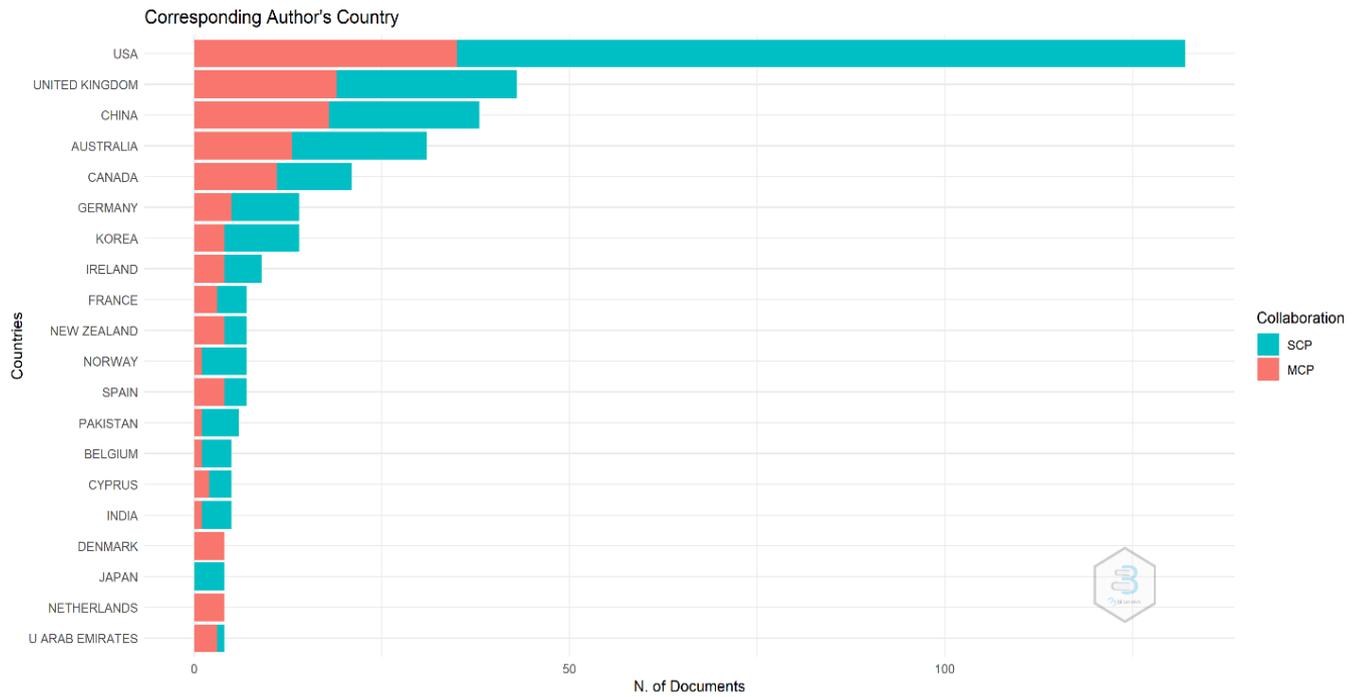


Figure 16. Corresponding Author's Country (top 20)

The country USA has topped the list of Country Scientific Production on the topic of Dividend Policy as shown in Figure 17. USA has published a total of 434 articles followed by China 144, UK 128, and Australia 93 etc.

Region	Frequency
USA	434
CHINA	144
UK	128
AUSTRALIA	93
CANADA	64
SOUTH KOREA	47
GERMANY	42
NETHERLANDS	25
FRANCE	23
IRELAND	22
NORWAY	20
BELGIUM	19
NEW ZEALAND	18
SPAIN	18
PAKISTAN	17
ISRAEL	14
JAPAN	13
SINGAPORE	13
INDIA	12
TURKEY	11

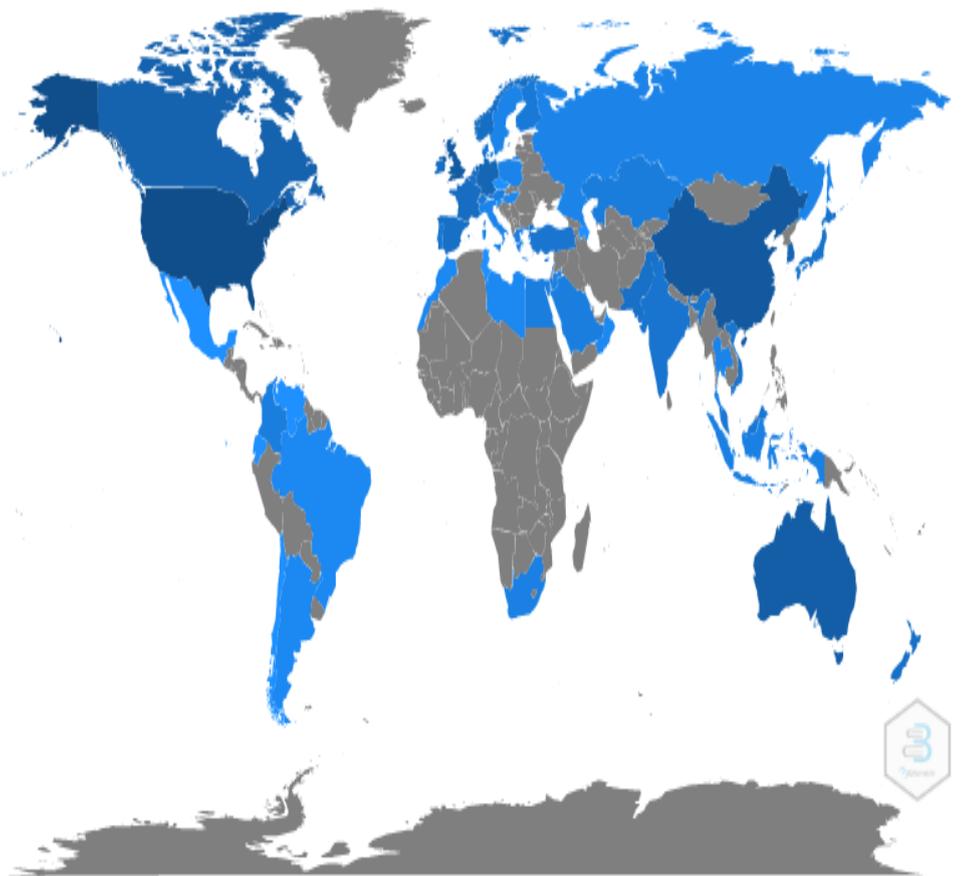


Figure 17. Country Scientific Production

be possible that when bibliometric analysis is performed with different database the results may vary. The further study on this topic can be made by using other databases which will give more reliable and genuine results.

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