The Bibliometric Analysis of Economics and Business Research Trends in Vietnam

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Abstract
The study applies the bibliometrics method to analyze 5,389 publications of research institutions in Vietnam for the economic and business field in the Scopus database.

The results of the study provide an overview of publishing trends in the business and economic field in Vietnam such as the most cited articles, the network of these publications, the most productive authors, the most influential journals, the keywords co-occurrence network and the research cooperation between Vietnam and other countries.

The purpose of this study is to provide a comprehensive picture of the current state in the field of economics and business research in order to suggest future research directions.

Key-words: Bibliometrics Analysis, Business, Economics, Vietnam.

JEL Classifications: C10, C88, D80, M21, G30.

1. Introduction

In recent years, research in the field of business and economics in Vietnam has increased rapidly, especially in the period 2014-2021. Table 1 shows the number of publications by year in Vietnam growing between 1992 and 2021. Most of the increase in the number of publications was 2014, particularly, in 2020 the number of publications increased by more than 100% compared to 2019 with the absolute number of 940 publications.
Table 1 - Number of Documents Published in Business and Economics per year in Vietnam

| Year | Documents |
|------|-----------|
| 2021 | 627       |
| 2020 | 1831      |
| 2019 | 895       |
| 2018 | 577       |
| 2017 | 319       |
| 2016 | 233       |
| 2015 | 173       |
| 2014 | 145       |
| 2013 | 99        |
| 2012 | 106       |
| 2011 | 86        |
| 2010 | 66        |
| 2009 | 64        |
| 2008 | 31        |
| 2007 | 25        |
| 2006 | 26        |
| 2005 | 20        |
| 2004 | 16        |
| 2003 | 14        |
| 2002 | 7         |
| 2001 | 5         |
| 2000 | 2         |
| 1999 | 5         |
| 1998 | 4         |
| 1997 | 4         |
| 1996 | 3         |
| 1995 | 2         |
| 1994 | 2         |
| 1993 | 1         |
| 1992 | 1         |

Source: Scopus, accessed May 11, 2021

The study analyzed bibliometric dataset originating from 5,389 research publication records extracted, selected and refined from Scopus databases for business and economics research in the period 1992-2021 to analyze the current situation as well as current research topics of interest in Vietnam.
2. Methodology

The method of biometric analysis was first introduced by Pritchard (1969), so far this method has become a popular analytical method to understand the trend of development over time of the research field from the perspective of multidisciplinary (Donthu et al., 2021; Saheb et al., 2021).

Bibliometrics analysis is the application of statistical methods to produce analysis and trend identification of scientific production such as articles, books, conference papers and other publications. Biometric methods are increasingly being applied in many multidisciplinary research fields. Bibliometric analysis is applied in this paper as a useful quantitative tool to map the trend of knowledge production within the specified time frame 1992–2021.

Biometric analysis helps to generalize comprehensive knowledge of a research area, establish connections between studies, the most influential authors in the field of research, indicate new directions for future research (Donthu, Reinartz, et al., 2021). In this study, bibliometric analysis is carried out using co-occurrence, network analysis. It also uses bibliometric indicators to represent bibliographic data such as the total number of articles and citations.

There is much software to facilitate bibliometric analysis such as Bibexcel, VOSviewer®, Gephi, CiteSpace and GraphPad Prism. In this study, VOSviewer® (Van Eck & Waltman, 2010) were used to analyse, filter, clean, process and illustrate the bibliometric data.

This study used ‘advance search’ in the Scopus database with query string “(AFFILCOUNTRY (Vietnam) AND (LIMIT-TO (SUBJAREA,"BUSI") OR LIMIT-TO (SUBJAREA,"ECON")) AND (LIMIT-TO (LANGUAGE, "English")) AND (EXCLUDE (PUBYEAR,1974)))” to search for all publication types between 1992 and 2021 with at least one author based in Vietnam. The raw bibliometric data has been downloaded from Scopus, which provides robust and inclusive source data. All scientific publications of Vietnam were refined by Scopus to the “Economics, Econometrics and Finance” and “Business, Management and Accounting” categories, with English being the language employed. After the definition of Scopus’ search strings, the dataset of this paper has obtained 5,389 publication records for economics and business research in Vietnam.

The dataset of this study is presented as a bibliometric dataset originated from 5,389 research publication records extracted, selected and refined from Scopus databases. This dataset is composed of two categories, including raw and analyzed. The raw category is available at http://dx.doi.org/10.17632/63vhbndns.3. The raw category has all 5,389 bibliographic research records on categories of economics and business in Vietnam, as detailed in Table 2.
Table 2 - The Features of Publications Contained in the Scopus Dataset

| Feature          | Description                                      |
|------------------|--------------------------------------------------|
| Authors          | The authors of a publication                     |
| Title            | The title of a publication                       |
| Year             | The date of publication of a publication         |
| Source title     | The name of source where a publication was published |
| Cited by         | The number of citations of a publication         |
| DOI              | The DOI of a publication                         |
| Link             | The link of a publication in the Scopus database |
| Affiliations     | The authors affiliations’ information of a publication |
| Abstract         | The abstract of a publication                    |
| Author Keywords  | The author keywords of a publication             |

Source: Scopus, accessed May 11, 2021

The analyzed category contains systematic overview information on research trends in the economic business sector in Vietnam such as number of publications by year, document types, number of documents per country, most cited articles, keyword analysis, top citations journal, co-occurrence network, most influential authors, most frequent keywords, top research organizations in economics and business, bibliometric mapping and clustering analysis. The dataset is available at http://dx.doi.org/10.17632/63vhbkndns.3.

3. Results and Discussion

In this section, we discuss the results in detail, including the trends in citations and publications on business and economics research, the keywords analysis, and the co-occurrence network analysis. A total of 5,389 publications were extracted and uploaded on VOSviewer® software (Van Eck & Waltman, 2010). By the VOSviewer® software, the systematic information review on economic and business research in Vietnam is extracted. All 5,389 publications were written by 8,652 authors from 113 countries. All publications were cited 34,917 times, published in 1,157 source titles. Classified by document type, nearly 87% of the total number of published publications are articles, following conference paper and book chapter (Table 3).
Table 3 - Distribution of Document Types

| Document Type   | Documents |
|-----------------|-----------|
| Article         | 4678      |
| Conference Paper| 288       |
| Book Chapter    | 245       |
| Review          | 111       |
| Book            | 18        |
| Editorial       | 17        |
| Note            | 14        |
| Erratum         | 7         |
| Short Survey    | 6         |
| Letter          | 1         |
| Undefined       | 4         |

Source: Scopus, accessed May 11, 2021

Figure 1 simulates the number of publications published by country. The data shows the trend of research cooperation between Vietnam and other countries. Australia has the strongest research collaboration with Vietnam with 600 publications, the following countries in turn include United States (364), United Kingdom (298) and France (246).

Figure 1 - World scaled by number of documents per Country

Source: Scopus data visualised through Tableau
Table 4 - The 15th most Cited Articles

| Authors               | Cited by |
|-----------------------|----------|
| Keh H.T. (2007)       | 397      |
| Meyer K.E. (2005)     | 393      |
| Meijer S.S. (2015)    | 214      |
| Nguyen L.D. (2004)    | 204      |
| Ngo D.-H. (2012)      | 171      |
| Trung D.N. (2005)     | 143      |
| Dhir A. (2018)        | 141      |
| Leisch H. (2002)      | 136      |
| Nguyen C.H. (2018)    | 133      |
| Luu V.T. (2009)       | 130      |
| Pomeroy R. (2007)     | 130      |
| Sheikholeslami M. (2020) | 122 |
| Thien Thu C.T. (2012) | 115      |
| Nguyen T.T. (2012)    | 114      |
| Van Huy L. (2012)     | 114      |

Source: Scopus, accessed May 11, 2021

Table 4 shows the top 15 papers with the most citations from the total of 5389 collected publications to investigate the most influential publications on economics and business research in Vietnam. The most cited article was written by Keh et al. (2007) (Keh et al., 2007), it has 394 citations. The paper of Meyer et al. (2005) (Meyer & Nguyen, 2005) has the second highest number of citations with 391 citations. Furthermore, cooperation among multiple authors has been becoming more popular. The most influential articles with the highest citation quantity were written by more than one author.

Table 5 - Top 15 Journals with the Highest Number of Citations

| Source                                         | Documents | Citations |
|------------------------------------------------|-----------|-----------|
| Journal of Cleaner Production                  | 153       | 3001      |
| Journal of Asian Finance, Economics and Business | 393       | 1560      |
| Knowledge-Based Systems                         | 54        | 1081      |
| International Journal of Biological Macromolecules | 47        | 854       |
| Finance Research Letters                        | 60        | 592       |
| World Development                               | 26        | 589       |
| Journal of Business Venturing                   | 3         | 513       |
| Research In International Business and Finance  | 38        | 426       |
| Resources, Conservation and Recycling           | 23        | 417       |
| Marine Policy                                   | 18        | 415       |
| Asia Pacific Business Review                    | 20        | 394       |
| Journal of Management Studies                   | 1         | 393       |
| International Journal of Energy Economics and Policy | 50        | 386       |
| Ecological Economics                            | 19        | 384       |
| Asia Pacific Journal of Marketing and Logistics | 26        | 354       |

Source: Scopus, accessed May 11, 2021
Table 5 shows the 15 most influential journals with the highest numbers of citations. Journal of Cleaner Production is the most popular, with 2,913 citations. Journal of Asian Finance, Economics and Business to become the largest producer of publications.

The keyword co-occurrence network map illustrates the core idea of an academic publication (Li et al., 2016). Figure 2 illustrates the keyword co-occurrence network created from VOS viewer software. Each node’s size represents its weight. In Figure 2, six separate colors illustrate six clusters of keywords. The yellow cluster is the biggest cluster in the keyword co-occurrence network. The keyword “Vietnam” is the biggest node with the highest frequency in the yellow cluster. The second largest cluster is red. The keywords with high degree centrality in the red cluster are related to “sustainable development” and “planning”. The keyword with the most frequency and the strongest connection strength is “article”, followed by “controlled study” in the green cluster. The purple cluster illustrates the co-citation network in economic psychology for the effects of financial well-
being on the financial market. The purple cluster shows the co-occurrence network on the topic of stock market and commerce. The light blue cluster is a small cluster. The keyword “human” is the node with the highest frequency, the most connected lines and the strongest connection strength in the light blue cluster. The blue cluster is scattered, it is less associated with other clusters. The blue cluster has several nodes mainly included “efficiency” and “agriculture”.

Table 6 - Top 20 Authors with the most Outputs in Citations

| Author name            | Documents | Citations |
|------------------------|-----------|-----------|
| Vo X.V.                | 120       | 901       |
| Jermsittiparsert K.    | 51        | 675       |
| Nguyen T.V.            | 37        | 665       |
| Nguyen T.T.M.          | 12        | 560       |
| Nguyen T.T.            | 71        | 515       |
| Nguyen H.V.            | 20        | 479       |
| Nguyen L.D.            | 28        | 449       |
| Tuan L.T.              | 37        | 442       |
| Meyer K.E.             | 3         | 418       |
| Keh H.T.               | 1         | 397       |
| Ng H.P.                | 1         | 397       |
| Pugazhendhi A.         | 9         | 373       |
| Lucey B.               | 21        | 364       |
| Matsui Y.              | 14        | 357       |
| Anwar S.               | 12        | 355       |
| Kim S.-Y.              | 8         | 354       |
| Napier N.K.            | 11        | 349       |
| Corbet S.              | 15        | 338       |
| Ogunlana S.O.          | 2         | 334       |
| Nguyen T.N.            | 28        | 329       |

Source: Scopus, accessed May 11, 2021

Table 6 shows the top 20 most productive authors. Vo X.V. (University of Economics Ho Chi Minh City) is the author which has published the most articles and the highest citations. Table 7 presents the 20 most popular keywords. The “Vietnam” keyword appeared 1176 times in the; “Viet Nam”, “Sustainable development”, “Planning” and “Environmental technology” appeared 362 times, 234 times, 154 times and 148 times respectively.
Table 7 - 20 most Frequent Keywords

| Keyword                          | Occurrences |
|---------------------------------|-------------|
| Vietnam                         | 1176        |
| Viet Nam                        | 362         |
| Sustainable Development         | 234         |
| Planning                        | 154         |
| Environmental Technology        | 148         |
| Economic Growth                 | 128         |
| Firm Performance                | 87          |
| Article                         | 82          |
| Decision Making                 | 78          |
| Corporate Social Responsibility | 75          |
| Innovation                      | 74          |
| Asia                            | 68          |
| Commerce                        | 66          |
| SMEs                            | 63          |
| China                           | 62          |
| Corporate Governance            | 61          |
| Customer Satisfaction           | 60          |
| Profitability                   | 60          |
| Sustainability                  | 59          |
| Developing Countries            | 58          |

Source: Scopus, accessed May 11, 2021

Table 8 - Top 15 Institutions with the most Prominent Outputs

| Affiliation                                      | Documents |
|-------------------------------------------------|-----------|
| University of Economics Ho Chi Minh City        | 698       |
| National Economics University                    | 468       |
| Ton-Duc-Thang University                        | 406       |
| Viet Nam National University Ho Chi Minh City   | 368       |
| Vietnam National University Hanoi               | 275       |
| Ho Chi Minh City Open University                 | 224       |
| Duy Tan University                              | 214       |
| Đại học Công nghệ Thành phố Hồ Chí Minh         | 208       |
| RMIT University Vietnam                          | 198       |
| Foreign Trade University                         | 153       |
| University of Danang                             | 146       |
| International University, Vietnam National University Ho Chi Minh City | 144 |
| Banking University - Ho Chi Minh City            | 127       |
| Can Tho University                               | 114       |
| Industrial University of Ho Chi Minh City        | 109       |

Source: Scopus, accessed May 11, 2021
Table 8 shows the top 15 institutions with the most prominent outputs. University of Economics Ho Chi Minh City, National Economics University, Ton-Duc-Thang University, Vietnam National University Ho Chi Minh City, Vietnam National University Hanoi are the top 5 institutions with the most productive outputs.

Figure 3 represents the evolution of keyword networks. It can be seen that before 2016, the keywords of that period concentrated on the words “construction industry”, “transitional economy” and “poverty”. From 2016, such keywords included “sustainable development”, “environmental technology”, “economic growth”, “corporate social responsibility” and “decision making”. After 2018, the concentration on the research area decreased, with fewer keywords appearing including “credit risk”, “industry 4.0”, “corona virus”, “gold”, “oil shock”, “energy policy” and “middle east”.

4. Conclusion

In this study, bibliometric analysis has been used as a useful quantitative tool to analyze the research trends of knowledge production on the economics and business research in Vietnam.
related publications in economic and business research were retrieved from Scopus from 1992 to 2021 and then inputted in VOSviewer® to visualize the networks and distribution of the data they contained. The results of the study help us to draw four main conclusions.

Firstly, the paper provides 5,389 scientific publications on categories of economics and business from 1992 to 2021 in Vietnam.

Secondly, the study provides an overview of publication trends on economics and business research in Vietnam.

Thirdly, this paper provides a comprehensive analysis of the most popular articles, the most influential journals, the keyword distribution, co-occurrence network, most influential authors, bibliometric mapping and clustering analysis, and top research organizations in economics and business in Vietnam.

Finally, this study can serve as useful reference sources for scholars who want to perform bibliometric analysis of economics and business research trends in Vietnam.

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Declaration of Competing Interest

The author declares that they have no known competing financial interests or personal relationships which have or could be perceived to have influenced the work reported in this article.

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