



A bibliometrics analysis study of herding behaviour in stock market

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Abstract

The purpose of this article is to provide a detailed bibliometrics analysis of herding behaviour. We have extracted the documents from the Scopus database. All documents indexed in the Scopus database 1998 to 2020 were included. During the Boolean search, we retrieved 330 documents related to herding behaviour literature which was indexed in the Scopus database. The results of our study provide that the United States, China, Taiwan, Germany, and the United Kingdom are the first five countries which have contributed towards herding behaviour literature. In addition, *Physica A: Statistical Mechanics and Its Applications* has produced the highest number of publication in the field of herding behaviour literature. Researchers from developed countries are dominated in herding behaviour literature.

Keywords: bibliometrics analysis, herding behaviour, stock market, literature review

1. Introduction

The elements of the capital market are staying confounding and unexplained with the focal points of the standard finance theory. Fama (1965, 1970) [3] and Markowitz (1952) [7] stated that standard finance theory assumes that individuals are rational, profit maximizer and make choices by thinking about all significant public information. However, in real market conditions, the assumptions of standard finance theories are not appropriate to explain to the investors' sentiments and expectations (Chang, 2008; Firat and Fettahoglu, 2011) [1,4]. The findings of Hirshleifer, (2015) [5], Shefrin (2000) [8], and Shleifer (2000) [9] provided that investors are a normal human being and irrational in decision making. Numerous studies suggested that there are many behavioural biases which cause irrationality among the investors. However, herding behaviour is most prominent bias in the stock market. Kumar and Goyal (2015) [6] documented that "herding of investors in equity markets is a very common bias and many times, generates a cascading effect, which results in excess volatility and instability in financial markets exacerbating the crisis and fragility". Most recent, Singh *et al.* (2020) [10] suggest that future uncertainty due to the COVID-19 outbreak caused panic selling which results in sell-side herding in the stock markets across the globe. In this article, we attempt to perform the bibliometrics analysis of herding behaviour literature. Therefore, the rest of the article is organized as follows. Section 2 discusses the measure and methods of bibliometrics analysis. Section 3 discusses the results of bibliometrics analysis. Section 4 concludes the findings of the article.

2. Measure and Methods

We have selected Scopus database as the main source of our study. All items during the period 1998 to 2020 were included in the study. We used the Boolean search technique to extract the

data from the Scopus database as follows. ("Herding behaviour" OR "herding" OR "herding effect" OR "herd behaviour" OR "herding bias") AND ("investment decision making" OR "investment decision" OR "stock market"). During the Boolean search, we found 330 documents related to herding behaviour literature which was indexed in the Scopus database.

3. Results and Discussion

3.1 General characteristics of herding behaviour literature

Table 1 shows the types of publication on herding behaviour literature from 1998 to 2020. Our study includes 330 documents on herding behaviour literature. More specifically, our study includes article (n=290, 87.88 percent), conference paper (n=17, 5.15 percent), book chapter (n=15, 4.55 percent), review article (n=5, 1.51 percent), book (n=1, 0.30 percent), conference review (n=1, 0.30 percent) and other (n=1, 0.30 percent). As shown in Table 1, the majority of documents were article followed by conference paper. Figure 1 shows the diagrammatical presentation of documents by types of publication on herding behaviour.

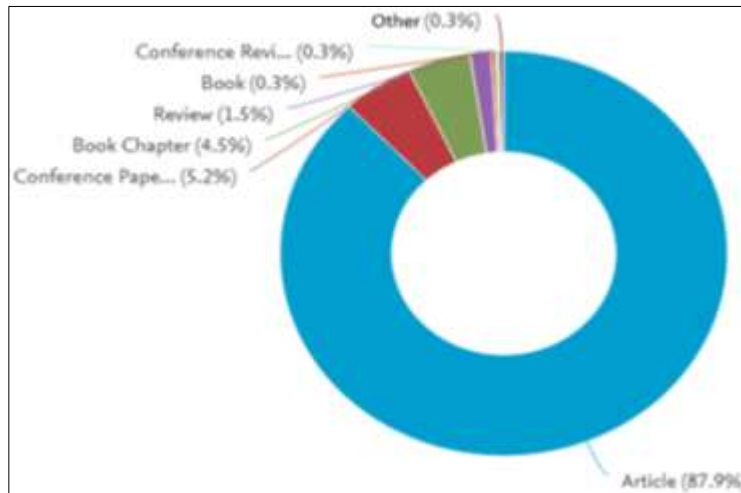
Further, Table 2 presents the documents by year on herding behaviour literature between 1998 and 2020. The results of bibliometrics analysis reveal that the interest of researchers to examine the herding behaviour was speed up after the year 2009. Moreover, the year 2020 accounts for the highest number of publications on herding behaviour literature followed by the year 2018. As paper results of bibliometrics analysis, the first paper on herding behaviour was published in 1998. In recent years, bibliometrics analysis attracts the attention of researchers to examine the herding behaviour in the stock market. Figure 2 shows the diagrammatical presentation of documents by year on herding behaviour.

Table 1: Types of publications on herding behaviour literature between 1998 and 2020

Document type	Number	%
Article	290	87.88
Conference Paper	17	5.15
Book Chapter	15	4.55
Review	5	1.52
Book	1	0.30
Conference Review	1	0.30
Other	1	0.30

Notes: N=330.

Source: Scopus database.



Source: Scopus database.

Fig 1: Documents by types.

Table 2: Documents by year on herding behaviour literature between 1998 and 2020

Year	Number	%
2020	42	12.73
2019	32	9.70
2018	35	10.61
2017	31	9.39
2016	19	5.76
2015	27	8.18
2014	22	6.67
2013	25	7.58
2012	12	3.64
2011	21	6.36
2010	13	3.94
2009	9	2.73
2008	6	1.82
2006	9	2.73
2005	5	1.52
2004	5	1.52
2003	5	1.52
2002	3	0.91
2001	2	0.61
2000	2	0.61
1999	3	0.91
1998	2	0.61

Notes: N=330.

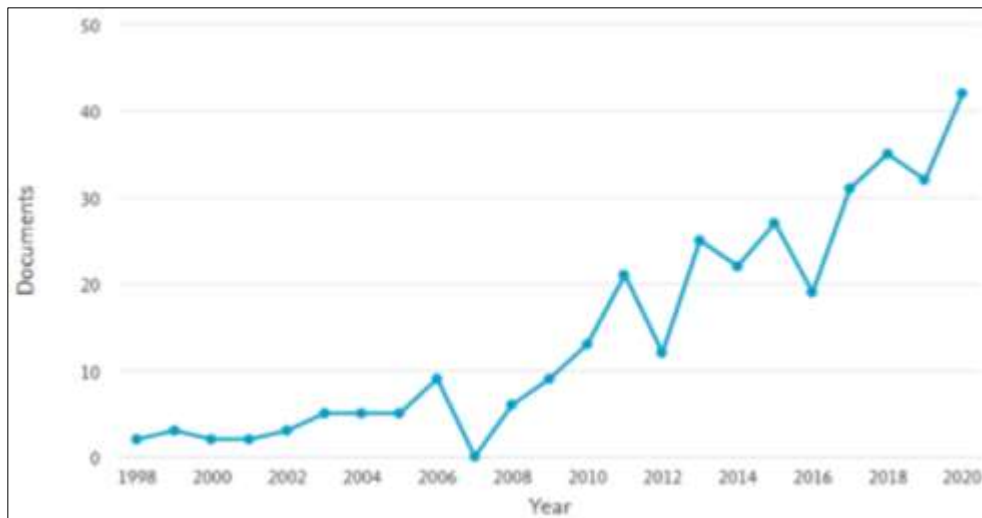
Source: Scopus database.

3.2 Productivity of countries, authors, and institutions

The most prominent country is United States (n=57, 17.27 percent) which is examining the herding behaviour in the stock market (see Table 3) followed by China. The results show that India is also important source on herding behaviour literature. However, India accounts for 19 documents of the 330 and secured a position among the first ten countries according to the number of published documents on the herding behaviour literature. Along with developed nations, developing countries also contributing prominent researches which explain the herding behaviour in the stock market. Figure 3 shows graphical presentation of documents by countries-wise on herding behaviour.

In addition, Table 4 provides the first ten authors by record count in herding behaviour literature between 1998 and 2020. Sornette, D. from Switzerland is leading in herding behaviour literature with 12 documents followed by Fang, H. from the United States. Moreover, we found that researchers from developed countries are dominated in terms of producing studies on herding behaviour. Figure 4 shows graphical presentation of documents by authors.

As shown in Table 5, University of California accounts for the highest source of published documents on herding behaviour literature (n=9, 2.73 percent). More specifically, institutes from the United States of America are producing the highest number of studies on herding behaviour literature followed institutes from Tunisia. Figure 5 shows the graphical presentation of documents by institutes.



Source: Scopus database.

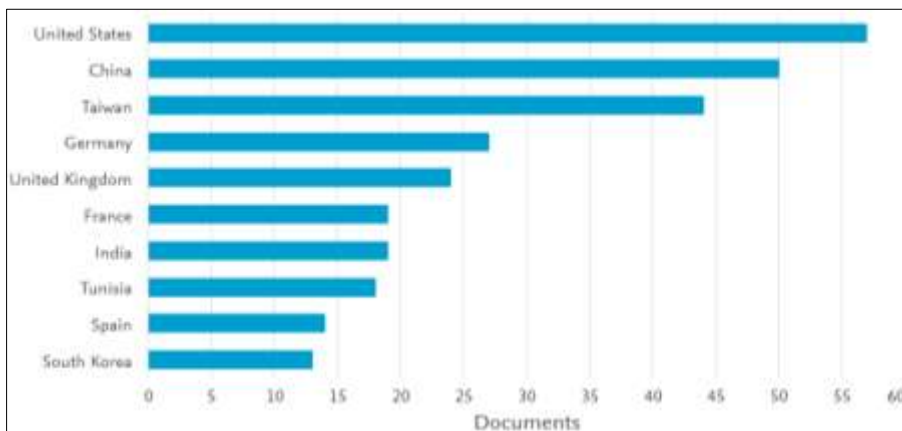
Fig 2: Documents by years.

Table 3: The first ten countries according to the number of published documents on the herding behaviour literature

Country	N	%
United States	57	17.27
China	50	15.15
Taiwan	44	13.33
Germany	27	8.18
UK	24	7.27
France	19	5.76
India	19	5.76
Tunisia	18	5.45
Spain	14	4.24
South Korea	13	3.94

Notes: N=330.

Source: Scopus database.



Source: Scopus database.

Fig 3: Documents by countries.

Table 4: The first ten authors by record count in herding behaviour literature between 1998 and 2020

Author	Institution	Country	N	%
Sornette, D.	ETH Zürich, Zurich ZH	Switzerland	12	3.64
Fang, H.	Hwa Hsia University of Technology, Taipei	Taiwan	8	2.42
Demirer, R.	Southern Illinois University at Edwardsville, Edwardsville	United States	7	2.12
Westerhoff, F.	Universität Bamberg, Bamberg	Germany	6	1.82
Zhou, W.X.	East China University of Science and Technology, Shanghai	China	6	1.82
Blasco, N.	Universidad de Zaragoza, Zaragoza	Spain	5	1.52

Chiang, T.C.	Drexel University, Philadelphia	United States	5	1.52
Corredor, P.	Universidad Pública de Navarra, Pamplona	Spain	5	1.52
Economou, F.	Centre of Planning and Economic Research, Athens	Greece	5	1.52
Ferruella, S.	Universidad de Zaragoza, Zaragoza	Spain	5	1.52

Source: Scopus database

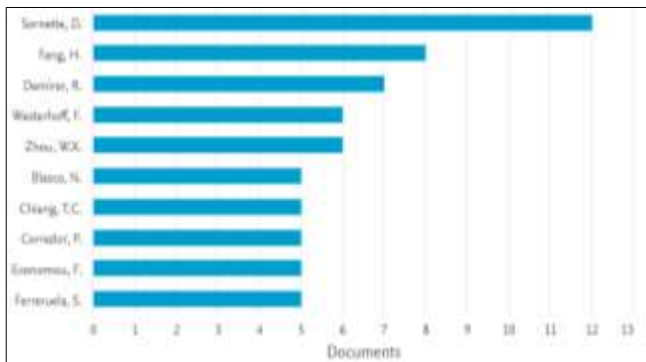
3.3 Productivity of sources

Table 6 presents the first five journal source according to the number of published documents in behavioural biases literature. Physica A: Statistical Mechanics and Its Applications (n=14, 4.24 percent) has produced the highest number of publication in the field of herding behaviour literature followed by Pacific-Basin Finance Journal (n=12, 3.64 percent). Journal of Behavioural Finance is also a well-known source of publication in the context of herding behaviour. Figure 6 shows graphical presentation of documents by source.

Table 6: The first five journal source according to the number of published documents in behavioural biases literature

Journal	N	%
Physica A: Statistical Mechanics And Its Applications	14	4.24
Pacific-Basin Finance Journal	12	3.64
Journal Of Behavioral Finance	11	3.33
Emerging Markets Finance And Trade	8	2.42
Applied Financial Economics	7	2.12

Source: Scopus database.



Source: Scopus database.

Fig 4: Documents by authors.

Table 5: The first ten institute according to the number of published documents in herding behaviour literature

Institute	Country	N	%
University of California, Los Angeles	USA	9	2.73
University of California, Los Angeles	USA	9	2.73
Institut de Physique de Nice	France	9	2.73
University of Sfax	Tunisia	8	2.42
Université Côte d'Azur	France	8	2.42
Christian-Albrechts-Universität zu Kiel	Germany	7	2.12
Drexel University	USA	7	2.12
Universidad de Zaragoza	Spain	7	2.12
Université de Sousse	Tunisia	7	2.12
Asia University Taiwan	Taiwan	7	2.12

Source: Scopus database.



Source: Scopus database.

Fig 5: Documents by institutes.



Source: Scopus database.

Fig 6: Documents by journals.

4. Conclusion

This article provides a bibliometrics analysis of herding behaviour literature. Herding behaviour is a well-established bias in behavioural finance literature. The number of articles on herding behaviour has increased in the last 10 years. First five countries which have contributed towards herding behaviour literature are United States, China, Taiwan, Germany, and the United Kingdom. In addition, India has also a magnificent contribution in examining the herding behaviour in the stock market. Researchers from developed countries, Sornette, D., Demirer, R., and Westerhoff, F., are dominated in herding behaviour literature. University of California, Los Angeles leads in the field of herding behaviour examining literature. Physica A: Statistical Mechanics and Its Applications has produced the highest number of publication in the field of herding behaviour literature. Our study provides credentials that can be utilized to understand the consequences of herding behaviour by investors, regulators, policymakers, and researchers.

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