



# Collaborative research and authorship pattern of refereed journals in submitted Ph.D. thesis of Department of Economics, Gulbarga University Kalaburagi, Karnataka, India during 1952-2001

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## Abstract

*This paper deals with growth and collaborative research pattern of Economics Department in the submitted Ph.D. thesis during the years 1952 to 2001. The study discovers that the majority of 206 (45.2%) publications are produced by the contributors during the years 1985 to 1995 and the ratio of the articles is 27:29 during the year 1985 to 1995. The degree of collaboration in this journal is 0.02 to 0.80. Further, the study explores the year wise growth, author productivity, authorship pattern, issue wise authorship, and the single and multi-authored papers and average citations etc.*

**Keywords:** Bibliometrics, author productivity, degrees of collaboration, publication analysis, social science journal.

## Introduction

Single journal of bibliometric and Scientometric studies are more important in the field of Library and Information Studies. Enormous number of studies have taken place in this discipline and carried out in India and International level. Journal of Economics Department is one of the principals and foremost research journals in the field of socio-economic studies. Economics subject articles is are being published bimonthly, monthly, quarterly and yearly by the well-regarded publisher in India and as well as rest of the countries<sup>1</sup>. As it is stated in its editorial objectives, it mainly intends to enhance the communication between policy makers, organizational agents, academics, and managers on the critical understanding and research on economics subject. Among all journals are indexed by Social Sciences Citation Index, Social Science Search, and Journal Citation Reports (Social Sciences Edition).

Research publications are the embodiments of the intellectual consideration contents expressed in published literature whose key objective is to put on the air innovative ideas or information to any precise field of knowledge towards the further development of a subject or a discipline. In this manner bibliometrics study is regarded as one of the crucial areas of research in the field of Library and Information Science. Moreover, bibliometrics study is used as an gadget in the collection building policy by providing the precise and much needed information to the managers to take the right decision in right time as to what documents they should select and what documents they should discard from the existing collections of their respective libraries.

Bibliometric studies can be applied to any subject to discover the trends and growth of the literature and to assess the quality,

maturity and productivity of a journal. Bibliometric studies are being used for a variety of purposes like determination of various scientific indicators, evaluation of scientific output, selection of journals for the libraries, forecasting the research potential of particular field and so on.

**Previous studies:** There are some earlier studies have been taken place related to the objectives of the present study and presented in this study. Karisiddappa et al. have studied the authorship trends and collaborative research work based on the data retrieved from psychological abstracts<sup>2</sup>. Bandyopadhyay examined the authorship pattern in different disciplines<sup>3</sup>. Farahat analyzed the study of authorship patterns and research in agriculture sciences in Egypt<sup>4</sup>. Vimala and Pulla Reddy examined the authorship pattern and collaborative research in the field of Zoology<sup>5</sup>. Zafrunnisha and Pulla Reddy described the study of authorship pattern and degree of collaboration in Psychology<sup>6</sup>. Elango and Rajendran have investigated the authorship trends and collaboration pattern in the marine sciences literature<sup>7</sup>. Erfanmanesh, Rohani and Abrizah have studied the co-authorship network of scientometrics research collaboration<sup>8</sup>. Barik and Jena explored the analysis of authorship studies of trends in Information Management during the period between 2008 and 2012<sup>9</sup>. Goyal, Gupta and Kumar have observed the authorship pattern and collaborative research growth appearing in the field of chemistry related works<sup>10</sup>. Velmurugan discussed bibliometric investigation in reference to authorship pattern work and joint research productivity of Annals of Library and Information Studies since 2007 to 2012<sup>11</sup>.

Velmurugan examined the research trends and authorship pattern in Indian Journal of Pure and Applied Physics (IJPAP) during the period years 2009 - 2012<sup>12,13</sup>. Velmurugan and

Radhakrishnan have been investigated the publication research trends on Technical Review Journal during the years 2012 to 2014<sup>14</sup>.

**Objectives:** The objectives of the present study are to evaluate the following purposes: i. To observe the authorship pattern and author's productivity during the period, ii. To examine the single and multi-authorship papers of the journal and, iii. To find out the degree of collaboration, iv. To trace out the number of references in the articles, v. To know about the articles published in economics subject in the years between 1952 and 2001.

**Methodology**

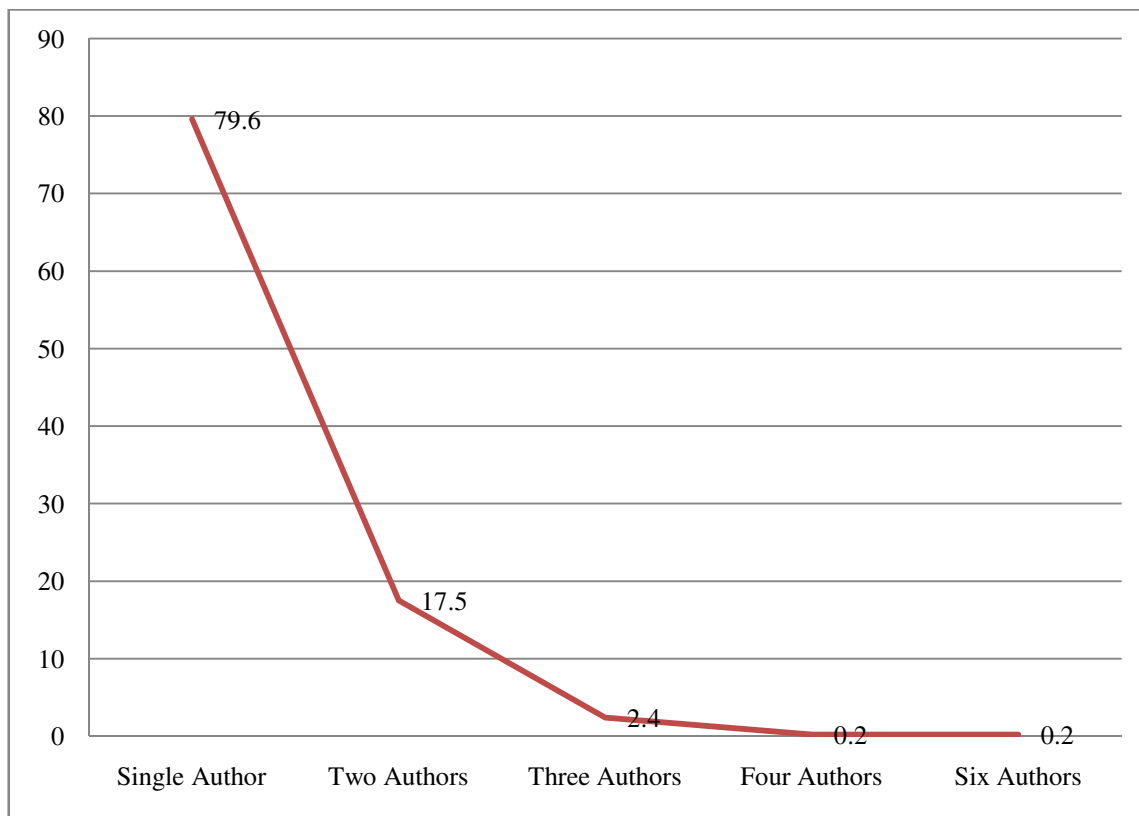
The authors have selected four hundreded fifty six papers during the years 1952 to 2001 for the study. The present study includes year wise distribution of articles, authorship pattern, authorship, author's productivity and the single and multi-authorship papers were described in this research. The collected data were organized, calculated, tabulated, analyzed and presented by using MS-Excel and SPSS for its results. The authorship pattern has been analyzed by using K. Subramanyam's degree of collaboration in quantitative terms. This present study is limited to economics subject submitted Ph.D. Thesis Journals in Gulbarga University Kalaburagi, Karnataka, India in the selected years only<sup>15</sup>.

**Results and discussion**

**Authorship pattern:** Researchers identified the authorship pattern of articles distributed by the contributors. Table-1 and Figure-1 shows that out of total of 456 articles in the journal, the highest number of contributions i.e. 363 (79.6%) have been contributed by single author and followed by 80 contributions (17.5 %) of articles have been contributed by two authors and 11 contributions (2.4%) by three authors and the lowest number of contributions i.e. 0.2% by four and six authors.

**Table-1:** Authorship Pattern.

Authorship pattern	Frequency	Percent
Single Author	363	79.6
Two Authors	80	17.5
Three Authors	11	2.4
Four Authors	1	0.2
Six Authors	1	0.2
Total	456	100.0



**Figure-1:** Authorship Pattern.

**Author productivity:** Table-2 presents the information about the year wise authorship patterns during the period between 1952 to 62 and 1995 to 2001. The highest number 363 (79.6%) of journal papers have single author and followed by 80 contributions i.e. 17.5% have two authors; 2.4% of contributions have three authors and the minimum percentage i.e., 0.2% contributions have more than three authors. However, highest number of paper cited during the years 1985 to 1995 and least cited years is from 1995 to 2000 during the study period.

**Ratio of single and multi-authored papers:** It is evident from Table-3 that the percentage of singly authored articles is more than 363. It is revealed that the predominance of solo research which has been increased from 3.8% during the years 1952 to 62 and unluckily it has been reduced 1.93% during the years 1995-2001. However, solo research has been fluctuated even though augmented compare with multi-authored papers. Normally, the ratio of single and multi-authored papers lies between 01:01 and 01:02, but it has been surprisingly increased to 27:29 during the years 1985 to 95.

Table-3 represents that out of 456 articles, the maximum number of publications were published by means of single author that is in number 363 while the rest of 93 papers were contributed by means of co- authorship authors. It is found that the majority of the articles have been contributed only by solo authors.

**Degree of collaboration:** As stated by the application of bibliometric indicators, the degree of collaboration in this journal ranges from 0.02 to 0.80 and the average degree of collaboration is 0.80 (Table-4). The degree of collaboration is calculated by using the K. Subramanyam formula<sup>15</sup>.

Table-5 represents that the year wise numbers of references that authors cited in their articles. There were 456 research articles with total of 13268 references during the period between 1952 to 62 and 1995 to 01. Averagely there were 2653.6. References cited per year, and the total in number almost increased yearly and shows that the distribution of citations indicates that the highest number of citations 4000 (30.15%) was during the years 1985 to 95.

**Table-2:** Author Productivity.

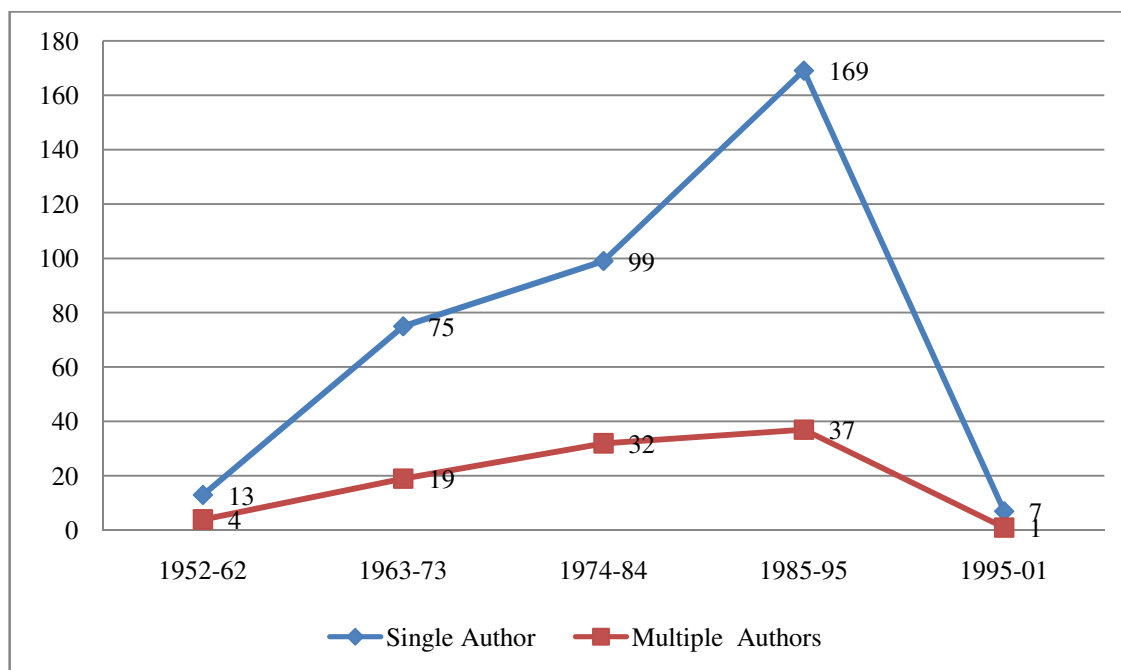
Author Productivity	Authors Name					Total
	Single Author	Two Authors	Three Authors	Four Authors	Six Authors	
1952-62	13 (2.9)	4 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	17 (3.7)
1963-73	75 (6.4)	17 (3.7)	2 (0.4)	0 (0.0)	0 (0.0)	94 (20.6)
1974-84	99 (21.7)	30 (6.6)	1 (0.2)	0 (0.0)	1 (0.2)	131 (28.7)
1985-95	169 (37.1)	28 (6.1)	8 (1.8)	1 (0.2)	0 (0.0)	206 (45.2)
1995-01	7 (1.5)	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	8 (1.8)
Total	363 (79.6)	80(17.5)	11 (2.4)	1 (0.2)	1 (0.2)	456 (100.0)

**Table-3:** Ratio of Single and Multi-Authored Papers.

Year	Single Author	%	Two Authors	%	SA:MA	Total	%
1952-62	13	3.58	4	4.30	01:01	17	3.73
1963-73	75	20.66	19	20.43	10:11	94	20.61
1974-84	99	27.27	32	34.41	23:25	131	28.73
1985-95	169	46.56	37	39.78	27:29	206	45.18
1995-01	7	1.93	1	01.08	01:02	8	01.75
Total	363	100.00	93	100.00		456	100.00

**Table-4:** Degree of Collaboration.

	Single Author	Multiple Authors	Total	Degrees of Collaboration
1952-62	13	4	17	0.03
1963-73	75	19	94	0.16
1974-84	99	32	131	0.22
1985-95	169	37	206	0.37
1995-01	7	1	8	0.02
Total	363	93	456	0.80



**Figure-2:** Single v/s Multiple Authors.

**Table-5:** Year-Wise distribution of citations.

Year	References	Percentage
1952-62	2456	18.51
1963-73	3567	26.88
1974-84	1200	9.04
1985-95	4000	30.15
1995-01	2045	15.41
Total	13268	100.00
Average	2653.6	

### Conclusion

The findings of this paper reveals that the majority of research output is produced by the contributors during the years 1952 to 62, whereas the lowest number of papers is published during the years between 1995 to 2001.

Out of 456 articles in journals, the highest number of contributions i.e. 363 (79.6%) have been contributed by Single author and the lowest number of contributions i.e. 0.2% by four and six authors. The highest number of papers are cited during the years 1985 to 1995 and least cited years are from 1995 to 2000 during the study period. Predominance of solo research which has been increased from 3.8% during the years 1952 to 62 and unfortunately it has been reduced 1.93% during the years 1995 to 2001. Normally, the ratio of single and multi-authored papers lies between 01:01 and 01:02, but it has been

surprisingly increased to 27:29 during the years 1985 to 1995. The degree of collaboration in journal ranges from 0.02 to 0.80 ratio percentage and the average degree of collaboration is 0.80. There were 456 research articles with total number of 13268 references during the period 1952-1962 and 1995-2001. Averagely there were 2653.6 references cited per year and the total number of almost increased year by year and that the highest number of citations 4000 (30.15%) was during the years 1985 to 1995<sup>16,17</sup>.

It has got world-wide recognition and is steadily growing to be a very promising journal in the area of economics by attracting scholarly articles from around the world. Therefore, the authorship research trend in the field of social science, particularly in economics is collaborative in nature like any other discipline.

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