

Marketing Research in India: A Scientometrics Study

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Abstract

Analyses the Indian publications output in marketing research during 1990-2018 on several parameters including contribution and citation impact of most productive countries, India's overall contribution, its growth pattern, citation impact, the share of international collaboration, identification of significant participating countries in India's international collaboration, most productivity and impact of leading Indian institutions and authors. The Web of Science citation database has been used to retrieve the data for 28 years (1990 - 2018) by searching the keywords "Marketing Research" in combined Title, Abstract and Keywords field. The World output 55,466 and the Indian publications output in marketing research consisted of 633 papers during 1990–2018 and which increased from 261 papers in 2008 to 969 papers in 2016, which decreased from 652 during 2017 & 318 during to 2018. The share of Indian overall marketing research was 11.56 percent during 2003-12, which increased from 10.43 percent during 2003-07 to 12.18 percent during 2008-12. Indian research out put on marketing research is quite low in the global context.

Keywords

Bibliometrics; Marketing research; India; Scientometrics; Web of Science (WoS)

Introduction

Scientometrics is the branch science of science that describes the output traits in terms of organizational research structure, resource inputs and outputs, develops benchmarks to evaluate the quality of information output. Scientometric research publications are a quantitative measure for the basic research activity in a country (Bagalkoti and Hosmani, 2014). Scientometrics indicators can be classified to the number of scientometrics sets they represent and the application of reference standards. Scientometrics indicators referring to the measure of a single scientometrics aspect of scientometrics system represented by a single scientometrics set with a single hierarchical level are termed gross indicators. Those indicators which consist of several gross or complex indicators, preferably with weighting factors and each representing a special aspect of a scientometrics system are composite or compound indexes (Chaman et al., 2017).

Indian Market Research provides an idea of the business and the consumer market pattern. They pave the way to economic and business development and help to generate profit for the country. An extensive Market Research in India takes care of all the queries of the marketers - giving them the required information for a smooth marketing journey. Market research involves giving insight to all the categories of marketing - valuation, distribution, promotion of product and services. For betterment and improvement, market research is absolutely essential. Indian marketing research focuses on Understanding consumers - The trends of the customers are tracked by the market research agencies. Their needs, perceptions, projected demands are all studied and marketing strategies are formed accordingly. Investigating market - This method helps in mapping the market conditions and demands are estimated. Conceptualizing product development - Positioning strategies, product and service strategies are formed accordingly after taking into consideration the marketing research results

Many bibliometric studies have been conducted on scientific journals. Recently, Laengle et al. (2017) performed a bibliometric overview of all of the papers published in *European Journal of Operational Research* between 1977 and 2016 and identified the main countries, institutions, authors and the leading trends of the journal (Merigo et al., 2017) studied *International Journal of Intelligent Systems*, with a bibliometric overview of all of its papers published in this journal between 1986 and 2015 to identify its developmental trend. In their study, using a bibliometric overview,

Noruzi and Abdekhoda (2014) examine research performance of Iraqi-Kurdistan universities, using the number of papers appearing in journals and proceedings, and the number of citations received by those papers as covered by Scopus, 1970-2012. They have also identifies subject coverage (domain/field) of publications and determines the preference of research communication channel within the research community. Total of 459 papers published by Iraqi-Kurdistan.

Slow development of bibliometric theory may be due in part to neglect of the unit of analysis — the objects described by variables and about which inferences are made. Problems include: inferences are often made on units other than those sampled, leading to inappropriate conclusions; units in literature reviews and meta-analysis are often not comparable, thus hindering cumulating of knowledge; confusion when names of sampling units in one study might also be the names of variables in other studies — e.g., no. of citations (variable) to *papers* (sampling unit) and no. of *papers* (variable) in journals (sampling unit); loss of information about the unit of analysis, means and variances when data are aggregated. If theory is to advance, scientometrics needs a generic definition of the unit of analysis, a complete list of all known units —classified and structured, meta-analyses, reporting standards— especially when data are aggregated clear indications of data level (nominal, ordinal, interval, and ratio), conventions for including units in titles, abstracts and keyword or subject indexes (McGrath, 1996).

In 1969, Pritchard coined the term Bibliometrics as a statistical method to quantitatively analyze the cross-science of all knowledge domains (Hood & Wilson, 2001). Bibliometrics has been interested by many researchers and has been applied in various scientific fields (Merigo & Yang, 2017). The use of bibliometric techniques for the analysis the knowledge structure and scientific features of a particular journal's publications provides a good guide for its potential authors and some reference guides concerned with the future development of the journal. It also can reveal a specific journal's current status and development trend, and provide a basis for further improvement of its quality (Xu, Yu & Wang, 2018).

Natural hazards contribution aims to reveal patterns of research from worldwide, based on the analysis of the Clarivate Analytics Web of Science database. A set of 588,424 research items published between 1900 and 2017 is analyzed, covering different types of natural hazards. Two categories of natural hazards are distinguished in this study: (i) geological/geomorphic (earthquakes, slope movements, erosion, volcanic activity, and others); and (ii) climatic/hydro-meteorological (floods, storms, drought, hurricane, and others). General trends, the geographical focus, and the involvement and cooperation between individual countries are revealed, pointing out certain patterns (e.g., hotspots of research) and trends (e.g., changing publishing paradigm). Further, a global overview of research on natural hazards is confronted with disastrous events, fatalities, and losses of MunichRE and SwissRE global databases of natural disasters (Emmer, 2018).

Technological change is argued to be taking place along ordered and selective patterns, shaped jointly by technological and scientific principles, and economic and other societal factors. Historical, descriptive analysis is often used to analyze these "trajectories". Recently, quantitative methods have been proposed to map these trajectories. It is argued that such methods have, so far, not been able to illuminate the engineering side of technological

trajectories. In order to fill this gap, a methodology proposed by Hummon and Doreian (1989) is used and extended to undertake a citation analysis of patents in the field of fuel cells (Verspagen, 2007).

Xu, Yu and Wang (2018) studied some bibliometric features of the *International Journal of Machine Learning and Cybernetics (IJMLC)* to improve its academic level and scientific quality.

This study aims to promote the theory development of 3D printing, help researchers to determine the research direction and provide a reference for enterprises and government to plan the development of 3D printing industry by a comprehensive understanding of the hotspots and trends of 3D printing. Were found in the Web of Science Core Collection' Science Citation Index Expanded (SCI-EXPANDED) index between 1995-2016. These were analyzed to explore the research hotspots and emerging trends of 3D printing with the software CiteSpaceIII (Jin et al., 2018).

Scientific journals are the main channels of scholarly communication, dissemination of research-based information, knowledge transfer, and certification of the research results. Journals should be evaluated from a research perspective. This can be done by applying bibliometric methods. Bibliometrics is a research field that quantitatively studies the publications of a journal, research institute, a research field, a country, etc. (Pritchard, 1969; Broadus, 1987). Bibliometrics can be used for measuring the scientific influence of journals, authors, research institutions as well as determining hot topics, newly-emerged subjects, highly-cited items, scientific collaboration patterns, interdisciplinary models, etc. (Laengle et al., 2018).

Hypotheses of the study

The following hypotheses are formulated on the basis of the study of related literature and objectives:

1. There is an increasing trend (growth) in the marketing publications;
2. The share of international collaborative papers in the marketing have increased over the years; and
3. Research marketing literature in India is an institutional activity.

Objectives of the Study

The study aimed to:

1. Examine the growth of marketing research literature covered in the Web of Science citation database for the period 1990–2018.
2. Analyze the channels used for communicating marketing research
3. Identify the language wise productivity
4. Identify the organizational / institutional collaboration in marketing research

5. Analyses international contribution of Indian marketing research output
6. Study major 25 productive journals of Indian marketing research
7. Examine major 25 subjects – wise distribution of marketing research
8. Analyze most productive authors in Indian marketing research.

Materials and Methods

The study will analyze the research output of marketing literature for the period 1990–2018 on several parameters including its growth and share in the world's research output, pattern of research communication in core domestic and international journals, geographical distribution of publications, etc.

There are various sources contributing to the research output in the field of marketing research by the scientists all over the world. In this study secondary sources are also taken for analysis. The Web of Science citation database has been used to retrieve the publications data for 26 years. The web of science is the search platform provided by Thomson Reuters. The study period 1990 – 2018 is selected as the database is available. Search string used for the data retrieval is *TS=(Marketing Research) AND Timespan=1990–2018. Database=SCSCI, A&HCI*, this search criteria yielded 693 records.

Analysis and Results

Data on the bibliographical records were collected from the online version of web of science (WoS) pertaining to marketing research publications from India for the period of 19990 – 2018. A total of 693 publications, bibliographical records were collected, which formed the sources for the study. The data was entered in the excel sheet and was coded tabulated and analyzed with the help of frequency, percentage and meaningful conclusions were drawn.

1. Contribution of marketing research publications by year wise

Table 1 and Figure 1 reveals features of scientific literature in recent years has been its rate of growth models have been proposed regarding the rate of growth; with doubling period of ten to fifteen years. India has produced 693 papers and received 8745 citations during the period 1990 – 2018, average citations per year 9.68. As per the web of science data the cumulative publications growth of marketing research output of India had increased from 75 marketing research publications 892 citations, 16 h-index (10.823%) and received during the year of 2015, 92 marketing research publications 969 citations, 16 h-index (13.276%) and received in the year of 2016, 116 marketing research publications, 652 citations, 12 h-index (16.739%) and received and 135 marketing research publications received and 318 citations, 8 h-index (19.481%) received. India's marketing research output has been gradually increased year by year.

Table 1. Contribution of marketing research publications by year wise

Years	Publication	TC	ACP	H - Index	% of 693
2018	135	318	2.36	8	19.481
2017	116	652	5.62	12	16.739
2016	92	969	10.53	16	13.276
2015	75	892	11.89	16	10.823
2014	30	571	19.03	12	4.329
2013	37	741	20.03	14	5.339
2012	41	810	19.76	19	5.916
2011	29	535	18.45	11	4.185
2010	28	668	23.86	14	4.04
2009	21	359	17.1	12	3.03
2008	12	264	22	8	1.732
2007	11	187	17	7	1.587
2006	9	261	29	6	1.299
2005	9	253	28.11	4	1.299
2004	10	141	14.1	6	1.443
2003	9	364	40.44	6	1.299
2002	2	155	77.5	2	0.289
2001	3	48	16	2	0.433
2000	9	131	14.56	7	1.299
1999	2	43	21.5	2	0.289
1998	5	109	21.8	3	0.722
1996	1	19	19	1	0.144
1994	1	18	18	1	0.144
1993	2	49	24.5	2	0.289
1992	2	151	75.5	2	0.289
1990	2	37	18.5	1	0.289

TP = Total Publications; TC = Total Citations; ACCP = Average citations per Papers



Figure 1. Contribution of marketing research publications by year wise

2. Channels used for communicating marketing research

Table 2 and Figure 2 illustrates the channels used for communicating of marketing research include articles published in the scholarly journals, conferences and seminars proceedings, reviews, editorial materials, Book chapters and Meeting abstracts. This study has observed a total of 693 publications in marketing research output from India it has been observed from table three are many communicating channels are used by authors to publish their research articles are used by Indian marketing research literature. The majority of publications are published in Journal Articles, i.e. 641 (92.5%) followed by Reviews 44 (6.34%) publications, 11 (1.59%) publications published in Proceedings Papers, 7 (1%) publications are published as Editorials Materials and less than 1 percent of articles are published in Book chapters and Meeting Abstracts in other communication channels.

Table 2. Channels used for communicating marketing research

Document Types	Records	% of 693
Article	641	92.496
Review	44	6.349
Proceedings Paper	11	1.587
Editorial Material	7	1.01
Book Chapter	1	0.144
Meeting Abstract	1	0.144

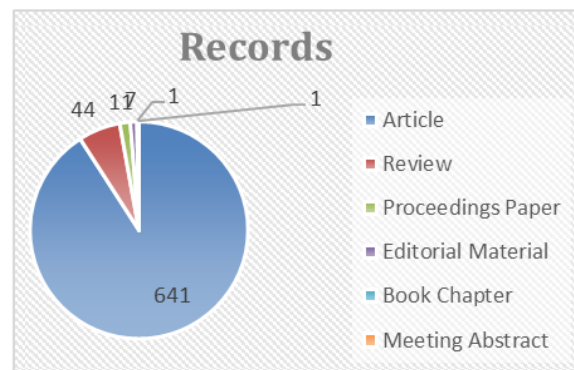


Figure 2. Contribution of marketing research publications by year wise

3. Language wise distributions of marketing research publications

It is observed that almost all are Indian marketing research publication published in English language, 693 publications (100%) only.

4. Organizational / Institutional Collaboration in marketing research

Table 3 reveals the ranking of 25 top research organizations in India based on their highest research articles. According to the Web of Science database Indian Institute of Technology

System (IITs), Delhi contributed the highest publications to the field of marketing research, i.e. 90 publications with 12.987 percent, followed by Indian Institute of Management Calcutta with 38 publications (5.483%), Indian Institute of Management Bangalore with 31 publications (4.473%), Indian School Of Business (ISB) with 29 publications (4.185%), Indian Institute of Management Ahmedabad with 21 publications (3.03%), Indian Institute of Technology IIT Roorkee with 29 articles (3.03%) and Indian Institute of Technology IIT Kharagpur with 19 publications (2.742%).

Table 3. Organizational / Institutional Collaboration

SN	Organizations-Enhanced	Records	% of 693
1	Indian Institute of Technology System IIT System	90	12.987
2	Indian Institute of Management Calcutta	38	5.483
3	Indian Institute of Management Bangalore	31	4.473
4	Indian School of Business ISB	29	4.185
5	Indian Institute of Management Ahmedabad	21	3.03
6	Indian Institute of Technology IIT Roorkee	21	3.03
7	University System of Georgia	20	2.886
8	Indian Institute of Technology IIT Kharagpur	19	2.742
9	University of Delhi	18	2.597
10	Indian Institute of Technology IIT Bombay	17	2.453
11	Management Development Institute	17	2.453
12	Indian Institute of Management Lucknow	16	2.309
13	Indian Institute of Technology IIT Delhi	16	2.309
14	Indian Institute of Management Kozhikode	15	2.165
15	Jawaharlal Nehru University	15	2.165
16	University of Texas System	13	1.876
17	Indian Institute of Management Indore	12	1.732
18	Xlri Xavier School of Management	12	1.732
29	Georgia State University	11	1.587
20	Indian Institute of Management Rohtak	11	1.587
21	National Institute Of Industrial Engineering NITIE	11	1.587
22	Council of Scientific Industrial Research CSIR India	10	1.443
23	IBS Hyderabad	10	1.443
24	Indian Institute of Management Udaipur IMU	10	1.443
25	INST Management and Technology	9	1.299

5. International Contribution of Indian marketing research Output

Due to the interdisciplinary growth of subject, the universe of knowledge is very dynamic and is ever-growing. More and more specialization in the subjects is achieved by the authors, which is a result of increased participation of group of researchers of different expertise. It has been found from earlier studies that collaboration in research varies from discipline to discipline and for the same discipline from time to time and from one country to another (Sangam, 2000). The International distribution of contribution is presented in Figure 3, which gives the country wise distribution of contributions of research output. There are about 693 research contributions made

by 74 countries of the world in the field of marketing during the study period. Out of total 693 research articles, USA contributed highest number of research article contributing 166 publications with (23.95%) share, followed by England contributed 44 publication with (6.34%) of total share, Peoples R China published 39 publications with (5.62%) , Australia contributed 21 (3.03%) publications, Canada contributed 17 (2.5%) publications, Germany 15 (2.2%) publications and other countries contributed 221 publications. Many countries are contributed with below 1 percent share with India in marketing research during 1990 – 2018.

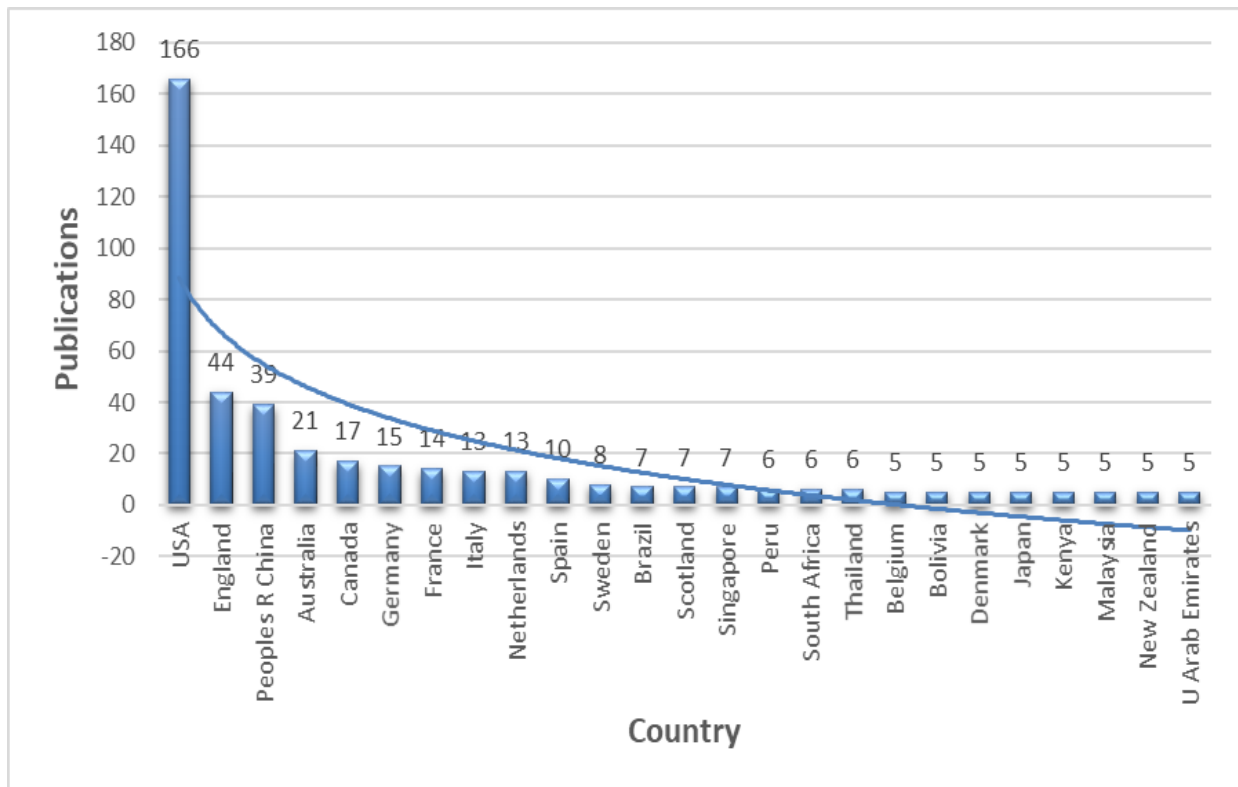


Figure 3. Organizational / Institutional Collaboration

6. Major 25 Productive journals of Indian marketing research

Figure 4 reveals that the top fifteen productive sources preferred the authors of India in the field of marketing research. *Marketing Intelligence Planning* ranked first in terms of publications, i.e., 17 publications (2.78%) of total publications and followed by *International Journal of Bank Marketing* and *International Journal of Retail Distribution Management* which are contributed 15 publications (2.16%) *International Journal of Emerging Markets* and *Journal of Business Industrial Marketing* produced 13 (1.87%) publications, *Asia Pacific Journal of Marketing And Logistics* contributed 12 (1.87%) publications, *International Journal of Production Research* and *Journal of Retailing And Consumer Services* produced 10 (1.44%) publications, *Journal of Enterprise Information Management* and *Journal of Services Marketing* produced 9 (1.29%) publications, *Journal of Cleaner Production* and *Strategic Management Journal* produced 8

(1.15%) publications, *British Food Journal*, *European Journal of Operational Research*, *Journal of Business Research* and *Management Decision* produced 7 (1.01%) publications, *Decision Support Systems*, *European Journal of Marketing* and *Journal of Manufacturing Technology Management* produced 6 (0.866%) publications respectively.

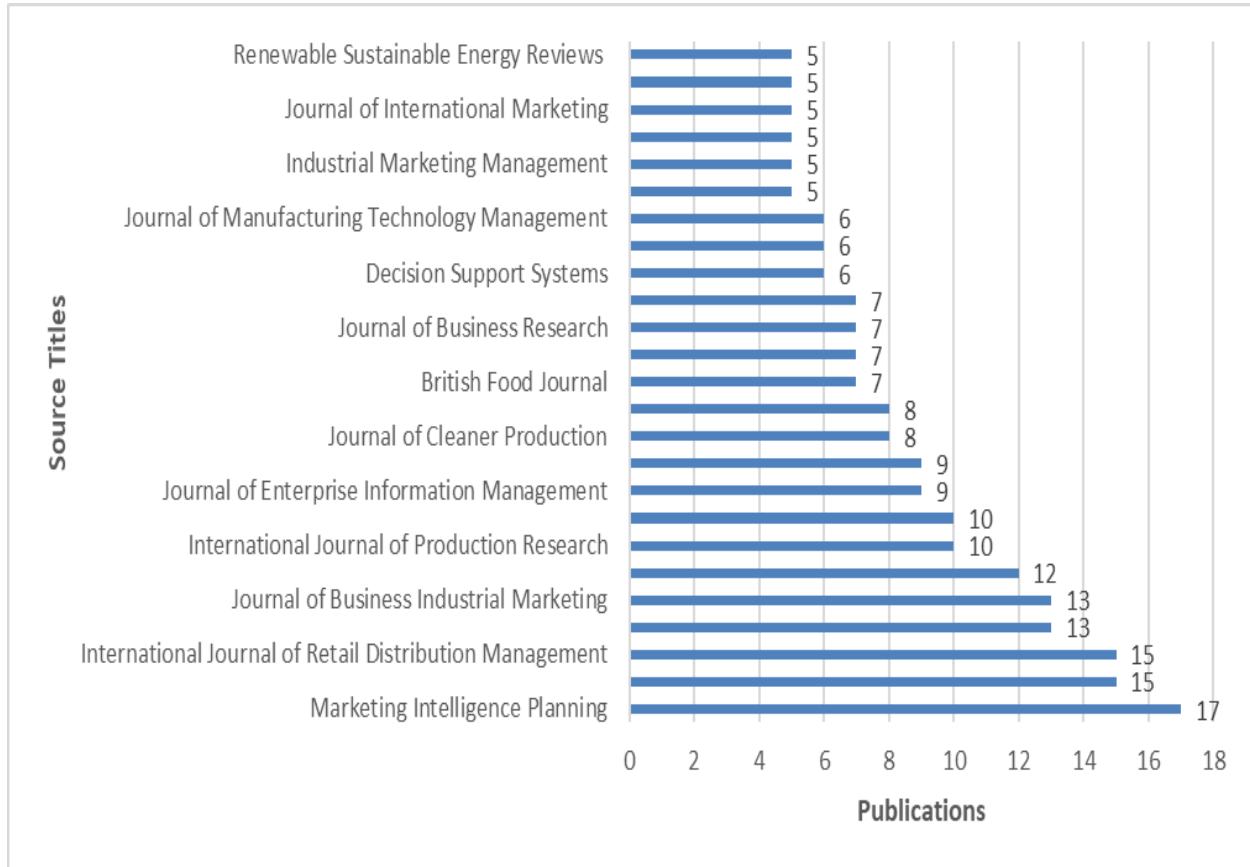


Figure 4. Major 25 Productive journals of Indian marketing research

7. Major 25 Subject – wise distribution of marketing research

The Indian marketing research published during 1990 – 2018 was classified under 25 major subjects (as defined by Web of Science citation database). Table 4 reveals that the top 25 research areas of India in the field of marketing research. Business Economics accounted for the largest publications, i.e. 423, followed by engineering subject produced 86 publications, Computer Science produced 56 publications, Operations Research Management Science produced 55 publications and Environmental Sciences Ecology produced 51 publications etc.

Table 4. Subject – wise publications of Indian marketing research

SN	Research Areas	Records
1	Business Economics	423
2	Engineering	86
3	Computer Science	56
4	Operations Research Management Science	55
5	Environmental Sciences Ecology	51
6	Information Science Library Science	40
7	Science Technology Other Topics	24
8	Social Sciences Other Topics	23
9	Agriculture	19
10	Energy Fuels	18
11	Development Studies	17
12	Public Environmental Occupational Health	15
13	Food Science Technology	12
14	Health Care Sciences Services	12
15	Geography	9
16	Psychology	9
17	Public Administration	9
18	Sociology	7
19	Biomedical Social Sciences	6
20	Government Law	6
21	Communication	5
22	General Internal Medicine	5
23	Social Issues	5
24	Telecommunications	5
25	History Philosophy Of Science	4

8. Most productive authors in Indian marketing research

Table 5 shows the highly productive authors from Indian marketing research output during the study period. Their highest papers, irrespective of their subjects in the Period of 1990 – 2018 as reflected in Web of Science Citation Database. These authors have together published 693 articles total Indian marketing output. As the highly productive authors, he contributed 21 (3.03%) publications, followed by Kumar A published 12 (1.73%) publications, Rahman Z contributed 10 (1.44%) publications, Gupta S and Singh R contributed 9 ((1.299%) publication, Singh S contributed 8 (1.154%) publications, Kiran R, Mani D, Reyes Garcia V and Tiwan MK contributed 6 (0.866%) publications end etc.

Table 5. Most productive authors in Indian marketing research

SN	Authors	Records	% of 693
1	Kumar V	21	3.03
2	Kumar A	12	1.732
3	Rahman Z	10	1.443
4	Gupta S	9	1.299
5	Singh R	9	1.299
6	Singh S	8	1.154
7	Roy S	7	1.01
8	Singh Rk	7	1.01
9	Kiran R	6	0.866
10	Mani D	6	0.866
11	Reyes-Garcia V	6	0.866
12	Tiwari Mk	6	0.866
13	Bose I	5	0.722
14	Bowonder B	5	0.722
15	Huanca T	5	0.722
16	Kumar S	5	0.722
17	Ranjan Kr	5	0.722
18	Sharma A	5	0.722
19	Sharma D	5	0.722
20	Sharma R	5	0.722

Findings

The present study explored the Indian marketing literature has been presented using its publication output in international peer reviewed journals covered in Web of Science database. It analyses India's publication activity in terms of global share, share of international collaborative publications, and visibility and citation impact for the period 1990-2018. It explores how far the trends in Indian marketing research output mirror those of the other upcoming countries and what the main differences among those countries. It discusses the findings in the light of the above-mentioned ongoing discussion on decline or emergence of marketing literature.

The major findings of the study are:

- India has produced 693 papers, and received 8745 citations and Average Citations per Paper is 2.36.during the period 1990 -2018

- Marketing publications are gradually increased year by year, the publications share of marketing research which has increased from 10.82 percent in 2015 to 19.48 percent in 2018.
- According to the research the trend line shows that there is a steady and significant increase in the publications in marketing research.
- The top 20 authors having been identified as most productive authors in Indian marketing research, the publications profile of these five authors along with their research output, citations received and h-index values are presented in Table 5.
- It has been observed from the table two are many communicating channels are used by scientists to publish their research articles in Indian marketing literature. The majority of publications are published in Journals, i.e. 641 (92.496%),
- The study reveals that the ranking list of top 25 highly productive Research Institutions in India based on their highest publications, citations, average citations per publication and h-index.
- It is observed from the table 4. Business Economics accounted for the largest publications, i.e. 423, followed by engineering subject produced 86 publications, have been identified as the three high priority research areas of marketing research output during 1990 -2018.
- Among 25 journals 15 journals are published outside India. Impact factor of the journals shows that Indian marketing intelligence planning research publish highest publications 17 (2.78%).

Conclusion

The analysis has found the publications share of Indian marketing research during 1990 -2018 was 12.987 percent, which has increased from 10.82 percent in 2015 to 19.48 percent in 2018, and it is observed from the study that the percentage of India's papers compared to that of the world's papers. Scientometric studies enable the science policy makers and administrators to understand and grasp the growth, development and impact of research and to know the countries, institutions and the individual scientists who are active in a particular field of research activity. These studies will also provide some insights into the dynamics of research activity and enable one to gauge the direction of research activity and take appropriate measures. There is an urgent need for substantial increase in research and development investments, both at institutional level as well as in terms of extramural funding from different scientific agencies. Indian research output on marketing research is quite low in the global context also, the impact and quality of Indian research is low compared to select development and developing countries. India has produced 693 papers and received 8745 citations during the period 1990–2018. Collaborative research has become a well-established feature in the field of marketing. It is observed that there is a consistently increasing trend towards collaboration among various branches of marketing which leads to collaborative authorship in literature.

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