

## **Exploring Consumer Behavior in Health Insurance: A Bibliometric Analysis of Emerging Trends**

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**Abstract:** Health insurance plays a crucial role in contemporary healthcare systems by providing a financial safety net that allows individuals to access necessary medical care without facing prohibitive costs. Over the last 25 years, health insurance has undergone significant transformations due to policy changes, technological advancements, and shifting demographics. Research in this field has expanded, examining the impacts of these changes on healthcare access, quality, and costs. Studies have evaluated policy reforms like the Affordable Care Act in the United States and compared different insurance models' effectiveness in enhancing health outcomes. The interplay between health insurance, public health, economics, and social justice has driven a multidisciplinary research approach, identifying crucial areas for future investigation.

This study utilizes bibliometric analysis to explore research trends in health insurance, specifically focusing on consumer behavior. We selected the Web of Science (WoS) database for its comprehensive and high-quality data. Using keywords such as "health insurance," "medical insurance," "consumer behav\*," and "customer behav\*," we identified 42 relevant research articles from the WoS core collection, following the PRISMA framework for systematic reviews. The analysis covered various metrics, including publication trends, citation counts, and productive journals.

Our findings highlight the dynamic nature of health insurance research, with notable publications increasing over the years, particularly post-COVID-19. The Journal of Health Economics emerged as the most productive journal in this domain. This study provides a comprehensive overview of the current state of health insurance research, offering insights into productive affiliations, influential authors, and key topics, thus guiding future research and policy development in the health insurance industry.

Keywords: Consumer behavior, Health Insurance, Bibliometric analysis, Biblioshiny, R program,

### BACKGROUND OF THE STUDY INTRODUCTION

Health insurance, a vital component of modern healthcare systems, serves as a financial safety net, ensuring individuals receive necessary medical care without the burden of overwhelming expenses. Over the past 25 years, health insurance has evolved significantly, influenced by policy changes, technological advancements, and shifting demographics. This evolution has been marked by a growing body of research aimed at understanding its impact on healthcare access, quality, and costs. Studies have explored various dimensions, from the effects of policy reforms like the Affordable Care Act in the United States to the comparative effectiveness of different insurance models in improving health outcomes. The intersection of health insurance with public health, economics, and social justice has been a focal point, driving a multidisciplinary approach to research in this field.

The last quarter-century has witnessed a proliferation of bibliometric analyses in health insurance research, highlighting trends, gaps, and emerging areas of interest. Notable research has delved into topics such as the efficiency of health insurance markets, the role of private versus public insurance, and the disparities in coverage and outcomes among different population groups. For instance, studies like those by Glied and Miller (2015) have provided comprehensive reviews of the impact of health insurance on healthcare access and health outcomes, while others have used bibliometric methods to map the landscape of health insurance research globally (Bodenheimer &

Grumbach, 2012). These analyses have not only underscored the critical importance of health insurance in shaping public health but also identified key areas for future research, ensuring that health insurance policies and practices continue to evolve in response to the needs of diverse populations.

"Health insurance", "medical insurance", "customer behave"", and "consumer behave" keywords were supplied in the search criteria to identify the published research articles from the WoS core collection. We have considered research articles, proceeding papers, and early access papers for this study. The association between the keywords and the search query is as follows

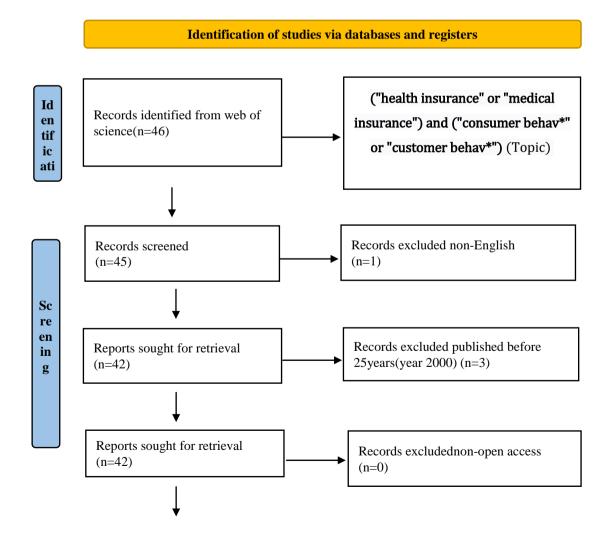
# "health insurance" or "medical insurance") and ("consumer behav\*" or "customer

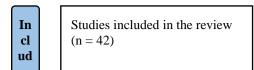
behav\*") (Topic) and English (Languages)

The word behavior is also spelled as behaviour in some parts of the world to cover both variants of the spellings we have used the wildcard search symbol '\*'(asterisk) which broadens the search by finding words that start with the given letters before the '\*'(asterisk) symbol.

#### 2. RESEARCH METHODS

We have selected web of science (WoS) as a source to extract the research took place in Health insurance industry specific to consumer behavior. WoS database was selected over Scopus due to its cleaner data, which helps to minimize duplication, and its core collection database includes top-tier journals. (Strozzi et al. 2017)





Web of Science search as of May 15, 2024.

Figure 1: PRISMA framework for selection of research articles to include

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach was selected from a wide range of available tools as it clearly drills down the number of articles using inclusion and exclusion criteria, all identified results of the WoS database for the defined search criteria are processed through PRISMA framework to screen the articles. 46 research articles were screened and 42 research articles got eligible and selected for the study. We have excluded

- i. Non-English
- ii. Publications before year 2000 (before 25 years from now)
- iii. Non-open access

Inclusion and exclusion criteria are drafted in detail in Figure 1.

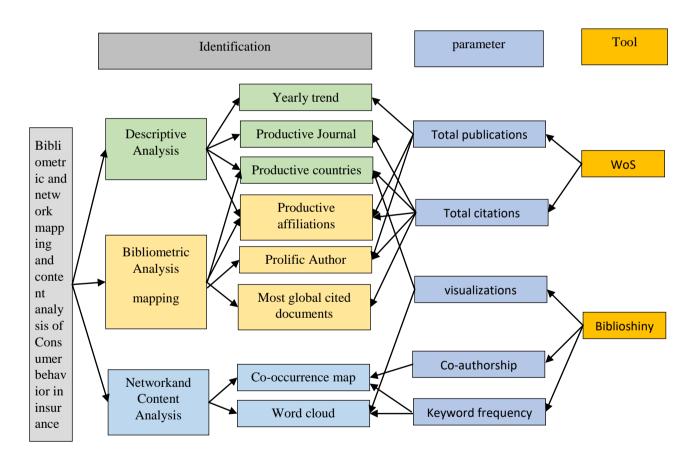


Figure 2: Analysis structure of the current paper.

Analysis metrics like yearly trends, most cited documents, and productive journals were determined using WoS 'analyze results' page. WoS provides detailed tabular data. Bibliometrics analysis was conducted using the Biblioshiny app which runs on the R-program to determine productive affiliations/institutes, prolific authors

and countries, most globally cited documents, and a word cloud of frequently used keywords. Constructed a co-occurrence map of keywords and authors' network maps using biblioshiny app of bibliometrix package of R.

#### 3. RESULTS

Using the PRISMA frameworks we have accepted 42 documents for bibliometric analysis from the WoS database. metadata of the research articles as follows.

- The total number of documents are 42,
- These are sourcedfrom 38 sources(journal),
- Average age of the document is 6.6 years,
- Averagenumber of citations per article is 11.79,
- Reference documents are 1782,
- Total number of authors are 142,
- H index of the documents is 12,
- Time span of documents is 2010 to 2024
- 39 documents are researcharticles and 3 are paper proceedings.

#### 3.1 Descriptive analysis

3.1.1 Total publications and total citations by year

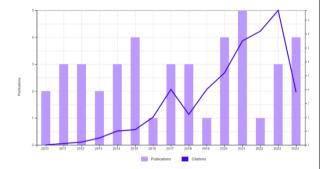


Figure 3: Total publications and total citations by year

Articles emphasizing Consumer behavior within the health insurance industry are shown on a time scale with a count of citations shown in Figure 3. 2 articles were published starting in 2010, 4 articles were published in 2024 and highest number of articles 5 was published in 2021. 2021 year was post Covid -2019 where Health insurance was widely discussed. Citations starting from 2010 increased rapidly year on year and reached the 50-plus mark in 2020 and highest citations are around 90 in 2023. We can interpret that there is ample research going on each year in the health insurance industry.

#### 3.1.2 The most productive Journal

**Table 1: Most Productive Journal** 

Source name	TC	TP
JOURNAL OF HEALTH ECONOMICS	126	3
JOURNAL OF POLITICAL ECONOMY	85	1
M\&SOM-MANUFACTURING \& SERVICE OPERATIONS MANAGEMENT	48	2
SOCIO-ECONOMIC PLANNING SCIENCES	39	1
INTERNATIONAL JOURNAL OF HEALTH PLANNING AND MANAGEMENT	27	1
JOURNAL OF MEDICAL ECONOMICS	26	1
AMERICAN ECONOMIC REVIEW	19	1
INQUIRY-THE JOURNAL OF HEALTH CARE ORGANIZATION PROVISION AND FINANCING	16	1
JOURNAL OF PUBLIC POLICY \& MARKETING	14	1
CHINA AGRICULTURAL ECONOMIC REVIEW	11	1
SOCIAL SCIENCE \& MEDICINE	11	1

TC: total citations TP: total publications

"Journal of Health Economics" is themost productive with 3 publicationswith 126 citations whereas the "Journal of Political Economy" has 1 publication with 85 citations. These 2 journals are the most popular journals.

#### 3.1.3 The most productive country

**Table 2: Most Productive Country** 

Country	TP	% of 42
USA	20	47.6%
PEOPLES R CHINA	4	9.5%

INDIA	3	7.1%
AUSTRALIA	2	4.8%
ENGLAND	2	4.8%
ITALY	2	4.8%
NETHERLANDS	2	4.8%
ROMANIA	2	4.8%
BRUNEI	1	2.4%
CHILE	1	2.4%

TP: total publications

The USA leads the table and has20research publications (equals to 47.6 % of total research papers considered for this study) published on consumer behavior in the healthinsurance industry in the last 25 years, the other side of the world China and India has a fantastic contribution to the research through its4 and 3 respective publications.

#### 3.1.4 The most productive affiliation/institute

Table 3: Authors' affiliation/institute

Affiliations	TP	% of total
UNIV MICHIGAN	6	14.3%
BOSTON UNIV	5	11.9%
HARVARD UNIV	5	11.9%
UNIV TEKNOL MARA	4	9.5%
A CONSTITUENT SYMBIOSIS INT UNIV	3	7.1%
ARIZONA STATE UNIV	3	7.1%
BABES BOLYAI UNIV CLUJ NAPOCA	3	7.1%
HARVARD MED SCH	3	7.1%
IPAG BUSINESS SCH	3	7.1%

SW UNIV FINANCE AND ECON	3	7.1%

TP: total publications

University of Michigan, Boston university and Harvard university are the top 3 contributors with at least 5 publications in health insurance.

#### 3.1.5 The most prolific author

Table 4: Most prolific author

Authors	Record Count	% of 42
Sinaiko AD	2	4.76%
Adijes-toren A	1	2.38%
Afendulis CC	1	2.38%
Aggarwal V	1	2.38%
Ahmad A	1	2.38%
Akan M	1	2.38%
Aline F	1	2.38%
Almunawar MN	1	2.38%
Amicarelli V	1	2.38%
Ang TFA	1	2.38%

TP: total publications

Sinaiko ADis the author who have significantly contributed the consumer behavior research in the health insurance industry with 2 articlespublished. In Table 4 we can identify the prolific authors. Authors with 1(one) publication of 42 can be interpreted as they have written an average of 2.38% of 42 articles.

#### 3.1.6 Most globally cited document

Table 5: Most globally cited documents

Paper	TC	TC p Year	er
GERUSO M, 2020, J POLIT ECON	85	17	

SINAIKO AD, 2011, J HEALTH ECON	61	4.36
DUARTE F, 2012, J HEALTH ECON	39	3
AMICARELLI V, 2022, SOCIO-ECON PLAN SCI	39	13
DAI T, 2017, M\&SOM- MANUF SERV OPER MANAG	33	4.13
LEE YH, 2018, INT J HEALTH PLAN MANAG	27	3.86
LAYTON TJ, 2017, J HEALTH ECON	26	3.25
SLABAUGH SL, 2015, J MED ECON	26	2.6
KETCHAM JD, 2016, AM ECON REV	19	2.11
SINAIKO AD, 2013, INQUIRY-J HEALTH CARE ORGAN PROVIS FINANC	16	1.33

TC: total citations

GERUSO M, 2020, J POLIT ECON is the most popular research article in consumer behavior research in the healthinsurance industry within the WoS database with overall 85 citations and an average of 17 citations in a year. We can learn the other most cited research articles sorted based on total citations received globally.

#### 3.2 Network analysis

As of now, we have seen descriptive analysis and how these authors connected to each other and how many of them collaborated, what are the keywords and how they are connected can be easily described using network analysis. We have used Biblioshiny network analysis.

#### 3.2.1 Authors' network map

Figure 4: Authors association map



Authors association map can be easily interpreted and we can learn from it that almost all the authors connected with each other. This means we have authors from different countries or affiliations/institutes researching another author for collaboration. All these authors belong to only 1 cluster of networks.

#### 3.3 Keyword analysis

Keywords supplied to a research paper by the author also keyword plus are considered for the keyword analysis. We can plot the keyword association using Vos viewer and plot the word cloud to understand the usage of keywords along with their frequency.

#### 3.3.1 Word cloud

Keyword and their frequency of theirs can be used to build a world cloud and it will enable us to understand what all keywords are most frequently used and what are emerging topics in this consumer behavior-related research in the health insurance industry.

#### 4. Limitations

The current research paper limited to the Web of Science database only, there might be qualitative and considerably good quantity research might be available in other databases like Scoups and google scholar etcetera.

The present research paper focused only last 25 years of papers, for bibliometric analysis time span filter can be extended to 30 years even up to 40 years, or even can be restricted to a smaller duration like 10 years or 5 years.

The number of citations threshold was not applied in our research, adding it might give different results altogether.

#### 5. Conclusion

There is ample research available on consumer behavior in the health insurance industry, from this study we have derived and discussed 1) Who are the prominent authors? 2) What are the top journals covering this research? 3) which institutes are encouraging or funding the research? 4) How the prominent authors are associated? and 5) what are the emerging themes for future research?

Whoever is interested in consumer research in the health insurance industry can refer to this research and derive the required literature from the top journals and top author's research.

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