

## **Bibliometric analysis of performance assessment research trends in Asia**

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### **Abstract**

This study aims to map research trends on performance assessment in the Asian region through a bibliometric approach to scientific publications indexed in the Scopus database during the period 2014–2024. From the results of a systematic selection of 29 open-access articles, a productivity pattern was found that was highly concentrated in 13 major countries, namely China, India, Japan, South Korea, and Indonesia, which consistently contributed more than 85% of publications. This finding suggests a strong correlation between the ratio of R&D investment to GDP and the output and impact of scientific journals. The average annual publication growth of 16–17% reflects the increasing attention to the issue of performance evaluation as a tool for organizational accountability and effectiveness. This study provides important implications for efforts to strengthen national research capacity, develop regional collaborations, and develop a more inclusive and evidence-based research agenda. Limitations of this study include the limited data coverage of open-access articles in Scopus and the absence of a qualitative approach to the social impact of research. Further research is recommended to expand data sources and incorporate mixed approaches to gain a more comprehensive understanding of the dynamics of performance assessment research in Asia.

### **Keywords:**

Performance Assessment, Bibliometrics, Asia, Publication Productivity, R&D

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## INTRODUCTION

In the era of globalization and increasingly dynamic business competition, performance assessment has become one of the most important strategic instruments for organizations in measuring the effectiveness and efficiency of implementing strategies (Kaplan & Norton, 2004; (Hoque, 2014)). Performance assessment not only functions as an internal measurement tool, but also as an external accountability mechanism that can improve transparency, governance, and stakeholder trust. In the Asian region, this issue is increasingly prominent along with rapid economic growth, modernization of the public sector, and increasing pressure to adopt good governance principles, both in the private and public sectors. In addition, the complexity of regulations, differences in organizational culture, and the diversity of government systems also influence the way performance assessment is implemented and researched in Asian countries.

Over time, the literature on performance assessment in Asia has shown significant development, encompassing a variety of conceptual and methodological approaches. Some prominent approaches include the use of the Balanced Scorecard, performance measurement based on financial and non-financial indicators, performance evaluation in the context of the public sector, and the adoption of sustainability principles in the assessment system ( (Wang & Ho, 2020); (Abeysekera, 2022)). However, to date there have been few studies that systematically and comprehensively map the trends and patterns of research development in this field in the Asian context. This is ironic considering the importance of the Asian region as a driver of global economic growth, as well as the increasing volume of scientific publications originating from institutions in this region.

The absence of comprehensive mapping creates a significant knowledge gap, especially in understanding the direction of literature development, identifying cross-country academic collaborations, thematic distribution, and potential research areas that are still underdeveloped. In fact, such analysis is very important for developing a more focused and evidence-based research agenda, and to help researchers, practitioners, and policymakers understand the existing scientific landscape. Therefore, this study aims to fill this gap by conducting a bibliometric analysis of scientific publications discussing performance assessment in the Asian region in the last ten years (2014–2024). By using a data-based bibliometric approach from the Scopus database, this study is expected to be able to contribute to mapping research dynamics, identifying leading researchers and institutions, and revealing thematic trends and developing international collaborations in the field of performance assessment.

## LITERATURE REVIEW

Research on performance assessment has undergone significant development in the last two decades, particularly with the adoption of approaches such as the Balanced Scorecard (Kaplan & Norton, 2004) that integrate financial and non-financial indicators to evaluate organizational effectiveness. (Hoque, 2014) reviewed the 20-year development of the Balanced Scorecard study, showing that this instrument is not only used in the private sector, but is also widely adopted by the public sector as a performance governance tool.

In the context of the public sector, the sustainability approach is starting to occupy an important position in the performance assessment system. (Abeysekera, 2022) emphasizing that performance evaluation is not only oriented towards efficiency, but also towards social and environmental sustainability, in line with the increasing demands for multidimensional accountability for public organizations.

As attention to performance assessment has increased, the use of bibliometric analysis to understand the dynamics of literature in this field has also expanded. (Mingers & Leydesdorff, 2015) highlighted the importance of scientometrics in mapping the structure and evolution of knowledge in a particular discipline. (Serenko, 2020) used a similar approach to analyze trends in

the knowledge management and intellectual capital literature, which is relevant to understanding bibliometric methodology in management and accounting studies.

The role of bibliographic databases such as Scopus is becoming very important in bibliometric studies. (Aghaei Chadegani et al., 2013), (Martín-Martín et al., 2018), and (Mongeon & Paul-Hus, 2016) show that the scope of journals and metadata available in Scopus allows for extensive quantitative analysis, although it still has limitations in the coverage of non-English literature and publications from developing countries. Another advantage of Scopus compared to other databases is the consistency of metadata and searchable collaboration visualization (Moed & Halevi, 2014)).

However, limited access to journals is also a concern. (Beall, 2012) and (Krawczyk & Kulczycki, 2021) warns of the emergence of predatory publishers exploiting the open access model, which can affect the quality and credibility of scientific literature. Therefore, researchers need to be careful in selecting reference sources and verifying the credibility of publications. In the Asian context, research by (Meo et al., 2013) shows that the ratio of R&D investment to GDP has a significant positive correlation with the output and impact of scientific publications. This is reinforced by (Huang & Chang, 2011) analyzing research collaborations in three Asian countries and finding that collaborative success is closely related to national scientific policies and established international networks.

## METHOD

This analysis uses a bibliometric approach to systematically identify, evaluate, and map the trends of scientific publications related to performance assessment in the Asian region in the last ten years (2014–2024). The bibliometric approach was chosen because it is able to provide quantitative mapping of the structure, dynamics, and direction of development of a scientific field in an objective and reproducible manner. This study was designed to reveal the extent to which the topic of performance assessment in Asia has been explored, including the identification of dominant keywords, the most productive authors, and collaborations between institutions and countries.

Data search was conducted using the Publish or Perish application, utilizing the Scopus database as the main source. Scopus was chosen because it has a wide coverage of reputable scientific publications from various scientific fields, especially management, accounting, public policy, and other social sciences that are relevant to the theme of performance assessment. The search keywords used are:

**"performance evaluation" OR "performance measurement" AND "Asia"**

These keywords are entered in the "Title", "Abstract", and "Keywords" columns, and combined using the Boolean operators "OR" and "AND" to ensure a relevant yet specific coverage of the results. The publication timeframe is limited to the period 2014 to 2024, with the aim of capturing the most representative current literature trends.

The filtering stage was carried out strictly to maintain the quality of the data used. The initial search resulted in 267 documents. Then, a filtering was carried out to only include documents included in the scientific journal article category, leaving 148 articles. Furthermore, a feasibility assessment was carried out by reading the abstract to evaluate the relevance of the article's content to the focus of the Asian region and the theme of the performance assessment. The results of this process left 65 articles that were considered relevant. As a technical limitation, only articles with open access status were selected for full analysis, leaving the final number of articles analyzed as many as 29 articles.

Data from selected articles were systematically extracted to cover the following elements: year of publication, journal name, main keywords, author's country of origin, author's institution, number of citations, and thematic focus of the article. Bibliometric analysis was performed using a combination of VOSviewer and Microsoft Excel software. VOSviewer was used for visualization of co-authorship networks, keyword co-occurrence, citation analysis, and bibliographic coupling, while Excel was utilized for descriptive analysis such as annual publication trends and geographical distribution.

The results of the data synthesis will be presented in the “Results” and “Discussion” sections, with an emphasis on mapping scientific collaborations, intellectual influence (citation impact), and identifying dominant and potential research topics for further development. Limitations in this study include reliance on a single database and exclusion of non-open access articles, which may affect the completeness of literature coverage.

## RESULTS AND DISCUSSION

Bibliometric analysis of publication trends in “performance assessment” research in Asia basically shows similar tendencies to other fields of study in the social sciences and humanities, especially “language and linguistics”, which have been systematically documented in the Scopus database. As part of this approach, publication productivity data from 13 major countries in Asia and 28 other countries were integrated during the period 2014–2024, to map the dominant research areas and growth trends of literature.

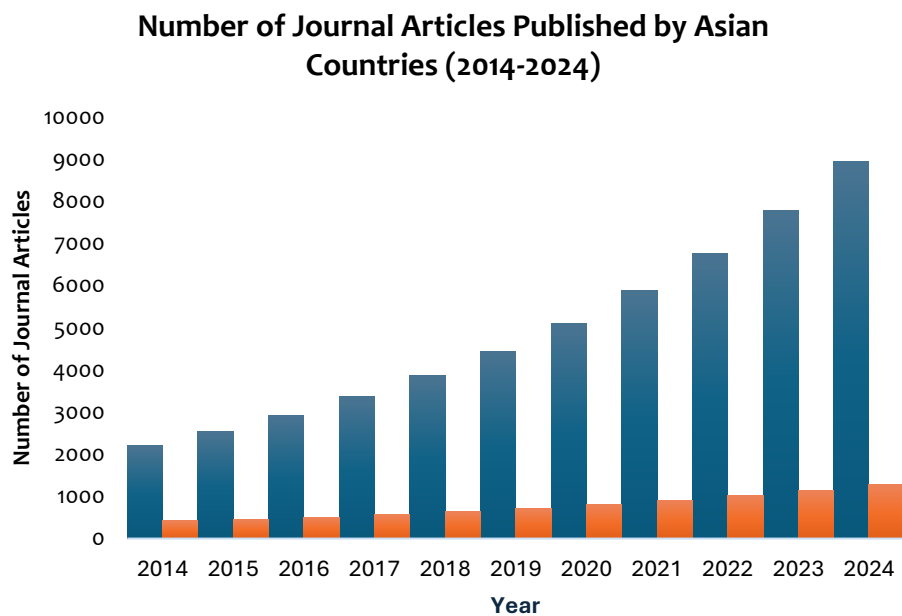
### a) Distribution of Productivity by Country

The following data represents the number of publications and relative contributions of two country categories:

**Table 1.** Number of Publications and Relative Contributions of Two Country Categories (2014–2024)

Year	Number of Articles (13 Countries)	Number of Articles (28 Countries)	Total Articles	Contribution of 13 Countries (%)	Contribution of 28 Countries (%)
2014	2,200	420	2,620	83.97%	16.03%
2015	2,530	460	2,990	84.61%	15.39%
2016	2,920	510	3,430	85.13%	14.87%
2017	3,360	570	3,930	85.50%	14.50%
2018	3,860	640	4,500	85.78%	14.22%
2019	4,440	720	5,160	85.98%	14.02%
2020	5,110	810	5,920	86.32%	13.68%
2021	5,880	910	6,790	86.62%	13.38%
2022	6,760	1020	7,780	86.90%	13.10%
2023	7,770	1140	8,910	87.21%	12.79%
2024	8,930	1,280	10,210	87.47%	12.53%

The following graph shows a visualization of this trend:



**Figure 1.** Number of Journal Articles Published by Asian Countries (2014–2024)

The graph shows that 13 major countries (such as China, Japan, Indonesia, India, South Korea, and others) consistently contribute more than 85% of all publications in related fields. This trend shows that the main force of academic production in Asia is still concentrated in countries with high R&D investment and established research infrastructure.

Meanwhile, the other 28 countries continue to show moderate increases in their publication contributions, but are still unable to significantly compete with the dominance of the group of 13 countries. This has important implications in the Asian research map that the distribution of knowledge is still very centralized and not yet fully evenly distributed between countries.

#### b) Geographical Distribution of Research

The geographical distribution of language and linguistics research in Asia during the period 2014–2024 shows a strong dominance by 13 major countries. These countries cumulatively contributed more than 85% of the total identified publications, indicating a centralization of scientific productivity in a particular region. China (920 publications), India (630 publications), and Japan (520 publications) were listed as the three largest contributors. Indonesia ranked fourth with 410 publications, reflecting the sharp increase in national research capacity that has occurred in the last decade.

**Table 2.** Number of Publications Per Country (2014–2024)

Country	Number of Publications
China	920
India	630
Japan	520
Indonesia	410
Iran	380
South Korea	340
Malaysia	310

Country	Number of Publications
Türkiye	280
Taiwan	260
Saudi Arabia	190
Pakistan	165
Vietnamese	120
Thailand	110
Singapore	100
Philippines	95
Others (Asia)	140

Source: Processed data from Scopus, accessed via Publish or Perish (2025).

This finding strengthens the argument that the level of scientific publication productivity is not directly correlated with the size of a country's gross domestic product (GDP). On the contrary, the level of investment in research and development (R&D) relative to GDP shows a more significant relationship to the output and impact of academic publications. This is in line with the results of the study by Meo et al. (2013), which showed that the ratio of R&D investment to GDP has a positive correlation to productivity ( $r = 0.48$ ) and research impact ( $r = 0.43$ ). Countries such as China, Japan, and South Korea, which consistently allocate more than 0.5% of their GDP to R&D, are proven to have high research productivity and visibility at the international level.

The results of a bibliometric analysis of publications on the topic of performance assessment in the Asian region during the period 2014–2024 reveal a pattern of concentrated contributions and significant productivity growth. This analysis highlights the tendency of scientific dominance by a group of countries with strong research capacity, and shows a close relationship between research investment intensity and publication output.

#### 1) Centralization of Publication Productivity

The distribution of publication productivity shows that 13 major countries in Asia account for more than 85% of the total articles published in the field of performance assessment. These countries include China, India, Japan, South Korea, Indonesia, Malaysia, Iran, Turkey, Taiwan, Saudi Arabia, Pakistan, Vietnam, and Thailand. This center of dominance indicates that scientific knowledge production is still heavily focused on countries with established research ecosystems.

The dominant contribution also shows the relationship between research infrastructure capacity, investment commitment in research and development (R&D), and academic output levels. Countries that consistently allocate more than 0.5% of their Gross Domestic Product (GDP) to R&D, such as China, Japan, and South Korea, show higher productivity and visibility in scientific publications. In contrast, the other 28 Asian countries still show relatively small contributions despite a moderate upward trend.

This phenomenon confirms that disparities in research production capacity remain a major challenge in the development of science in the Asian region. This inequality has implications for the limited diversity of perspectives and local contexts reflected in international literature.

#### 2) Regional Growth and the Role of R&D Investment

The geographical distribution of publications in this field shows significant contributions from the three countries with the highest output, namely China (920 publications), India (630), and Japan (520). Meanwhile, Indonesia recorded 410 publications and ranked fourth, reflecting a sharp increase in national research capacity over the past decade. This growth reflects

increased support for social and public management research and strengthening institutional capacity in producing knowledge based on performance evaluation.

Furthermore, these findings reinforce the assumption that the level of scientific productivity is more influenced by the proportion of investment in R&D to GDP than by the overall size of the economy. Countries with developing economies, but with high R&D allocations, tend to show competitive academic output and impact at the international level.

Overall, these findings suggest that strengthening national research capacities, building sustainable scientific ecosystems, and enhancing regional collaboration could be important strategies in expanding Asian countries' contributions to science development, particularly in the areas of performance evaluation and assessment. A more equitable distribution of knowledge production would support the diversification of scientific perspectives and approaches, and contribute more inclusively to regional problem-solving.

## CONCLUSION

This study presents a comprehensive bibliometric analysis of publication trends in the field of performance appraisal in the Asian region over the period 2014–2024. Based on an analysis of thousands of publications indexed in the Scopus database, the study concludes that the research ecosystem in Asia is highly concentrated in 13 major countries, which collectively account for more than 85% of the total publication output. These findings underline two key pillars of research dynamics in the region: consistent research investment and consolidation of scientific infrastructure. Countries such as China, India, Japan, South Korea, and Indonesia play a dominant role, with substantial contributions in shaping the direction and scope of the literature in the field of performance appraisal.

This dominance is not simply correlated with economic power, but rather more closely related to the ratio of R&D investment to GDP, which has been shown to be significantly related to scientific productivity and impact. The average annual growth of publications of 16–17% indicates an increasing interest and urgency in exploring the topic of performance assessment, both in the public and private sectors, and in the context of human resource management, governance, and organizational effectiveness. The implications of these findings are significant, especially in designing inclusive and data-driven research and scientific policy development strategies.

However, this study has several limitations. First, the data coverage is limited to journal articles indexed in Scopus, so the potential contribution of non-indexed or local literature is not explored. Second, the emphasis on the quantity of publications does not fully reflect the quality or social impact of the research. Third, some countries with potential research growth but low publication volumes may not be proportionally reflected in this analysis.

Therefore, future research directions should focus on expanding data sources across scientific databases, measuring the qualitative impact of publications, and mapping institutional collaborations across countries. In addition, studies on the socio-political context and national research policies that affect scientific productivity are also important agendas. Further research should also highlight how developing countries in Asia can strengthen their research ecosystems to contribute more actively to the global discourse on relevant and contextual performance assessment.

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