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The Development of Artificial Intelligence Research in Public Administration: A Bibliometric Analysis 2015–2025

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ABSTRACT

Background: Artificial intelligence (AI) is increasingly used in public administration, yet an up-to-date and comprehensive mapping of its research development remains limited.
Objective: This study aims to map the publication trends, most influential actors, thematic grouping, and research gaps of artificial intelligence in public administration during 2015–2025.
Method: The method employed is a bibliometric performance analysis of 3,557 documents retrieved from the OpenAlex database on 7 July 2026. Documents were identified by combining public administration terms in the title with artificial intelligence terms in the title or abstract.
Results: The results show remarkably rapid growth, from 14 articles in 2015 to 1,328 articles in 2025, with 58% of the works published solely in 2024–2025. The United States, China, and India are the largest contributors, while Indonesia ranks fourth worldwide among 121 countries. Government Information Quarterly is the most productive journal. An interpretive grouping of the most frequent OpenAlex concepts indicates three areas: AI and data technology, the public-sector and governance domain, and the values and transformation of governance.
Conclusion: This study concludes that the field is growing very rapidly but is not yet theoretically mature. Empirical evaluation of deployed systems remains scarce.

INTRODUCTION

Artificial intelligence (AI) has grown to become one of the most transformative technological forces in the last two decades, with an influence that spans almost all sectors of life, from finance, health, manufacturing, to government (Dwivedi et al., 2021). AI's ability to automate routine work, process large volumes of data, and support evidence-based decision-making positions it as a strategic instrument for the modernization of governance (Duan et al., 2019). In the realm of public administration, this technology is seen as able to answer a number of classic problems such as high administrative burdens, slow service completion times, limited apparatus resources, and communication barriers between the government and citizens, while opening up opportunities for the realization of more efficient, responsive, and inclusive public services (Wirtz et al., 2019).

This shift marks a new chapter in the study of public administration, where smart technology is no longer just an administrative tool, but rather a way for states to formulate policies and administer services. The scale of this shift is now measurable in government itself: around 70 per cent of the countries covered by the 2023 OECD Digital Government Index reported using AI to improve internal government operations and 67 per cent to improve the design and delivery of public services, yet only 30 per cent reported using it for policymaking (OECD, 2024). In parallel, the global average E-Government Development Index rose from 0.6102 in 2022 to 0.6382 in 2024, and 42 per cent of United Nations member states now hold legislation, policy or strategy documents on artificial intelligence (Economic, 2024).

In practice, the use of AI in the public sector has taken various forms. Governments in various countries are developing intelligent chatbots to improve interaction and communication with citizens (Androutsopoulou et al., 2019), integrating AI with the Internet of Things to realize smart government (Kankanhalli et al., 2019), and implementing AI-based systems in strategic service sectors such as public health (Sun & Medaglia, 2019). Wirtz et al., (2019) even identified at least ten areas of AI application in the public sector, which shows the breadth of the spectrum of use of this technology. These studies confirm that AI has the potential to bring significant added value to government organizations, both in terms of operational efficiency, quality of decision-making, and improving the quality of services to the community.

Nevertheless, the adoption of AI in public administration is inseparable from complex challenges and risks. Several studies highlight the issues of governance, ethics, transparency, and accountability that arise when public decisions begin to be delegated to algorithmic systems (Wirtz et al., 2020; Young et al., 2019; Zuiderwijk et al., 2021). Zuiderwijk et al., (2021) through a systematic review found that the implications of using AI in public governance include risks to fairness, privacy, and legitimacy, while most research in this area is still exploratory, conceptual, and qualitative. At the implementation level, barriers to adoption are also organizational and institutional, ranging from limited human resource capacity, data infrastructure readiness, to bureaucratic resistance (Misra et al., 2023; Neumann et al., 2024). This tension between opportunity and risk is what makes AI in public administration a rapidly growing and debated field of study.

In the Indonesian context, this tension is framed by an explicit policy architecture. The national artificial intelligence strategy, Strategi Nasional Kecerdasan Artifisial Indonesia 2020–2045, was issued in 2020 and sets a planning horizon to 2045 (Teknologi, 2020), while the electronic-based government system is governed by Presidential Regulation No. 95 of 2018 on Sistem Pemerintahan Berbasis Elektronik. The effect of this agenda is visible in international measurement: Indonesia rose from 77th place with an E-Government Development Index of 0.7160 in 2022 to 64th of 193 member states with an index of 0.7991 in 2024, moving the country into the Very High EGDI group (Economic, 2024). Policy ambition and measured capacity are therefore both rising, which makes the state of the underlying research literature a question worth asking directly.

The increasing academic attention to this theme has given birth to several literature reviews and research agendas. De Sousa et al., (2019) map the direction of AI development in the public sector, Madan & Ashok, (2023) examine the patterns of AI adoption and

diffusion in public administration, while Valle-Cruz et al., (2019) review the potential of AI from a public policy perspective. Medaglia et al., (2023) further affirm four future research directions, namely AI governance, trustworthy AI, impact assessment methodologies, and data governance. Bibliometric studies have also begun to emerge, including mapping the use of AI in public services Lawelai et al., (2023) and AI bibliometric analysis in government studies (Djen et al., 2023), both of which were initiated by Indonesian researchers. The presence of these works indicates that interest in AI in public administration is not only growing in developed countries, but also starting to strengthen among academics in Indonesia, in line with the encouragement of digital transformation of government in the era of the Industrial Revolution 4.0.

However, there are still gaps that need to be bridged. First, most of the existing reviews and mapping limit their scope to around 2022–2023, even though the number of publications on this theme has increased sharply in recent years, so more up-to-date mapping is needed to capture the latest dynamics. Second, previous bibliometric studies tend to focus on specific aspects or periods, for example on public services in a narrow way, and few have mapped publication trends, influential actors and the thematic composition of AI research in public administration across a full decade in a single performance analysis.

This study addresses that descriptive gap and does not claim to analyse collaboration networks or thematic evolution over time, which remain open for subsequent science mapping work. Third, the synthesis that links quantitative mapping with gap identification and future research agendas is still limited, especially relevant to the context of the development of public administration science in Indonesia. The absence of a comprehensive and up-to-date picture has the potential to make it difficult for researchers to place their contributions as well as determine the direction of valuable research.To answer this gap, this study uses a bibliometric approach. Bibliometric analysis is a systematic and tested method to study and visualize a large amount of scientific literature, to be able to objectively uncover development trends, influential actors, and intellectual structure of a field (Donthu et al., 2021).

Based on the description above, this study aims to: (1) analyze the development trend of artificial intelligence research publications in public administration in the period 2015–2025; (2) identify the most influential actors, including countries, sources (journals), and documents that are cited the most; (3) map the dominant thematic clusters and keywords in this field; and (4) formulate the research gap and future research direction. The novelty of this study lies in three things: a decade-long window that for the first time includes the full 2024 and 2025 output, in which 58 per cent of all documents in the field appeared; the use of OpenAlex rather than Scopus or Web of Science, which widens coverage of journals from developing countries; and the explicit treatment of automatically assigned concepts as an interpretive rather than an algorithmic basis for thematic grouping.

The study is expected to benefit three audiences: researchers, who gain an up-to-date map for positioning new work and a set of named underexplored themes; journal editors and research managers, who gain evidence on where the field's output is concentrated; and policymakers in Indonesia, for whom the mapping indicates which governance themes are already well served by evidence and which are not.

METHOD

This study used a quantitative approach with a bibliometric analysis method. The bibliometric method was chosen because it is able to study and visualize the development of a large amount of scientific literature systematically and objectively, so as to reveal publication trends, influential actors, and the intellectual and thematic structure of a field of study (Donthu et al., 2021). The research procedure follows the commonly used bibliometric stages, which include the formulation of objectives and scope, the selection of analytical techniques, data collection, the implementation of analysis, and the interpretation and reporting of findings.

Research data is sourced from the OpenAlex database. OpenAlex was chosen because it is a large-scale, open access database that indexes hundreds of millions of works from various disciplines, and provides complete and freely accessible bibliographic metadata. The selection of a database is an important methodological decision, as the scope and indexing system of each database differs and can affect the results of the analysis (Mongeon & Paul-Hus, 2016; Singh et al., 2021). The extracted metadata includes title, author name, affiliation, country, keyword, year of publication, source name, and number of citations.

The data search was conducted on July 7, 2026, using a search equation that combines a set of public administration and government terms in the title section with the term artificial intelligence in the title and abstract sections. The inclusion criteria applied include: (a) publications published in the period 2015–2025; (b) the title contains one of the terms related to public administration/government, namely public administration, public sector, public governance, e-government, digital government, public service, or government; and (c) the title or abstract contains one of the terms related to artificial intelligence, namely artificial intelligence, machine learning, or deep learning.

The restriction of public administration terms in the title section is deliberately applied to maintain the thematic relevance of the document to the focus of the research. The exact query submitted to the OpenAlex works endpoint was: filter=title.search:("public administration" OR "public sector" OR "public governance" OR "e-government" OR "digital government" OR "public service" OR government),abstract.search:("artificial intelligence" OR "machine learning" OR "deep learning"),from_publication_date:2015-01-01,to_publication_date:2025-12-31. The application of the search equation resulted in 3,557 documents that were used as final dataset.

The identification and screening stages are reported in Figure 1 following the PRISMA reporting structure. Records were deduplicated on the OpenAlex work identifier and on normalised title and DOI, so that a work indexed more than once was counted once. Document types were not restricted a priori: repository and preprint records were retained in the main dataset but flagged, and because the same work can appear both as a preprint and as a journal article, all analyses were repeated on a peer-reviewed subset of 3,226 documents obtained by removing the 331 records held in SSRN, Zenodo and arXiv. No manual relevance screening was applied to the full set, and the consequences of that decision are quantified in the Results and acknowledged in the Limitations.

Table 1. Identification, screening and inclusion of documents, reported following the PRISMA structure

Stage	Records	Detail
Identification	3,557	Records returned by the OpenAlex query above, limited to 2015–2025
Deduplication	3,557	Records deduplicated on OpenAlex work ID, normalised title and DOI; no residual duplicates returned by the API
Screening: year and field criteria	3,557	All returned records already satisfy the title and title-or-abstract term criteria applied in the query
Records flagged by container type	331	SSRN (172), Zenodo (113) and arXiv (46) repository or preprint records, retained but flagged
Included: main dataset	3,557	Full dataset used for the analyses reported in Tables 1 to 5
Included: peer-reviewed subset	3,226	Sensitivity subset after removing the 331 flagged repository and preprint records

The analysis was carried out using a performance analysis approach on the metadata obtained (Donthu et al., 2021). The analysis included calculating the number of publications per year to see development trends, identifying the most productive countries and sources (journals), searching for the most cited documents, and analyzing the frequency of keyword occurrences to identify the dominant thematic cluster. The thematic grouping reported in this study is an interpretive grouping rather than an algorithmic clustering.

The fifteen most frequent OpenAlex concepts were extracted, discipline-level labels that carry no thematic information were set aside, and the remaining concepts were assigned by the two authors independently to one of three substantive areas, with disagreements resolved by discussion. No co-occurrence matrix was computed and no modularity-based community detection was run, so the groups are presented as an informed reading of a frequency distribution and not as empirically derived clusters.

Full science mapping of keyword co-occurrence and co-authorship networks using VOSviewer Van Eck & Waltman, (2010) or the bibliometrix package Aria & Cuccurullo, (2017) remains a necessary complementary step and is stated as such in the Limitations. The fourth objective was addressed by reading the frequency distribution against the four-part agenda of Medaglia et al., (2023), treating themes that are prominent in that agenda but weakly represented in the concept frequencies as candidate gaps. The results of the analysis are then interpreted descriptively to answer the research objectives.

RESULTS AND DISCUSSION

The search resulted in 3,557 documents that met the criteria and were analyzed. The findings were outlined following four research focuses: publication trends, the most influential actors and sources, the thematic structures that were formed, and the gaps that were still open for further research.

Publication Trends, 2015–2025

During the study period, scientific attention to artificial intelligence in public administration grew tremendously. The number of publications increased from just 14 articles in 2015 to 1,328 articles in 2025 a nearly hundredfold jump in a decade (Table 1). Growth was slow in the first half of the period and has only really picked up since 2019 (150 articles), before exploding in the last three years: 399 articles in 2023, 738 in 2024, and 1,328 in 2025.

The pace of that acceleration is uneven and is better stated precisely: growth was 31.2 per cent from 2022 to 2023, then 85.0 per cent from 2023 to 2024 and 79.9 per cent from 2024 to 2025, so only the last two intervals approach a doubling. Across the full window the compound annual growth rate is 57.7 per cent. The trend is shown in Figure 2. Most strikingly, more than half (58%) of all publications over a decade were published only in the 2024–2025 range. This sharp surge coincides with the widespread use of generative AI since the end of 2022, which seems to have triggered a new wave of interest in the application of AI in the public sector. This kind of growth pattern marks a relatively young but explosively growing field of study, leaving room for further study.

Table 2. Number of publications per year (2015–2025)

Year	Number of Publications	Percentage (%)
2015	14	0.4
2016	12	0.3
2017	42	1.2
2018	80	2.2
2019	150	4.2
2020	220	6.2
2021	270	7.6
2022	304	8.5
2023	399	11.2
2024	738	20.8
2025	1,328	37.3
Total	**3,557**	**100**

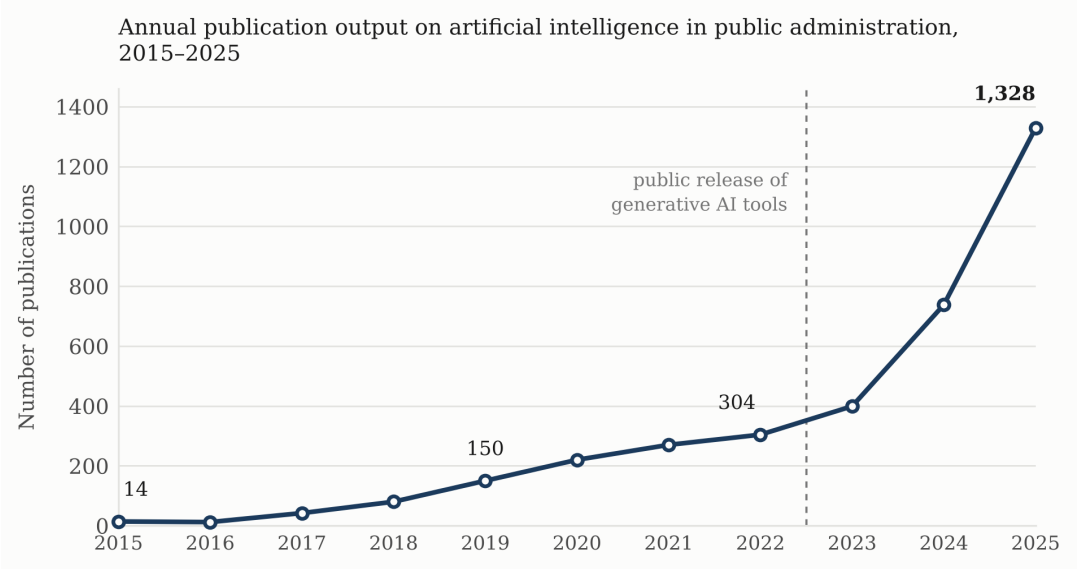


Figure 1. Annual publication output on artificial intelligence in public administration, 2015–2025

Most Influential Actors and Sources

AI research in public administration is spread across 121 countries, but concentrated in a handful of major countries. The United States leads with 402 documents, followed by China (269), India (195), and of note Indonesia which ranks fourth in the world with 186 documents, outperforming the United Kingdom (146) and all other European countries (Table 2). Indonesia's position confirms that the topic of the use of AI in public administration is not just a discourse of developed countries, but also an issue that is strengthening significantly among Indonesian academics.

It should be noted that a document can be counted in more than one country if the authors come from different countries, so the number of countries between countries is reasonable to exceed the total number of documents. This ranking must, however, be read against the coverage profile of the database. OpenAlex indexes a large volume of national open access journals through Crossref and OJS, so countries with many locally published journals are better represented here than they would be in Scopus or Web of Science. The high placement of Indonesia, and equally that of Russia (95) and Ukraine (91), is therefore partly an artefact of database coverage rather than a pure measure of research influence, and the figures should not be read as directly comparable with counts drawn from selective commercial indexes.

Table 3. Ten most productive countries

No	Country	Number of Documents
1	United States	402
2	China	269
3	India	195
4	Indonesia	186
5	United Kingdom	146

No	Country	Number of Documents
6	Russia	95
7	Ukraine	91
8	Italy	89
9	Australia	82
10	Germany / Spain	68

Interesting findings appear in the publication container pattern. Repositories and preprint platforms occupy the top positions SSRN (172 documents), Zenodo (113), and arXiv (46) a pattern typical of the fast-paced field, where researchers race to disseminate findings first before going through a lengthy review process. Among peer-reviewed journals, *Government Information Quarterly* was the most productive (43 papers), followed by *Sustainability* (25) and *Transforming Government: People, Process and Policy* (19) (Table 3). The diverse composition of journals ranging from mainstream public administration journals such as *Public Administration Review* and *Public Management Review*, to cross-disciplinary journals such as AI & Society, to sustainability and computing journals once again confirms the character of this field that sits at the intersection of public administration, political science, and computer science.

Because a single study can be deposited as a preprint and then published as an article, the 331 records held in these three repositories were checked against the rest of the dataset on normalised title and DOI and were then removed to form a peer-reviewed subset of 3,226 documents. Repeating the annual, country, source and concept analyses on that subset leaves the ordering of the leading countries, journals and concepts unchanged, which indicates that the repository records inflate the absolute counts by about 9.3 per cent but do not drive the structure of the findings reported here.

Table 4. The ten most productive peer-reviewed journals

No	Source	Number of Documents
1	Government Information Quarterly	43
2	Sustainability	25
3	Transforming Government: People, Process and Policy	19
4	Digital Government: Research and Practice	11
5	Public Money & Management	11
6	Procedia Computer Science	10
7	Public Administration Review	9
8	Administrative Sciences	8
9	Public Management Review	8
10	AI & Society	8

The ten documents with the highest citations are presented in Table 4. The most cited document is a study of modelling the effectiveness of government interventions in the face of COVID-19 (1,467 citations) a computational-oriented work that reflects that some of the

most influential references in this field come from the technical side applied to the context of government. Interestingly, however, the second to fourth ranks are occupied by the foundational works of public administration that directly form the conceptual framework of this field: the study by Wirtz et al., (2019) on the applications and challenges of AI in the public sector (1,120 citations), the study by Sun & Medaglia, (2019) on the challenges of AI in public healthcare (836 citations), and the systematic review by Zuiderwijk et al., (2021) on the implications of AI for public governance (668 citations).

A number of other most cited works, such as De Sousa et al., (2019); Madan & Ashok, (2023), are also literature reviews with a research agenda. The dominance of review and conceptual works at the top of this hierarchy indicates that the field is still in the stage of establishing a theoretical basis, and that its discourse is based on a small number of foundational texts that are common references. Because raw citation counts favour older documents, Table 4 also reports citations per year, calculated as total citations divided by the number of years since publication. On that normalised measure the ordering changes materially: Madan & Ashok, (2023) rises from tenth to fourth with 128.3 citations per year and Zuiderwijk et al., (2021) rises to third with 133.6, while Veale et al., (2018) falls to last with 55.8.

The normalised figures therefore show recent review work accumulating attention faster than the older foundational texts, which reinforces rather than weakens the reading that the field is still consolidating its conceptual base. It is also worth stating plainly that two of the ten documents, Haug et al., (2020); Perc et al., (2020), are epidemiological modelling studies of government intervention during the COVID-19 pandemic rather than studies of artificial intelligence in public administration.

Their presence is a direct consequence of admitting the broad term government into the title criterion, and it indicates that precision at the top of the citation distribution is approximately 80 per cent. This is an indicator drawn from the ten most cited records only and should not be read as an estimate of precision across the whole dataset, which would require a manual audit of a random sample and is identified in the Limitations as a necessary next step.

Table 5. Ten most cited documents

No	Author (Year)	Title (concise)	Citation	Citations per year
1	Haug et al., (2020)	Ranking the effectiveness of worldwide COVID-19 government interventions	1.467	244.5
2	Wirtz et al., (2019)	Artificial Intelligence and the Public Sector Applications and Challenges	1.120	160.0
3	Sun & Medaglia, (2019)	Mapping the challenges of AI in the public sector: Evidence from public healthcare	836	119.4
4	Zuiderwijk et al., (2021)	Implications of the use of AI in public governance: A systematic literature review	668	133.6

No	Author (Year)	Title (concise)	Citation	Citations per year
5	Androutsopoulou et al., (2019)	Transforming the communication between citizens and government through AI-guided chatbots	538	76.9
6	Perc et al., (2020)	Forecasting and planning during a pandemic: COVID-19 growth rates and governmental decisions	505	84.2
7	Lindgren et al., (2019)	Close encounters of the digital kind: A research agenda for the digitalization of public services	488	69.7
8	De Sousa et al., (2019)	How and where is AI in the public sector going? A literature review and research agenda	477	68.1
9	Veale et al., (2018)	Fairness and Accountability Design Needs for Algorithmic Support in High-Stakes Public Sector Decision-Making	446	55.8
10	Madan & Ashok, (2023)	AI adoption and diffusion in public administration: A systematic literature review	385	128.3

Structure Theme

Keyword frequency analysis (after filtering out the overly common discipline labels) shows that the scientific conversation in this field is centered on three interrelated thematic clusters (Table 5). First, the cluster of artificial intelligence and data technologies, which can be seen from the high frequency of keywords such as *artificial intelligence* (907), *data science* (347), *computer security* (342), *machine learning* (233), and *big data* (164). Second, the public sector and governance domain cluster, represented by *the public sector* (840), *knowledge management* (591), *corporate governance* (513), *public administration* (446), *public service* (254), and *public policy* (181).

Third, the value cluster and governance transformation, which emerges through keywords such as *transparency* (230), *digital transformation* (210), and *accountability* (142). Two qualifications are essential to reading this table correctly. First, these terms are OpenAlex concepts assigned automatically by a classifier and are not author-supplied keywords, which is why terms that sit oddly in a public administration corpus appear at high frequency: corporate governance (513), knowledge management (591) and computer security (342) are most plausibly classification artefacts of a general-purpose classifier rather than evidence of substantive research streams on those subjects.

Second, the three groups below are an interpretive grouping produced by the authors from this frequency list, as set out in the Method, and not the output of a co-occurrence clustering algorithm; they should be read as a descriptive summary rather than as an empirically derived thematic structure. This configuration shows that the study of AI in public administration does not stop at the technical dimension alone, but extends to issues

of governance, public values, and governance reform. In other words, technology and questions of public administration are closely linked in the discourse of this field.

Table 6. Fifteen most frequently occurring OpenAlex concepts

No	Keywords	Frequency
1	Artificial intelligence	907
2	Public sector	840
3	Knowledge management	591
4	Corporate governance	513
5	Public administration	446
6	Data science	347
7	Computer security	342
8	Public service	254
9	Machine learning	233
10	Transparency	230
11	Digital transformation	210
12	Public policy	181
13	Big data	164
14	Data mining	142
15	Accountability	142

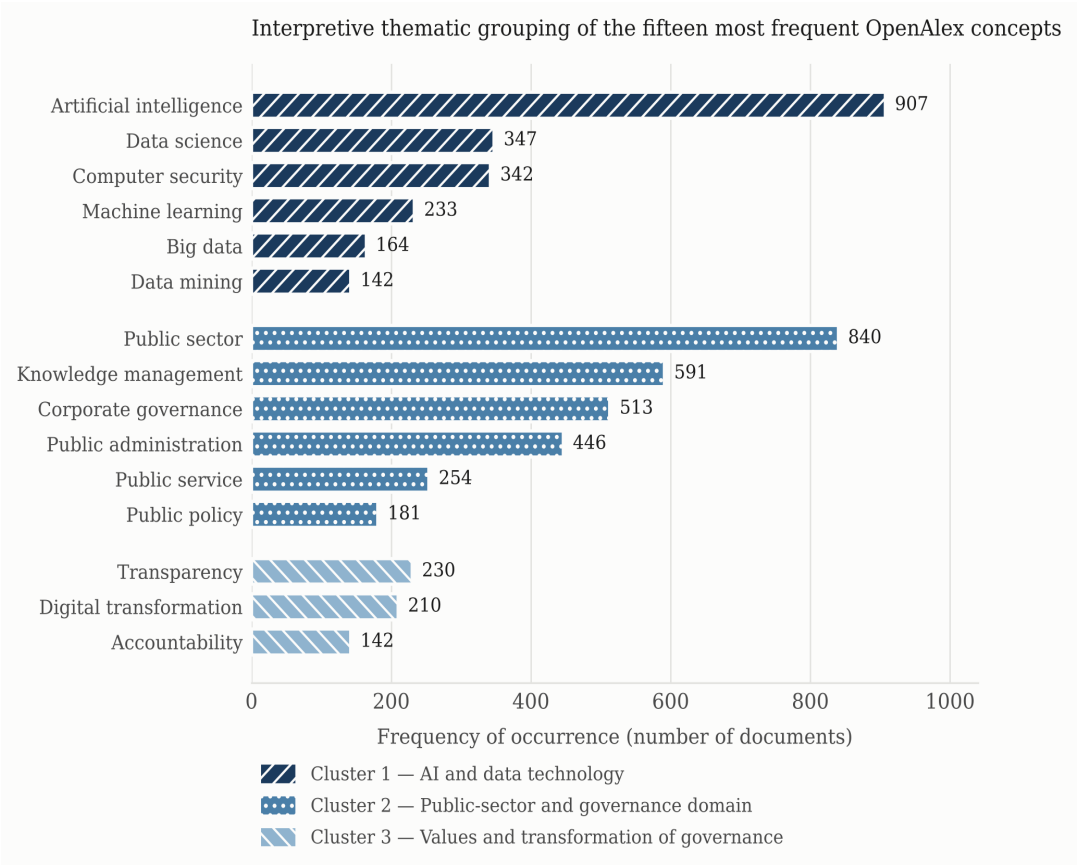


Figure 2. Interpretive thematic grouping of the fifteen most frequently occurring OpenAlex concepts

Overall, the findings of this study illustrate a rapidly growing but theoretically immature field of study. Mapping of 3,557 documents shows that artificial intelligence in public administration has moved from a fringe issue to one of the most dynamic research agendas in the past decade. This section interprets the significance of the findings, compares them with previous studies, and draws on their implications for the development of public administration science and practice.

Acceleration of Immature Fields of Study

The almost hundredfold growth of publications in ten years, with more than half of the works published in 2024–2025 alone, shows that the field is experiencing tremendous acceleration. This acceleration is difficult to separate from the widespread use of generative AI since the end of 2022, which has triggered a new wave of interest in the application of AI in the public sector. A similar pattern is in line with the observation that AI has transformative power across sectors that has attracted great attention from academics and practitioners alike (Dwivedi et al., 2021).

However, the speed of growth does not necessarily reflect the maturity of science. The dominance of literature review works and conceptual studies with a research agenda in the most cited documents such as De Sousa et al., (2019); Madan & Ashok, (2023); Sun & Medaglia, (2019); Wirtz et al., (2019); Zuiderwijk et al., (2021) indicates that this field is still busy building conceptual foundations and mapping directions, instead of producing cumulative empirical evidence. The findings of Zuiderwijk et al., (2021) stating that research in this field is dominated by exploratory, conceptual, and qualitative studies strengthen this interpretation. The dominance of preprint repositories such as SSRN, Zenodo, and arXiv as the most sources also confirms the fast-paced nature of the field: findings are disseminated first for the sake of speed, while also raising questions about consolidation and quality assurance through peer review.

A direct comparison with the two most closely related prior studies clarifies what this update adds. Lawelai et al., (2023) mapped the use of AI in public services and Djen et al., (2023) mapped AI in government studies; both were published in 2023 and their data windows therefore close in or before that year. That timing is decisive rather than incidental. Fifty-eight per cent of all documents in the present dataset were published in 2024 and 2025, which means that the majority of the literature now in existence postdates both earlier mappings entirely, and that any ranking of countries, journals or themes derived before 2024 describes a field roughly two fifths of its present size.

The two studies also drew on selective commercial indexes, whereas the present study uses OpenAlex, which indexes a far larger set of national open access journals; part of the difference in the position of Indonesia between those studies and this one is attributable to that choice of database rather than to a change in the underlying research activity. A third comparator, the bibliometric study of hybrid intelligence in the public sector by Liu et al., (2025), reaches a similar conclusion about the conceptual rather than empirical character of the field. Table 6 summarises the comparison.

Table 7. Comparison with prior bibliometric mappings of artificial intelligence in government

Dimension	Lawelai et al., (2023)	Djen et al., (2023)	This study
Scope	AI in public services	AI in government studies	AI in public administration, broadly defined
Latest year that can be covered	2023 or earlier	2023 or earlier	2025
Database	Commercial selective index	Commercial selective index	OpenAlex, open and inclusive
Documents analysed	Smaller corpus, pre-surge	Smaller corpus, pre-surge	3,557 (peer-reviewed subset 3,226)
Coverage of the 2024–2025 surge	Not covered	Not covered	Covered; 58 per cent of all documents fall in this window
Thematic treatment	Keyword co-occurrence mapping	Keyword co-occurrence mapping	Interpretive grouping of automatically assigned concepts

Indonesia's Position and Cross-Disciplinary Character

One of the most prominent findings is Indonesia's position as the world's fourth-largest contributor of publications. This achievement reflects the strengthening of academic attention to AI in public administration in Indonesia, in line with the government's digital transformation agenda in the era of the Industrial Revolution 4.0. The presence of Indonesian researchers who have previously worked on this theme bibliometrically Djen et al., (2023); Lawelai et al., (2023) strengthens this picture.

However, the high number of publications needs to be interpreted carefully: the volume of output does not automatically equate to influence or quality, and research productivity may run faster than the maturity of AI application in government agencies. This gap between academic enthusiasm and readiness for implementation is an interesting gap to be studied further, as it is also found in the context of other developing countries (Misra et al., 2023). A further caution is required before this position is read as a measure of standing.

OpenAlex draws heavily on Crossref and on journals running open journal systems, so national scholarly ecosystems that publish many local open access journals enter the index far more completely than they enter Scopus or Web of Science. Indonesia maintains one of the largest such ecosystems in the world, and the adjacent high placements of Russia (95) and Ukraine (91) are consistent with the same mechanism. The fourth position is therefore best described as fourth by indexed volume in an open and inclusive database, and establishing how much of that volume appears in internationally indexed journals would require a separate cross-database analysis that this study does not perform.

Findings regarding thematic structures and publication sources confirm the character of this field that sits at the intersection of three disciplines (public administration, political

science, and computer science) with journals that span from mainstream public administration to computing and sustainability. On the one hand, this diversity is a wealth that allows for a multi-perspective approach.

On the other hand, it holds the risk of fragmentation: scientific conversations can run independently without a common theoretical framework that binds them together. The three thematic clusters identified (AI and data technologies, public sector domains and governance, and governance values and transformations) suggest that integration between perspectives is indeed underway, although these fields still require stronger linking theories.

Theoretical and Practical Implications

Theoretically, these findings imply the need for the field of study to move from the mapping and agenda-setting stage to the development of theories based on empirical evidence. Issues that have been underworked (such as impact evaluation, data governance, and stakeholder engagement) deserve to be prioritized, in line with the four-way agenda proposed by Medaglia et al., (2023), namely AI governance, trusted AI, impact assessment methodologies, and data governance. These priorities can be stated more precisely by reading the concept frequencies in Table 5 directly rather than by restating an existing agenda.

Three absences in that distribution are informative. First, no concept relating to evaluation, impact or effectiveness appears among the fifteen most frequent terms at all, which is consistent with a literature that proposes far more than it measures. Second, accountability (142) is the least frequent concept in the list and sits an order of magnitude below artificial intelligence (907), even though accountability is one of the most frequently invoked normative concerns in the conceptual literature.

Third, and most strikingly for a dataset in which 58 per cent of documents were published in 2024 and 2025, no concept corresponding to generative AI or large language models reaches the top fifteen, which suggests that the post-2022 surge in output has so far been absorbed into existing vocabulary rather than generating a distinct and consolidated research stream. Recent work on generative AI in public administration remains largely conceptual or survey-based (Cantens, 2025; Taeihagh, 2025), with empirical exceptions such as the survey evidence of Bright et al., (2025), in which 22 per cent of United Kingdom public sector professionals reported actively using a generative AI system while only 32 per cent reported clear workplace guidance for doing so.

Practically, the results of this study offer a useful map for policymakers, especially in Indonesia. The high momentum of research needs to be translated into evidence-based public service delivery practices, by strengthening the framework of governance, transparency, and accountability in the application of AI in public services. Experience from various studies shows that the adoption of AI without adequate governance has the potential to pose risks to justice, privacy, and legitimacy (Wirtz et al., 2020), while the success of adoption is highly dependent on organizational and institutional readiness (Alshahrani et al., 2022; Neumann et al., 2024).

For the public administration community in Indonesia, this map also marks opportunities as well as specific themes that need to be prioritized locally. Indonesia's own policy architecture makes this concrete: the Stranas KA horizon to 2045 and the SPBE

framework set the ambition, but the governance of AI specifically still rests largely on soft instruments, and emerging Indonesian work on generative AI for public service innovation (Alamsyah & Aryfiyanto, 2025) indicates where empirical evidence is beginning to accumulate. Comparative evidence from other developing countries suggests that adoption failures cluster at the later stages of the AI life cycle, in deployment and monitoring rather than in strategy formulation (Distor & Neumann, 2026).

Research Limitations

This research has several limitations that need to be openly acknowledged. First, the data is sourced from only one database, OpenAlex; its scope and classification system are different from other databases such as Scopus or Web of Science, so results may vary when using different sources. Follow-up research can perform cross-database triangulation. Second, there is a compromise between recall and precision in the design of search equations: the broad use of the term "government" in the title has also netted a number of computational-oriented works such as modeling government intervention during a pandemic that are thematically on the fringes of public administration. Stricter search equations will increase accuracy, but risk omitting relevant works.

Third, keyword classification in OpenAlex is automated and contains disciplinary labels and ambiguity of terms, thus requiring manual filtering that contains elements of subjectivity. Fourth, the country's contribution count is full, so that one document can be counted for more than one country. Fifth, the analysis is likely to lean towards the English-language literature. Sixth, the bibliometric method can reveal the structure and trends, but does not assess the quality or substantive content of each study; content or qualitative analysis as a complement, as well as the presentation of a map of co-citation and co-authoring networks, will deepen understanding.

Finally, the ongoing updating of indexing may slightly change the number of publications in recent years. Three of these limitations warrant a more explicit statement because they bear on the strength of the claims made here rather than only on their generality. No manual relevance screening was applied to the full dataset, and although the repository records were isolated into a peer-reviewed subset and the false-positive mechanism was quantified at the top of the citation distribution, a manual audit of a random sample of records remains necessary to estimate precision across the corpus as a whole; this is the single most important methodological step for any extension of this work.

No co-occurrence or co-authorship network was computed, so the thematic groups reported here are interpretive and the intellectual structure of the field is described rather than demonstrated. The concepts analysed are machine-assigned rather than author-supplied, which places a ceiling on how finely the thematic findings can be read.

CONCLUSION

This study maps the development of artificial intelligence research in public administration in 2015–2025 through bibliometric analysis of 3,557 documents. First, in terms of trends, this field of study is growing rapidly but relatively young, with more than half of the works published only in the 2024–2025 range. Second, contributions are

concentrated in the United States, China, and India, with Indonesia occupying the fourth position in the world out of 121 countries.

Third, the discourse in this field is centered on three clusters, namely AI and data technology, the public sector domain and governance, and governance values and transformations. Fourth, research gaps were identified in the form of limited empirical studies compared to conceptual studies. These conclusions should be read within one methodological boundary: they rest on a single database, OpenAlex.

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AUTHOR CONTRIBUTIONS

RS: conceptualisation, research design, data collection and curation from OpenAlex, formal analysis, and writing of the original draft. RF: methodology, validation of the dataset and of the thematic grouping, preparation of tables and figures, and writing through review and editing. Both authors discussed the results, resolved the thematic grouping by consensus, and read and approved the final version of the manuscript.

GENERATIVE AI STATEMENT

The author(s) declared that generative AI was used in the creation of this manuscript. The author(s) wish to acknowledge the use of Generative AI for refining the language clarity and grammatical structure of this manuscript. This application was conducted in adherence to established ethical guidelines regarding the use and disclosure of generative AI in scholarly research. Each author has provided substantial intellectual contributions to the work, which has been rigorously vetted for accuracy, and the author(s) assume full responsibility for the integrity and final content of the manuscript.

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