Exploring trends in the public sphere: scientometrics and systematic review

Explorando tendencias del devenir público: cienciometría y revisión sistemática

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Abstract

In this research, it was shed light on the imperative of ensuring effective government services and sustainable policies in the context of modernity. The study utilized a combination of scientometric analysis and systematic literature review to explore the current landscape of public administration and management. The analysis of the latest Scopus publications revealed a noticeable increase in research production over the past five years. There were identified three categories of trends: consolidated, intermediate, and emerging. Prominent themes included governance, transparency, corruption, e-government, and sustainability, while emerging trends encompassed public health, big data, open government, digital transformation, and smart cities. The findings emphasize the critical role of effective governance and citizen participation in shaping health-related policies, as well as the strategic adoption of technologies to improve service delivery. Looking ahead, it is proposed further investigation into emerging and intermediate trends, along with addressing identified thematic gaps such as public-private and international collaboration for sustainable governance, addressing health disparities in vulnerable communities and the role of higher education to develop ethical leaders. Moreover, the impact of information and communication technologies (ICTs) on achieving developmental goals in developing countries merits in-depth exploration. This research contributes valuable insights for policymakers, academics, and practitioners seeking to enhance public administration practices and meet the evolving needs of society.

Keywords

State administration, government management, information and communication technologies, governance, trends.

Resumen

El avance de la modernidad torna imperativo asegurar el adecuado funcionamiento de los servicios gubernamentales y la efectiva implementación de políticas y programas para garantizar la sostenibilidad de la ciudadanía. El objetivo de esta investigación fue proporcionar un análisis exhaustivo de las tendencias actuales, vacíos temáticos y áreas de investigación futura en administración y gestión pública. Para lograr ello, se llevó a cabo un análisis cienciométrico y una revisión sistemática de literatura sobre la última producción en Scopus, durante los últimos cinco años. Los hallazgos revelan que la producción actual presenta una tendencia al alza. Se identificaron tres categorías de tendencias: consolidadas, intermedias y emergentes. Entre las tendencias consolidadas se destacaron términos como gobernanza, transparencia, corrupción, gobierno electrónico y sostenibilidad. Las tendencias emergentes contemplan: salud pública, *big data*, gobierno abierto, transformación digital y ciudades inteligentes. También se reveló la importancia de una gobernanza efectiva y participación ciudadana en salud y, la adopción estratégica de tecnologías para mejorar la eficiencia operativa y prestación de servicios gubernamentales personalizados. En futuros trabajos, se recomienda el estudio en las tendencias emergentes, intermedias o vacíos temáticos identificados, tales como la colaboración público-privada e internacional en el desarrollo de una gobernanza sostenible, difusión y prevención salud en comunidades en estado de vulnerabilidad o, el impacto de las TIC en logro de resultados en países en desarrollo.

Palabras clave

Administración estatal, gestión gubernamental, tecnologías de la información y comunicaciones, gobernanza, tendencias.

Introduction

Modernity requires the proper functioning of government services and the effective implementation of policies and programs to ensure the sustainability of citizenship. Organizational conceptions arise from the premise about management and public administration, terms that, although close, have differences. Public management encompasses a set of processes, strategies and practices used at the governmental level to plan, organize, direct and control the resources and activities necessary to achieve the objectives and goals of the State (Macedo *et al.,* 2022). On the other hand, public administration refers to the organization and structure of the state responsible for implementing policies and programs designed by political leaders and government institutions (Mykytyuk *et al.,* 2021). Thus, in the context of the public sphere, there are different nomenclature, which can lead to confusion.

It is a dynamic and constantly evolving field that is pivotal in the effective functioning of government institutions and in meeting the needs of society. In an increasingly interconnected and changing world, it is crucial to understand the trends of this issue. In this way, it is possible to distinguish a variety of approaches, such as curriculum design for public management (O'Neill, 2022a), optimization of process management (Sousa *et al*., 2021), preventive approaches (Appe *et al*., 2021), learning experiences (Wong *et al.,* 2022), use of information and communications technologies (ICT) (Salnikova *et al., 2019) or the construction of a culture of innovation through leadership in the government (Park, 2021), offering each of these approaches a step towards improving the efficiency, transparency and quality of government services, with the aim of meeting the changing needs of society.*

From this context, questions arise: How has research evolved in the field of public administration and management? How do the prevailing currents manifest themselves? What areas of research should be explored in the future? In order to respond to these concerns, a comprehensive scientometric analysis was carried out in Scopus, considering publications of the last five years and using search terms in English, Spanish and Portuguese. After data exclusion and analysis, a systematic literature review was conducted, focusing on seven research subtopics and the identification of possible thematic gaps in these areas. These lines of research identified were governance and corruption in public administration and management, accounting and financial issues in public administration and management, transparency, decen-

tralization and open government in public administration and management: strengthening democratic governance; higher education as a means to build social leadership, administration and public management; governance sustainability in public administration and management; health issues, administration and public management and technological advances, administration and public management.

In this way, the aim is to analyze and examine the most outstanding trends in the field of public administration and management, exploring its contents, identifying thematic gaps and suggesting areas for future research. It is important to highlight the combination of a scientometric analysis and a systematic literature review, which adds significant value to the work. The scarce scientometric production in Spanish is also highlighted, mentioning the importance of this research and its relevance in the field. In addition, it is intended that the results and analyzes obtained have a positive impact on the quality of life of citizens, contributing to the optimization of public policies and strengthening efficiency in government management.

Materials and methods

A qualitative approach and a systematic review methodology were used, following the guidelines established by Aranibar *et al*. (2022). To this end, a search was conducted on Scopus, using the following terms in both titles and abstracts and keywords: "public management", "public administration", "state management", "state administration", "government management", "government administration", "public management", "public administration", "state management", "state administration", "management of the state", "administration of the state", "governamental management", "governamental administration", "gestão do Estado", "administração do Estado", "administração governamental" and "administração governamental".

The focus was on the last five years of academic production, 2018 and 2022. Subsequently, we proceeded to specifically select articles, eliminating any duplicate present in the database. An analysis was carried out to evaluate the concordance of the contents, establishing inclusion and exclusion criteria, among them, thematic relevance, extrapolable contents; type of study, empirical; determination of sample, statistically significant; ability to access. In addition, an exhaustive and detailed reading of the works was carried out

to identify trends and generate theoretical and thematic guidelines that were subsequently used in the drafting of this review. After specifying the procedures and criteria used, 63 works were selected.

In order to add additional value to the work, trends in the field of study were identified by means of keyword analysis. For this, the total number of articles was considered once duplicates were eliminated and before applying other criteria, which yielded a total of 13 644 articles, allowing a deeper analysis of trends. It is important to note the specific use of keywords in English, since the revised works were available in that version or was their original language.

Results

It was found that 13 658 works were conducted in the period of the study, however, establishing the restriction of the type of document the number was reduced to 8853. The year with the highest production was 2022, with 2109; likewise, there is a predisposition to address the subject, since over the period the number of works increases by an average of 193 works.

It was also observed that the subject is mostly researched in *Social Sciences,* 6302; *Business, Management and Accounting*, 2162 and, *Environmental Science*, 1043. The journals with the highest incidence are Sustainability (Switzerland), 201; Public Administration, 148; International Review of Administrative Sciences, 129; Public Management Review, 124; and Public Administration Review, 120.
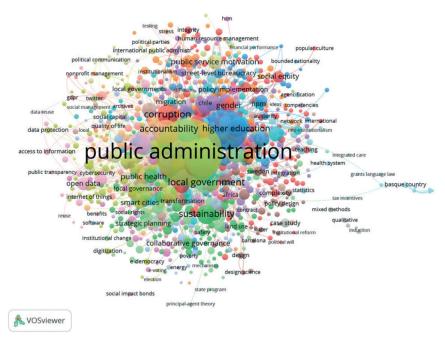
On the other hand, the institutions that further develop this area are Russian Presidential Academy of National Economy and Public Administration, 78; University of São Paulo, 59; Universiteit Utrecht, 58; *Aarhus Universitet*, 56; *Russian Academy of Sciences, 55 and,* the countries that delved the most were the United States of America (USA), 1308; Spain, 878; Italy, 633; Brazil, 633; and Russia, 529. This fact shows the non-concordance between the highest production per country and institution, in terms of territorial belonging. Regarding the original language of the manuscripts, there is a predominance in the following order: English 7016; Spanish 744; Portuguese 399; Russian 286; and Italian 163.

Meanwhile, the most produced authors were Bernd Wirtz of the *Deutsche Universität für Verwaltungswissenschaften*, Germany, 13; Meghna Sa-

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bharwal, *The University of Texas at Dallas*, USA, 12; Bert George, *City University of Hong Kong*, China, 11; Ignacio Criado, Autonomous University of Madrid, Spain, 10 and, Mary Guy,University of Colorado DenverWat, USA, 10. However, the productions with the greatest impact were those by Kapoor *et al*. (2018), with 596 quotations; Corburn *et al*. (2020), 307; Wang *et al*. (2018), 227; Torfing *et al.(2019), 214; Greer et al. (2020), 189.*

Thematic relations in the study of finamatic education

This paper presents the scientific mapping, provided by VOSviewer, which analyzes the occurrence of keywords used by authors in the total count. In this analysis, a minimum threshold of three occurrences per keyword was considered for its inclusion in the mapping (see Figure 1).

Figure 1
Keyword occurrence analysis

Note. Elaboration with data taken from Scopus processed through VOSviewer.

The relationships between the keywords can be identified in Figure 1, with variations in colors and sizes that reflect the intensity of their occurrences. In this way, it is noted that the central axis of the figure is public administration, new public administration, followed by local government, accounting, public health, higher education, gender, e-government, sustainability, corruption, migration, smart cities, transformation, bureaucracy, open data, collaborative governance, universities, policy implementation, strategic planning, cybersecurity, gender. The program also notes the existence of 19 clusters or thematic clusters.

Trends in Financial Education

In addition to what is presented in Figure 1, it is important to perform an analysis of the keywords that showed high, medium and emerging interaction in the investigated repository. In this respect, the results of this analysis are detailed in Table 1.

Table 1

Consolidated Trends

Consolidated Trends		Intermediate trends		Emerging Trends	
Keywords in English	f	Keywords in English	f	Keywords in English	f
public administration	1241	'innovation'	89	public health	50
'new public management'	454	higher education	83	trust	50
public management	394	'sustainable development'	81	civil service	49
governance	209	'efficiency'	79	'democracy'	48
'covid-19'	179	'management'	79	'development'	48
'local government'	143	'artificial intelligence'	73	'good governance'	48
"public policy"	143	"performance"	73	public service	48
public sector	142	bureaucracy	69	'social media'	48
"transparency"	129	'leadership'	68	big data	46
'corruption'	127	"neoliberalism"	67	open data	46
'e-government'	124	'public services'	66	'ethics'	45
'accountability'	109	'state'	65	European Union	45
'sustainability'	105	"performance management"	63	job satisfaction	45
		gender	62	open government	45
		public service motivation	62	'regulation'	44

Consolidated Trends		Intermediate trends		Emerging Trends	
Keywords in English	f	Keywords in English	f	Keywords in English	f
		'spain'	59	'Italy'	43
		'education'	58	'policy'	43
		'government'	58	'collaboration'	42
		public procurement	58	decentralization	42
		public value	58	evaluation	42
		citizen participation	57	'Brazil'	40
		administrative law	56	public sector reform	40
		'china'	56	administration	39
		'digitalization'	54	'legitimacy'	39
		'participation'	52	pandemic	39
				'social equity'	39
				"digital transformation"	38
				'effectiveness'	38
				collaborative governance	37
				smart cities	37
				climate change	36
				smart city	36
				state administration	36
				'new public governance'	35
				state management	35
				administrative reform	34
				civil society	34
				public governance	34
				'russia'	33
				'developing countries'	32
				'quality'	32
				resilience	32
				strategic planning	32
				universities	32
				'Indonesia'	31

Note. Processing with data taken from Scopus processed through Numbers.

Considering that the study involved different languages, a decision was made to use keywords in a matching language, English. Following this trend identification, a brief translation of the terms was made so that they could be understood by a wider audience. Thus, in the context of consolidated trends are terms such as public administration, new public management, public management, governance, COVID-19, local government, public policy, public sector, transparency, corruption, e-government, accountability and sustainability.

In the intermediate trends, innovation, higher education, sustainable development, efficiency, management, artificial intelligence, performance, bureaucracy, leadership, neoliberalism, public services, state, performance management, gender, motivation in public service, Spain, education, government, public procurement, public value, citizen participation, administrative law, China, digitalization, and participation are observed.

Correspondingly, emerging trends include the terms: public health, trust, civil service, democracy, development, good governance, public service, social networks, *big data,* open data, ethics, European Union, job satisfaction, open government, regulation, Italy, politics, collaboration, decentralization, evaluation, Brazil, public sector reform, administration, legitimacy, pandemic, social equity, digital transformation, effectiveness, collaborative governance, smart cities, climate change, smart city, state administration, new public governance, state management, administrative reform, civil society, public governance, Russia, developing countries, quality, resilience, strategic planning, universities, Indonesia.

Trends in financial education ranked by year

In order to present more enlightening results to identify the most addressed topics per year in relation to their keywords, the terms containing "public" were removed. For example, "public administration", "new public management", "public management", "public policy", "public sector" and "public service".

Table 2

Trends in Financial Education Ranked by Year

Year	1st keyword	f	2nd keyword	f	3rd keyword	f	4th keyword	f	5th keyword	f
2018	governance	30	'accountability'	24	'local government'	20	'sustainability'	20	'e-government'	19
2019	governance	49	'local government'	32	"transparency"	28	'corruption'	24	higher education	24
2020	'covid-19'	42	governance	41	'local government'	36	"transparency"	32	'corruption'	30
2021	'covid-19'	76	governance	44	'corruption'	30	'sustainability'	29	"transparency"	26
2022	'covid-19'	62	governance	45	'local government'	39	'e-government'	34	'artificial intelligence'	27

Note. Processing with data taken from Scopus processed through Numbers.

The aim was to give relevance to less obvious thematic results and consider the excluded results as possible outstanding topics in the subject.

By 2018, the most researched terms were related to governance, accounting, local government, sustainability and e-government; by 2019, governance, local government, transparency, corruption and higher education; by 2020, COVID-19, governance, local government, transparency, corruption; by 2021, COVID-19, governance, corruption, sustainability and transparency; and by 2022, COVID-19, governance, local government, e-government and artificial intelligence.

Discussion

Approaches to public administration and management

For improving the understanding of public management and its relationship with various aspects, seven sub-themes that emerged as a result of the analysis of intermediate and emerging trends were considered. These sub-themes were grouped together to provide a more comprehensive view of the topic.

Governance and corruption in public administration and management

Governance and corruption are two fundamental aspects that cut across the public apparatus and have a significant impact on the development of societies. Thus, it is recognized that the first term refers to the processes and

mechanisms through which decisions are made and authority is exercised, involving the participation of various actors, both governmental and non-governmental (Hue and Tung-Wen, 2022); while corruption encompasses dishonest practices that undermine integrity (Macedo *et al*., 2022), including bribery, nepotism, influence peddling and embezzlement (Capasso *et al.,* 2022).

It is clear that corruption represents a significant obstacle to effective governance; when public officials engage in corrupt practices, the public interest is compromised for the benefit of private interests (Macedo *et al*., 2022). This weakens the government's ability to implement effective policies and deliver quality public services (Steffek and Wegmann, 2020). Hence, lack of transparency and accountability creates an environment for these practices, undermining citizens' trust in their leaders and government systems (Biscione and Muço, 2021).

Corruption is influenced by various factors, such as institutional weaknesses, lack of oversight and control, as well as an organizational culture that tolerates or encourages such practices (Park *et al*., 2021). In addition, the existence of a weak regulatory framework and impunity promote it (Mahmood *et al.,* 2022). Corruption can also be related to the existence of power monopolies and a free and critical low press capable of reporting corruption (Capasso *et al*., 2022).

Recognizing the consequences of corruption, the challenge lies in finding effective ways to prevent and combat it. According to Sweeting (2022), addressing this problem requires a combination of comprehensive strategies, being essential to strengthen control and oversight mechanisms in public institutions to prevent and detect corruption cases, including the establishment of efficient audit systems and promotion of transparency in decision-making processes (Nicolaescu and López, 2019). Likewise, citizen participation and civil society empowerment are essential to promote more responsible and ethical public development (Ostřanský and Aznar, 2021).

It is recommended to address the application of collaborative governance approaches and their impact on the effectiveness of the fight against corruption in specific contexts of developing countries.

Accounting and financial issues in public administration and management

Hence, effective public development requires the management of accounting and financial issues (Tran *et al*., 2022). In this line, it is noted that public accounting is responsible for the registration and control of financial

operations of the public sector (Widanti, 2022), while public finance refers to the management and administration of financial resources of the government (Stentella, 2022). At this point, Fleischer and Reiners (2021) emphasize that international public sector accounting standards provide guidelines for these issues.

On the other hand, Widanti (2022) recognizes that public accounting allows government entities to maintain accurate and up-to-date records of their financial operations, facilitating informed decision-making; it is also a tool for accountability, allowing citizens, legislators and other social actors to assess the financial performance of government and the social impact of public policies (Salnikova *et al*., 2019).

Boudreau (2021) adds that transparency in financial reporting is necessary for building public and social trust; clear and accessible disclosure of government financial reports ensures that citizens can understand how public resources are managed and financial decisions are made. Ríos *et al.* (2022) address financial responsibility involving accountability for the use of public resources and the fulfillment of established financial and fiscal objectives.

Challenges such as public debt management are also recognized, as excessive indebtedness puts at risk the financial stability and fiscal sustainability of the country (Caldas, 2021). In addition, financing public investment projects requires careful planning and evaluation of costs and benefits (Mykytyuk *et al*., 2021). However, the use of tools such as results-based budgeting or periodic evaluation of investment projects would facilitate proper accounting and financial management (Rios *et al.,* 2022), not to mention the significant involvement of ICTs. It is suggested to deepen the application of ICT in the dissemination of information in diverse contexts.

Transparency, decentralization and open government in public administration and management: strengthening democratic governance

According to Boudreau (2021), transparency guarantees access to government information, open government encourages citizen participation, and decentralization empowers communities and fosters greater autonomy in local decision-making. Transparency not only strengthens citizens' trust in government institutions, but also helps to detect and prevent acts of corruption

(Ríos *et al*., 2022). Accessible public information also allows civil society to participate actively in monitoring government policies and programs (Nicolaescu and López, 2021). At the same time, the transfer of responsibilities to subnational authorities allows management closer to the needs of each community, reducing bureaucracy. For Cevallos *et al.* (2022) this decentralization promotes transparency, because local authorities are often closer to citizens and more susceptible to accountability. Similarly, decentralization facilitates citizen participation in decision-making and increases efficiency in the provision of public services.

As for open government, Alcaide *et al*. (2022) point out that more openness is sought for developing public policies and programs through collaboration between government and civil society and that citizen participation is not limited only to access to information, but involves citizens in defining agendas and evaluating results, using ICT as a means of communication.

In this way, the combination of transparency, decentralization and open government can bring multiple benefits towards reform in administration and public management, since citizen participation would lead to more effective solutions adapted to their needs (Ford, 2021). In addition, transparency in the allocation of resources at the local level avoids clientelistic practices and ensures a more equitable distribution (Castillo *et al*. 2022).

However, there are challenges in implementing these policies. Decentralization requires adequate capacities and resources in local governments, as it can increase complexity and costs (Lanzaro and Ramos, 2021). Likewise, open government may face resistance from officials who fear exposure to malpractices or poorly informed decisions (Elliott *et al.,* 2022). It addresses the impact of these strategies in strengthening democratic governance.

Higher Education as a means to build social leadership, administration and public management

Higher education has the potential to develop social leaders capable of inspiring and mobilizing their communities to promote positive social change (Lund, 2022). Academic programs can develop leadership, effective communication and teamwork skills in students, which are essential for effective leadership in complex and diverse contexts (O'Neill, 2022b). Higher education can also foster social empathy and sensitivity, which are key to unders-

tanding people's needs and designing inclusive solutions. Dolamore (2021) states that ethical and effective public administration and management requires leaders capable of managing public resources transparently and responsibly, prioritizing the well-being of the population over particular interests.

Along these lines, social leadership has a significant impact on public management and government decision-making, as empowered social leaders influence the public agenda, promoting policies and programs that address urgent social challenges (Adomavičiūtė, 2018). Social leaders can generate greater legitimacy and trust in public institutions through channels of citizen participation. This leadership can also drive innovation, encouraging the adoption of new practices and approaches to address complex problems (Park *et al*., 2021).

On the other hand, higher education can foster civic engagement, encouraging community involvement and public decision-making. Through volunteering and social activities, students can apply their academic knowledge in solving real problems and contribute to the development of more effective public policies (Kim and Charbonneau, 2020). Higher education also offers opportunities for training student leaders, who can become agents of change and promote initiatives from their institutions (Donina and Paleari, 2019).

However, this training faces important challenges, such as the need to adapt to a constantly changing world and address complex and global issues (Toleikienė *et al.,* 2021). It is essential that higher education be kept up to date and relevant to respond to the demands of society. In this way, academic institutions should promote interdisciplinarity and collaboration with external actors to enrich the training of their students and develop comprehensive solutions to social problems (O'Neill, 2022a).

It is recommended to investigate the factors for establishing alliances between educational institutions and external agents for the formation of leaders, motivations, challenges and frequent activities of leaders in various contexts.

Governance sustainability in public administration and management

The Government faces constant challenges in its quest to ensure sustainable and equitable development for present and future societies. In this context, the sustainability of governance is a fundamental approach to achieve a balance between social welfare, environmental care and economic efficiency.

Thus, it is emphasized that sustainable governance is based on basic principles that guide decision-making and actions in the public sphere, among these are citizen participation, transparency, equity in the distribution of resources, representativeness and inclusion and accountability (Yang and Wu, 2022). However, the implementation of sustainable governance faces several challenges, some of which are rooted in traditional institutional structures and political cultures, such as resistance to change by political and bureaucratic actors, lack of resources and capacities to carry out sustainable policies, and the need to reconcile sometimes contradictory interests (Steffek and Wegmann, 2021).

According to Gatto and Sadik (2022), to move towards sustainable governance it is necessary to have instruments and policies that promote economic, social and environmental integration. The adoption of tools such as environmental impact assessment, analysis of costs and social benefits, monitoring and setting *of sustainable development goals, contribute to a more informed decision-making aligned with the principles of sustainability (Sousa et al*., 2021).

In addition, it should be evaluated and monitored periodically to measure its effectiveness and make necessary adjustments. The design of sustainability indicators, as well as the establishment of monitoring and accountability mechanisms, are essential to assess progress towards the established goals (Battisti *et al.,* 2022). In addition, the incorporation of ICT can facilitate monitoring and feedback in real time.

Valbona (2022) also considers that sustainable governance generates positive synergies in different areas of society. For example, the transition to a green and circular economy, social inclusion and reduction of inequalities, and resilience to the challenges of climate change and biodiversity loss can be boosted.

It is recommended to investigate public-private and international collaboration for developing sustainable governance in developing country contexts.

Health, administration and governance

Health is a fundamental right of every individual and an essential condition for the development and welfare of societies (Boffardi, 2022). For its part, public management is crucial in addressing health issues, because it is responsible for designing and implementing policies and programs that ensure equitable access to quality health services (Silva, 2022). However, one of the main challenges is equitable access to quality health services (Gaba-

rro, 2021). In many countries, inequalities are seen in access to health care between rural and urban areas, as well as between different socioeconomic groups (Mériade and Rochette, 2022). In addition, adequate funding can be a barrier to providing quality services to the population (Rubaii *et al*., 2021), not to mention the fight against infectious diseases and prevention of outbreaks that are also challenges that require coordinated and rapid intervention.

In this topic, Simonet (2022) argues that citizen participation is an essential element to strengthen the area of health; involving society in decision-making on health policies and programs can generate more acceptance and effectiveness in its implementation. In addition, active listening to citizen needs and demands allows designing interventions that are more limited to local and cultural realities (Mangia *et al*., 2022).

Gonçalves and Domingos (2021) and Rezapour and Elmshaeuser (2022) highlight that the use of ICT by the State would favor the development of public health, for example, the digitization of medical records, telemedicine, *blockchain* and use of mobile health applications can improve the efficiency and accessibility of services. In addition, data analytics and artificial intelligence can provide valuable information for evidence-based decision-making (Longo, 2022). However, it is essential to ensure that these technological tools are accessible and ethically used.

On the other hand, adequate financing is essential for maintaining sustainable health systems over time. So governments must ensure a needs-adjusted budget allocation and promote responsible fiscal management (Robert *et al.,* 2022). Rubaii *et al.* (2021) also state investment in prevention and health promotion that can reduce the costs associated with chronic diseases and improve the quality of life of the population. Appe *et al*. (2021) add that strengthening partnerships with agencies and international cooperation can contribute to improving the sustainability of health systems in developing countries.

After the COVID-19 pandemic, it is seen that health crises, such as pandemics and outbreaks of diseases, test the capacity of the state response in health. The need for speed and effectiveness in government response to contain the spread of disease and save lives is becoming evident (Kim, 2021). For this reason, Wong *et al.* (2022) demonstrate the importance of coordination between different actors, including the health sector, government, and international community, for a successful response to emergency situations.

It is suggested to investigate the spread of sexual health in vulnerable communities and prevention of zoonoses in rural contexts.

Technological advances, administration and public management

In the age of digital transformation, technological advances have a significant impact on all spheres of society, including government. The adoption and strategic use of emerging technologies are transforming the way governments operate, make decisions and interact with citizens (Longo, 2022).

The rise of disruptive technologies such as artificial intelligence, internet of things, data analytics and cloud computing has revolutionized and is still revolutionizing government action (Rezapour and Elsmhaeuser, 2022). These technologies offer opportunities to improve operational efficiency, optimize decision-making and *provide personalized services to citizens (Gonçalves and Domingos, 2021).* Thus, its adoption has allowed more government openness and citizen participation in decision-making, which has been enhanced by the use of digital platforms and social networks (Wirtz *et al*., 2018).

For its part, e-government has become a key element for the modernization of the state (Steffek and Wegmann, 2021). Overton *et al.* (2022) identify that the exponential growth of data in the digital age has led to the emergence of the concept of *big data* and data analytics, tools that allow governments to obtain *insights* and behavioral patterns of citizens, which facilitates evidence-based decision-making and the design of more effective policies.

In this regard, Willems *et al.* (2022) note some examples where routine tasks and decision-making have been automated, including the application of *chatbots* in attention to the citizen, predictive analysis to detect fraud and optimization of routes in public transport.

However, this growing reliance on technology has also exposed governments to cybersecurity and data protection risks (Pérez, 2021). Governance must face challenges in protecting citizens' sensitive information and ensuring that government technology systems are resistant to cyber attacks (Pečarič, 2020). Similarly, McMullin (2021) sees challenges in the face of effective implementation of technologies, from lack of staff training to resistance to change.

It is recommended to address the forms and impacts of emerging and disruptive technologies within the state apparatus in its various levels and contexts.

Conclusions

A positive trend was identified for the number of jobs in relation to the passage of time. Thus, the highest production in the study period occurred

in 2022, with 2109 articles. The area where this subject is studied most is *Social Sciences*; the journals with the highest production are Sustainability (Switzerland), Public Administration, International Review of Administrative Sciences; the institutions were *Russian Presidential Academy of National Economy and Public Administration, Universidade de São Paulo and Universiteit Utrecht*. Likewise, the non-concordance between the highest production per country and institution was seen in terms of territorial belonging.

Regarding trends, within the consolidated trends are terms such as public administration, new public management, public management, governance, COVID-19, local government, public policy, public sector, transparency, corruption, e-government, accountability and sustainability; in the intermediate trends, innovation, higher education, sustainable development, efficiency, management, artificial intelligence, performance, bureaucracy, leadership, neoliberalism, public services, state, performance management, gender, motivation in public service, Spain, education, government, public procurement, public value, citizen participation, administrative law, China, digitalization and participation; while in emerging trends the terms public health are observed: trust, civil service, democracy, development, good governance, public service, social networks, *big data,* open data, ethics, European Union, job satisfaction, open government, regulation, Italy, politics, collaboration, decentralization, evaluation, Brazil, public sector reform, administration, legitimacy, pandemic, social equity, digital transformation, effectiveness, collaborative governance, smart cities, climate change, smart city, state administration, new public governance, state management, administrative reform, civil society, public governance, Russia, developing countries, quality, resilience, strategic planning, universities, Indonesia.

In another area, the systematic review showed that effective governance is essential to ensure transparency in public development and prevent corruption. To address this challenge, oversight and control in public institutions must be strengthened, citizen participation promoted, and decision-making empowered in civil society. Likewise, higher education plays a fundamental role in the formation of social leaders capable of inspiring positive change in their communities, focusing on leadership skills, empathy and social sensitivity.

In addition, the sustainability of governance is an essential approach to achieve a balance between social welfare, environmental care, and economic efficiency. The integration of economic, social and environmental aspects into public policies and programs is necessary for effective and sustainable mana-

gement over time. Continuous assessment and monitoring through indicators make it feasible to measure progress towards the established goals. In terms of public administration and management, challenges and opportunities related to financial efficiency, decentralization and open government are identified.

Regarding health issues, equitable access to quality health services must be guaranteed. Citizen participation in decision-making and the strategic use of ICT in this sector improve the efficiency and accessibility of services. However, challenges in data protection and cybersecurity need to be addressed to ensure the privacy and security of citizens' sensitive information. As for technological advances, it is noted that the digital transformation is having a significant impact; the adoption of emerging technologies offers opportunities to improve operational efficiency, optimize decision-making and provide personalized services. However, it is essential to address cybersecurity and data protection risks, as well as to ensure adequate staff training for effective deployment of technologies.

Finally, the review of a single database is a limitation, although the large number of documents of Scopus was considered. Similarly, the combination of working methods offers a solid view of the state-of-the-art. In future research, it is recommended to address emerging trends, intermediate or thematic gaps identified, such as public-private and international collaboration in the development of sustainable governance, health dissemination and prevention in communities in a state of vulnerability, impact of ICT in the dissemination of information and achievement of results in specific contexts of developing countries.

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