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Introductory Preface

Publication Patterns of the Central European Public Administration Review – A Bibliometric Analysis

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ABSTRACT

On the 20th anniversary of the Central European Public Administration Review (CEPAR), this study underscores the significance of the journal's inclusion in indexing. Employing scient metrics, bibliometric techniques, and knowledge mapping, the analysis offers a comprehensive overview of CEPAR's evolution over the past two decades, the challenges encountered following the journal's indexing in Web of Science, and the distinctive characteristics of authorship patterns. The data used in bibliometric analysis was extracted from Web of Science and covers the period 2018–2023 (103 papers), while the data for authoring analysis was collected from the archives of journal volumes covering the period 2003–2023 (425 papers). Over its 21 years of existence, CEPAR has published a total of 425 articles with an average of 20 articles per year. These contributions represent the collaborative efforts of 684 authors from different countries, with the average article written by 1.61 authors. The trend in annual citations is positive, with citations increasing tenfold following indexation in Web of Science. The publications in the sample (bibliometric analysis) were written by 175 authors affiliated with 75 institutions, of which 84% contributed a single article to CEPAR's evolution. In the five years since its indexing in Web of Science, CEPAR has garnered about 200 citations, approximately 33 per year. The most frequent topics include studies on performance, public administration, comparative analysis, e-government, administrative courts, and access to information.

Keywords: *authorship patterns, bibliometric analysis, CiteSpace, journal metrics, journal performance, knowledge map*

JEL: H83

1 Introduction

Central European Public Administration Review (p-ISSN 2591-2240, e-ISSN 2591-2259) is an interdisciplinary scientific journal dedicated to public administration and governance in Central Europe and other countries of Europe. The journal is published under the auspices of the University of Ljubljana (Slovenia), Faculty of Public Administration. The publication policy of the journal focuses on the approach of European values that lead to an efficient governance and public administration. CEPAR is a journal open to multidisciplinary research collaborations, but which go beyond the borders of a country, and which lead to fruitful benchmarking analyses applicable in public administration. The central goal is to identify the best practices in public administration by referring to the traditional specifics of the analysed countries and the integration of European principles in the field.

The journal was published for the first time in 2003, under the initial name of "Administration", which was changed to "International Public Administration Review". In 2018, the journal was renamed, receiving the current form "Central European Public Administration Review (CEPAR)". Ever since its first appearance, the publication frequency has been maintained at two issues per year. If in the first years after its appearance articles were accepted in Slovenian, now the publication is done exclusively in English.

CEPAR accepts manuscripts with scientific empirical research, qualitative and quantitative analyses, after being reviewed by an international advisory board, who works in an efficient manner with the editorial team. All publication ethics and guidelines for manuscript submission can be found on journal's website (https://cepar.fu.uni-lj.si/index.php/CEPAR).

CEPAR is indexed in 13 databases, among which they are found Web of Science - ESCI (Clarivate Analytics), SCOPUS, ECONLIT, EBSCO, ProQuest, ERIH+, etc. CEPAR publisher is a member of COPE - Committee on Publication Ethics, the European Association of Science Editors (EASE) and OpenAIRE. The review is also part of CEE Network of Public Administration and Policy Journals. In 2022 CEPAR has recorded the following metrics in Web of Science: Journal Citation Indicator 0.31, Article Influence Score 0.115, Rank 67 of 89 journals in Public Administration category. It is obvious that it has gone through several revisions by different international institutions, which leaded to some changes in focus and type of articles published. The most recent database that includes CEPAR into indexing is SCOPUS (from 2023). The current study is focused on analysing CEPAR's performance by using quantitative data downloaded from databases for bibliometric analysis and knowledge mapping (Web of Science 2018 – 2023) and collected from journal's archive (2003 – 2017) for extended authorship framework analysis. In the past one analysis about the journal was already done by Kovač and Jukić (2016), which focused on content analysis under the previous name of the journal. Bibliometric analysis focused on international journals is fashionable at the present in all sciences, including business and economics sectors. Here are some recent examples of this type of studies: Journal of Accounting and Public Policy (Baker

et al., 2023b), Journal of Financial Services Marketing (Bhaskar et al., 2023), Total Quality Management & Business Excellence (Singh et al., 2023), Journal of Public Budgeting, Accounting and Financial Management (Göksu, 2023), International Journal of Contemporary Hospitality Management (Sharma et al., 2023), Journal of Corporate Real Estate (Maggon, 2023), International Journal of Advertising (Ford et al, 2023), International Journal of Finance & Economics (Baker et al., 2023a), etc.

The presented work aims to offer a comprehensive overview of Central European Public Administration Review by using scient metrics and bibliometric techniques. The purpose is to describe how the journal has evolved in the last 20 years and what challenges are faced after journal indexing in Web of Science.

The rest of the paper is as follows: research methods and data collection procedure are covered in Section 2, the findings are detailed in Section 3, and the main conclusions, beside potential opportunities, and current weaknesses, of the study are covered in Section 4.

2 Research methods and data collection

Bibliometrics is a technique that uses the total amount of scientific literature produced to observe the condition of research and technology. It is a way to place a nation in relation to the rest of the world, an organization in reference to a nation, a scientist regarding their local community, and even a journal in relation to other journals that share a similar theme. Bibliometric analysis offers a more impartial assessment of the literature than traditional literature reviews, which may contain interpretation bias (e.g., systematic literature review, meta-synthesis) or publication bias (e.g., meta-analysis) (Dede and Ozdemir, 2022). Bibliometric analysis examines the social and structural connections among various research components to provide a summary of the bibliometric and intellectual structure of a field. Before researchers even begin reading, bibliometric analysis helps them find the best studies; it also helps them identify research gaps in the field quickly; it generates new research ideas; it reveals research trends; and it maps the research area to show the conceptual, social, or cognitive structure (Donthu et al., 2021).

Results from data analysis are presented using visual maps. Map visualization is used to analyse and display the correlated data and present it as maps, which are clearer and more intuitive. There is several software able to manage large quantities of bibliometric data in different data formats and to provide readable and colorful maps, networks, and connections (e.g. BibExcel, CiteSpace, Netdraw, Pajek, BiblioShiny, BiblioMaps, Sci2, SciMat, Publish or Perish RStudio, Sitkis, UCInet, VOSviewer). Science mapping analysis and general bibliometric and performance analysis can both be conducted with bibliometric instruments. Each software has its own strengths and weaknesses, but a very useful analysis was done by Moral-Muñoz et al. in 2020.

Evaluating scientific research is challenging and is done by using particular bibliometric indicators. Bibliometric indicators fulfil the need for objective and easily manipulable measures of scientific activities. Bibliometric indicators can be calculated for a publication, a researcher, a journal, an institution, a country, or a topic. The current research employs bibliometric indicators such as indicators of scientific production, indicators of collaborations, indicators of authorship, indicators for co-occurrences analysis.

In the study, Microsoft Excel is used to calculate indicators measuring CEPAR's performance. Excel is a Microsoft software application that arranges numbers and data using spreadsheets, algorithms and functions and it facilitates descriptive statistics. To visualize and map the sciences published in CEPAR it was used CiteSpace 6.1.R6 and CiteSpace 6.3.R1. CiteSpace assess the knowledge domain by various types of timeseries of networks to reveal interesting patterns or turning points of science (Chen, 2016). The development of a topic area, the most citations in the knowledge base, the automatic labeling of the various clusters using terms from citing articles, the geospatial collaboration network, and international collaboration are just a few of the options that CiteSpace provides to comprehend and interpret historical and network patterns.

CEPAR is indexed in two databases, Web of Science and Scopus, as was previously noted. As opposed to Scopus, which has one more year of indexing, Web of Science was the only database used for data collecting. Data collection took place on 22.01.2024 by using the following query strategy. In "Publication Title" field in Web of Science were introduced as query words "central European public administration review" without any temporal restriction. Therefore, 104 articles published by Central European Public Administration Review between 2018 and 2023 were indexed in this database. One editorial material is indexed, it was removed, resulting in 103 papers. Of these publications 92.2% are articles (95 publications) and 7.8% are review articles (8 publications). The data sample was downloaded in two formats: full record in Excel and full record in plain text with cited references. Deduplication procedure is not needed. All publications are written in English.

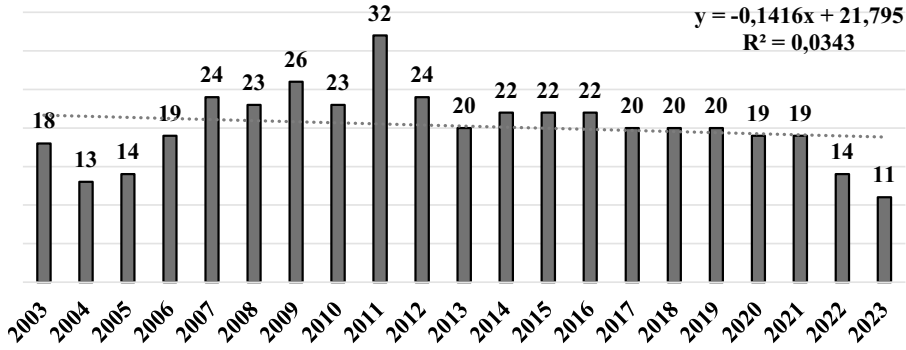
3 Results and discussions

3.1 CEPAR's publication dynamics

Throughout its 21 years of existence, a total of 425 articles have been published in CEPAR, with an annual average of 20.24 articles per year, even though journal volumes ranged between two or four issues per year. It cannot be seen an upward trend in the number of published articles, but on the contrary, there is a constant trend of them (around +/- 20 articles per year). The year 2011 is highlighted by the largest number of published articles, namely 32 articles, which represent 7.53% of the total publications and meant an increase of 39% compared to the previous year, this is the largest annual growth in the entire analyzed period. The change in the quantity of publications in the last

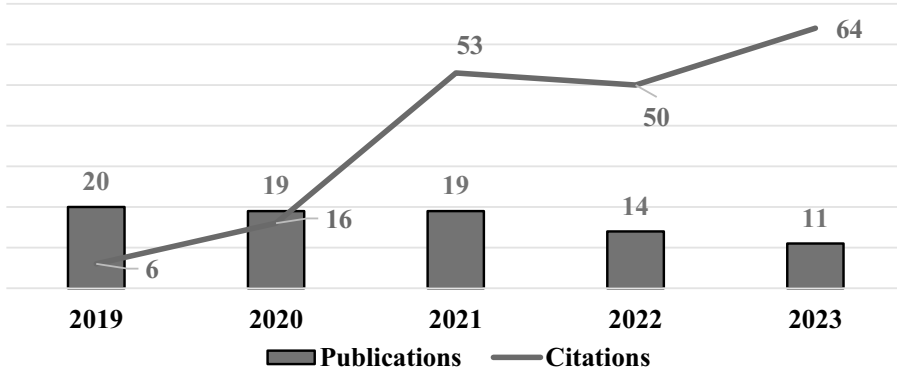
two years is not desirable, the journal faces a reduction in the number of published articles. These changes are the result of editorial decision to publish only scientific articles and only articles that include implications connected to the region (namely Central Europe). At the same time the rejection rate increased, especially because of the request to enter Scopus and its evaluation. Thus, in 2023, only 11 articles were published, the smallest number of articles published in a year, reflecting a decrease of about 50% of the annual average of the two decades analyzed. After the announcement of entering to Scopus the number of submitted articles increased, despite the rejection rate. The yearly variations in the quantity of articles released by CEPAR between 2003 and 2023 are depicted in Figure 1.

Figure 1. Annual quantitative evolution of articles published by CEPAR



Source: Authors

Figure 2. Evolution of publications and citations after WoS indexing



Source: Authors

In this study are integrated 103 publications which have an H-index of 6 and an average of 1.93 citations per article. They are associated with 148 citing articles (without self-citations) and were cited 170 times (without self-citations). In Figure 2 we can observe the simultaneous evolution of the number of published articles and the citations generated by them after indexing the

journal in Web of Science. A positive evolution of the number of annual citations is visible, they increased 10 times in the 5 years after the indexation in Web of Science. The 83 articles indexed in Web of Science brought 64 citations in 2023, the maximum number from 2019-2023. Entering the indexation of Scopus would probably improve the citations even more.

The publications in the sample were written by 175 authors, out of which 147 authors (i.e. 84%) contributed one article to the CEPAR evolution in the last 5 years analysed. To these we can add 26 authors (15%) who have published 2 articles in CEPAR. Among the authors we can identify the authors who have contributed most to the development of the journal, namely Androniceanu and De Vries . These two authors have each published a total of 3 articles during the period under review. Androniceanu A. is affiliated to the Bucharest University of Economic Studies (Romania) and has an WoS H-index of 17, respectively an H-index in Google Scholar of 36. De Vries M.S. is affiliated at Radboud University Nijmegen (Netherlands) and has a WoS H-index of 5, respectively a Google Scholar H-index of 28.

The 175 authors in the analysed collection of publications are affiliated to 75 institutions, of which 26% are professors at the University of Ljubljana (Slovenia), which places this institution on the first position in the top. On the 2nd position, with a contribution of 6 articles in CEPAR, are Masaryk University Brno from Czechia and University of Rijeka from Croatia. It should be remembered that over 65% of the involved institutions published only one article, and to these are added 24% of the institutions that published 2-3 articles in the 5 years analysed. Table 1 contains a list of affiliate institutions that have published more than 4 articles.

Table 1. List of institutions with more than 4 publications in CEPAR (2019-2023)

Rank	Institutions	Country	Publications	%
1	University of Ljubljana	Slovenia	27	26.21
2	Masaryk University Brno	Czech Republic	6	5.82
3	University of Rijeka	Croatia	6	5.82
4	Bucharest University of Economic Studies	Romania	5	4.85
5	Adam Mickiewicz University	Poland	4	3.88
6	Eotvos Lorand University	Hungary	4	3.88
7	University of Public Service	Hungary	4	3.88

Source: Data centralized by author

From a geographical perspective, the country of origin of most authors is Slovenia and it had a contribution of 29% in the total number of CEPAR publications. Table 2 shows the top 5 countries with the highest contribution in the

analysed journal. Out of the 25 countries involved in the publication, 42% of them contributed one article and 35% of them contributed between 2 and 5 articles. Both tables indicate that journal focuses on specific region as it is indicated by its name.

Table 2. Top 5 – most productive countries in CEPAR (2019-2023)

Rank	Countries	Publications	%
1	Slovenia	30	29.13
2	Hungary	14	13.59
3	Czech Republic	12	11.65
4	Croatia	11	10.68
5	Poland	9	8.74

Source: Data centralized by the author

In the 5 years of indexing in Web of Science, CEPAR collected about 200 citations, the articles being quoted, on average, about 33 times a year. Of the 103 items in the sample, 4 items are differentiated as having over 10 citations. Although the number of citations is small, they can still be ranked in the topmost cited articles published by CEPAR. Thus, the most cited work is published by Androniceanu A. and Marton D.M. in 2021, it is about how government decisions in the pandemic have psychosocially influenced citizens. Table 3 contains the list of works with more than 5 citations.

Table 3. List of the most cited papers published in CEPAR (2019-2023)

Rank	Title	Authors	Year	DOI	Citations
1	*The Psychosocial Impact of the Romanian Government Measures on the Population During the COVID-19 Pandemic*	Androniceanu A., Marton D.M.	2021	DOI10.17573/cepar.2021.1.05	15
2	*The Impact of Digitalization on Public Administration, Economic Development, and Well-Being in the EU Countries*	Androniceanu A., Georgescu I., Sabie O.M.	2022	DOI10.17573/cepar.2022.2.01	13
3	*E-Government Effectiveness and Efficiency in EU-28 and COVID-19*	Hodzic S., Ravselj D., Alibegovic D.J.	2021	DOI10.17573/cepar.2021.1.07	13
4	*Public Administration's Adaptation to COVID-19 Pandemic - Czech, Hungarian, Polish and Slovak Experience*	Horvat M., Piatek W., Potesil L., Rozsnyai K.F.	2021	DOI10.17573/cepar.2021.1.06	12
5	*Impact of the COVID-19 Crisis on the Regulation to Tourism in the Czech Republic*	Novotny L., Pellesová P.	2021	DOI10.17573/cepar.2021.1.09	8
6	*The Analysis of E-Government Services Adoption and Use in Slovenian Information Society between 2014 and 2017*	Decman M.	2018	DOI10.17573/cepar.2018.2.10	7
7	*Collaborative Governance Challenges of the COVID-19 Pandemics: Czech Republic and Slovakia*	Klimovsky D., Maly I., Nemec J.	2021	DOI10.17573/cepar.2021.1.04	6
8	*Efficiency of Medical Laboratories after Quality Standard Introduction: Trend Analysis of Selected EU Countries and Case Study from Slovenia*	Lamovsek N., Klun M.	2020	DOI10.17573/cepar.2020.1.07	6
9	*Public Sector Reform from the Post-New Public Management Perspective: Review and Bibliometric Analysis*	Ropret M., Aristovnik A.	2019	DOI10.17573/cepar.2019.2.05	6

Source: Data centralized by authors from WoS

3.2. CEPAR's authorship pattern

One kind of bibliometric analysis called authorship study is concerned with looking at the patterns and traits of authorship in academic publications. Authorship analysis aims to characterize the traits of authors and authorship of articles that are published in a particular publication or journal. It also computes the level of collaboration among these authors. All data were manually centralized in Table 4. Over the two decades, 425 articles or reviews papers have been published in CEPAR, representing the efforts of the work done by 684 authors from different countries. Thus, on average an article published in CEPAR was written by 1.61 authors.

Predominant are single author articles, which have a share of 57% in total, which means that about one tremor of authors prefers individual research activities. Moreover, 85% of the articles published in CEPAR involved research activities submitted by 71% of the authors who published 363 articles with 1 or 2 authors. The maximum number of co-authors of an article is 5, with only one such article published in 2019.

It is impossible to pinpoint a distinct evolution, over time, of the number of articles with multiple authors in the case of CEPAR. The 182 articles with multi-authors show a sinusoidal evolution, reaching a maximum value of 17 articles with multiple authors in 2012. A total of 441 contributors to the CEPAR journal (representing 64% of the total authors) were open to collaboration in their research activities, which generated the production of 43% from the articles published in the analyzed period.

Collaboration research refers to research in which any paper is being carried out by at least two persons with their intellectual efforts. Collaboration in research is fundamental to achieving the proposed goals and identifying the novelty elements. The collaboration brings together researchers with their own ideas, varied knowledge, and particular skills. The evaluation of the degree of research collaboration within CEPAR magazine involved the calculation of a set of indices presented in Table 5. The conceptual details and calculation formulas of the four indicators can be studied in the papers published by Neelamma and Gavisiddappa (2018) and Savanur, and Srikanth (2010). The annual evolution of collaboration indicators can be seen in Figure 3.

Table 4. Authorship patterns of CEPAR

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total papers	Total authors	*% Total papers*	*% Total authors*
Papers - single author	18	8	11	18	18	16	16	14	21	7	12	12	14	9	8	8	9	11	5	5	3	**243**	**243**	*57.18*	*35.53*
Papers - two authors	0	3	2	0	5	5	7	8	8	12	5	6	4	7	7	12	4	7	7	5	6	**120**	**240**	*28.24*	*35.09*
Papers - three authors	0	2	0	1	1	1	3	1	3	3	3	2	4	6	4	0	4	1	5	3	1	**48**	**144**	*11.29*	*21.05*
Paper - over four authors	0	0	1	0	0	1	0	0	0	2	0	2	0	0	1	0	3	0	2	1	1	**14**	**57**	*3.29*	*8.33*
Total papers	**18**	**13**	**14**	**19**	**24**	**23**	**26**	**23**	**32**	**24**	**20**	**22**	**22**	**22**	**20**	**20**	**20**	**19**	**19**	**14**	**11**	**425**	**684**	***100.00***	***100.00***
Total authors	**18**	**20**	**19**	**21**	**31**	**33**	**39**	**33**	**46**	**48**	**31**	**38**	**34**	**41**	**38**	**32**	**42**	**28**	**42**	**28**	**22**	**684**	-	-	-
% Total papers	*4.24*	*3.06*	*3.29*	*4.47*	*5.65*	*5.41*	*6.12*	*5.41*	*7.53*	*5.65*	*4.71*	*5.18*	*5.18*	*5.18*	*4.71*	*4.71*	*4.71*	*4.47*	*4.47*	*3.29*	*2.59*	***100***	-	-	-
% Total authors	*2.63*	*2.92*	*2.78*	*3.07*	*4.53*	*4.82*	*5.70*	*4.82*	*6.73*	*7.02*	*4.53*	*5.56*	*4.97*	*5.99*	*5.56*	*4.68*	*6.14*	*4.09*	*6.14*	*4.09*	*3.22*	***100***	-	-	-
Total papers with multi-authors	0	5	3	1	6	7	10	9	11	17	8	10	8	13	12	12	11	8	14	9	8	**182**	-	***42.82***	-
Total authors in papers with multi-authors	0	12	8	3	13	17	23	19	25	41	19	26	20	32	30	24	33	17	37	23	19	**441**	-	-	***64.47***

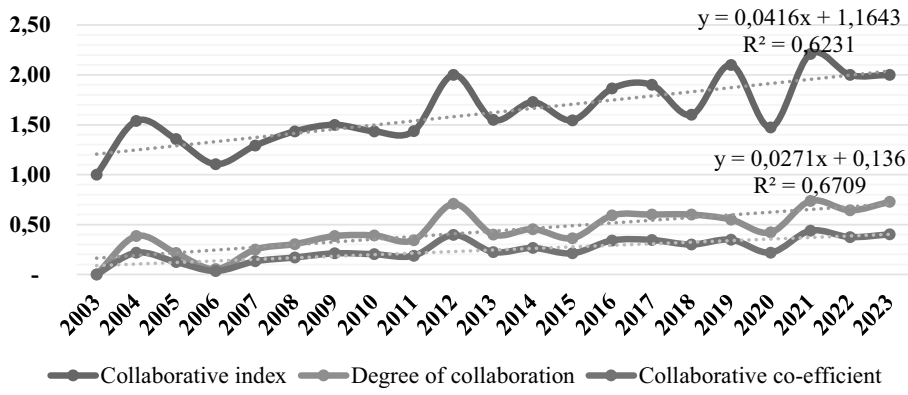
Source: Data centralized by authors from journal

Table 5. Collaborative research in CEPAR

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Collaborative index	1.00	1.54	1.36	1.11	1.29	1.43	1.50	1.43	1.44	2.00	1.55	1.73	1.55	1.86	1.90	1.60	2.10	1.47	2.21	2.00	2.00
Degree of collaboration	0	0.38	0.21	0.05	0.25	0.30	0.38	0.39	0.34	0.71	0.40	0.45	0.36	0.59	0.60	0.60	0.55	0.42	0.74	0.64	0.73
Collaborative co-efficient	0	0.22	0.13	0.04	0.13	0.17	0.21	0.20	0.19	0.40	0.23	0.27	0.21	0.34	0.35	0.30	0.35	0.22	0.44	0.38	0.40
Moderate Collaboration	0	0.23	0.13	0.04	0.14	0.18	0.22	0.21	0.19	0.40	0.23	0.27	0.22	0.35	0.36	0.31	0.36	0.23	0.45	0.39	0.42

Source: Calculations by authors archive

Figure 3. Time evolution of research collaboration indicators of CEPAR



Source: Authors

The Collaborative index indicates, on average, how many authors contributed to making an article. The calculations show that on average 1.61 authors contributed to the creation of an article published in CEPAR. The evolution of this index is remarkable, sinusoidal, but with a clear tendency to grow. In the first year of publication (2003) it had a minimum value of 1, and all published articles had a single author. The annual values increased in some years, in 5 years the value of collaborative index was at least 2, this indicates an average of 2 co-authors per paper during that period.

The percentage of works with multiple authors among all the articles published during the analysis period is shown by the degree of collaboration. Thus, a value of 1 of the indicators is framed as maximal and reflects the fact that all the items in the sample are developed in co-authoring. On the other hand, a null value of the indicator is classified as minimal and reflects the non-existence in the sample of an article with multiple authors. In the case of CEPAR, the degree of collaboration registers a slight upward trend, with constant growth, but without large variations (except for 2012 and 2020). The highest value is reached in 2023, when 73% of the papers published by the journal had more than 2 authors, double value as the one recorded in the first years of publication. The indexation of CEPAR in Web of Science did not increase the interest of authors to appear in greater numbers as co-authors.

Collaborative coefficient variates between the minimum value of zero (single authored publications are predominant) and the maximum value of 1 (multi-authored publications are predominant). In the present situation, the coefficient collaborative records annually small values, which does not exceed 0.5, signifying that the works with one or two authors are those that prevail in the annual volumes of the journal. The previous statement is confirmed by the average value of the indicator (0.25) in the two analyzed decades.

Moderate collaboration involves the calculation of a modified collaborative coefficient, that is, multiplying the coefficient with a parametric that depends

on the total number of authors. This indicator tends to 1 as the degree of collaboration becomes maximum when it is rich 1. Against the background of the 21 years analysed, these indicators are equal or almost equal values with the coefficient of collaboration, it confirms the conclusion revealed by the previous indicators.

Authorship analysis continues by studying co-authorship in CEPAR and using CiteSpace software. Time-slicing 2019–2022, years per slice = 1, Look Back Years (LBY) = -1, Link Retaining Factor (LRF) = -1, Top N% = 100%, Top N = 25, g-index = 20, and no pruning approach were the settings for the software. We employed authors, institutions, and nations as nodes for the collaboration analysis. Because of the tiny sample size and low number of links between nodes, a map cannot be effectively displayed. There is extremely little cooperation among the writers who published in CEPAR (67 linkages representing isolated partnerships and 110 nodes representing authors). With three collaborations a piece, Androniceanu A. and Janderova J. are the most cooperative authors.

From the perspective of the institutions to which the authors are affiliated, the network comprises 68 nodes – institutions and 39 connections. Three centers of collaboration can be identified: University of Ljubljana, University of Economic Studies of Bucharest, and Masaryk University of Brno. The most collaborative institution is the University of Ljubljana (27 collaborations), followed by the University of Rijeka, Masaryk University, and the University of Economic Studies in Bucharest. In Figure 4 are displayed the universities which are involved in more than 3 collaborative research relationships.

Figure 4. CEPAR – collaboration among institutions

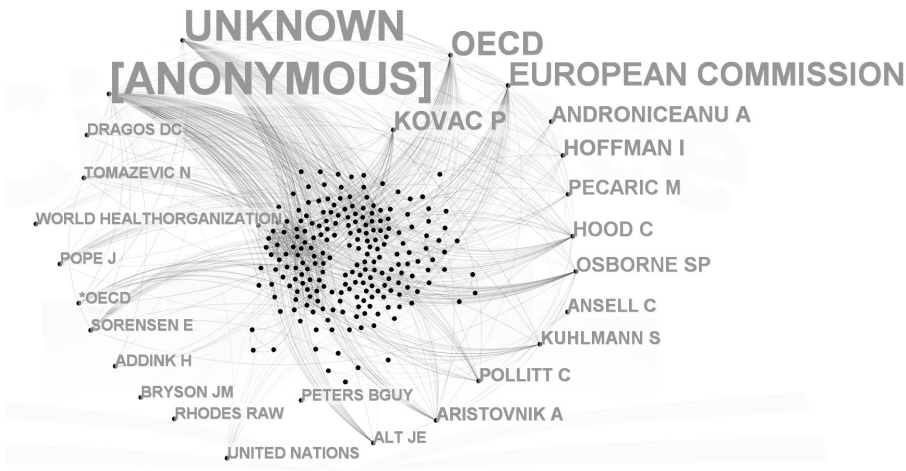
In terms of collaboration between countries, the network is 26 nodes and 20 collaborations. The most collaborative countries with publications in CEPAR are Slovenia, Hungary, the Czech Republic, and Croatia.

3.3. CEPAR's co-citation analysis

One technique to determine if two papers are comparable is co-citation coupling. When two documents are included in a third document's reference list, they are considered co-cited (Surwase, et al, 2011). An innovative technique for examining the cognitive structure of science is co-citation analysis, which develops paradigms to identify trends in multidisciplinary research in journals or institutions. The CiteSpace settings were maintained for this portion of the research, and references, authors, and journals were employed as nodes in the network. To cite references for all articles published in CEPAR and indexed in Web of Science, the first step is to examine networks. The network has 181 elements (cited references) and 412 connections with a density of 0.0253. The low number of co-cited references generated an isolated distribution of nodes, without a clear highlighting of the intensity of the connections between them. Therefore, it is considered irrelevant to have a graphical representation of this network. Moreover, the maximum number of co-citations of a work in bibliography is 3 and returns to a paper published by Ansell and Gash in 2008 on collaborative governance. The level of co-citation of references is so low that ¾ of the 181 co-citations have a single occurrence frequency, and the remaining ¼ have a frequency of occurrence of double. For the cited references, no burst was found.

Co-citation analysis continues with the approach of the co-cited authors network in the articles published in CEPAR. In this situation, a network of 240 nodes, 1448 connections with a density of 0.0505, was generated. Figure 5 contains the graphic representation of the authors who have been baked in CEPAR, and the intensity of the connections between them can be seen. Of the 240 authors co-cited in CEPAR, 58% were co-cited in one article, and 31% of them were co-cited in 2 articles. A ranking of the most co-cited authors can be found in Table 6. The most co-cited authors are unidentified, they appear in the database as anonymous or unknown. Abstracting from them, the authors' interest in the reports and publications of the two well-known organizations is noted: Organization for Cooperation and Development Economy and the European Union. On an individual level, the most co-cited author in CEPAR is Kovac P., affiliated with the University of Ljubljana. Kovac P. is distinguished by the registration of a 2.17 burst in the period 2018 – 2019 and a total of 8 co-citations. The burst in the case of Kovac P. means an increase in the frequency of co-citation during the two years mentioned above. No other author has a burst situation.

Figure 5. Co-cited authors in CEPAR



Source: Derived by authors in CiteSpace

Table 6. Top 8 most co-cited authors in CEPAR

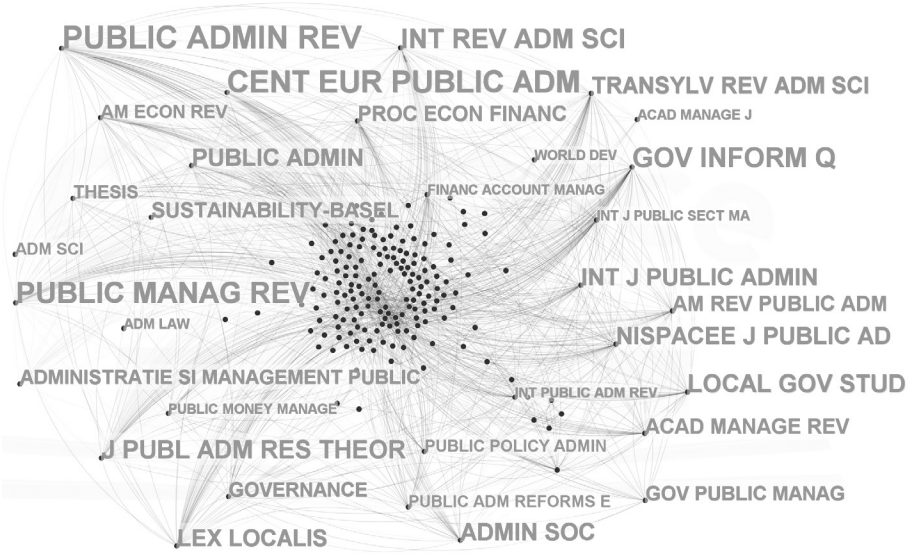
Rank	Author	Affiliation	Year	Frequency	Degree	Centrality	Burst
1	Anonymous	–	2018	64	183	1.02	–
2	Unknown	–	2018	47	128	0.45	–
3	OECD	–	2018	17	79	0.14	–
4	European Commission	–	2018	16	67	0.13	–
5	Kovac P.	University of Ljubljana	2018	8	31	0.01	2.17
6	Hoffman I.	Eötvös Loránd University of Budapest	2019	6	15	0.02	–
7	Androniceanu A.	Bucharest University of Economic Studies	2021	6	31	0.09	–
8	Pecaric M.	University of Ljubljana	2019	5	16	0	–

Source: CiteSpace network summary

Co-citation analysis continues with the observation of the network of journals co-cited in CEPAR. This time it is a network with 220 nodes, 1675 connections with a fairly high density, 0.0695. In Figure 6 are marked all the journals that were co-cited more than 3 times in CEPAR. Table 7 shows a ranking of journals with more than 10 copies in CEPAR. Of the 220 journals on the network, 49% have a single occurrence frequency of co-citation, to which are given another 38% of the journals that have a double occurrence frequency. Therefore, only 11 journals record more than 10 co-citations. Thus, the top 3 most co-cited

journals in CEPAR are occupied by the Public Administration Review, the Central European Public Administration Review and Public Management Review.

Figure 6. Co-cited journals in CEPAR



Source: Derived by authors in CiteSpace

We proceeded to check some periods of burst, periods in which the interest of CEPAR collaborators had in mind other trending journals at the time. Thus, an explosion of the quotations was obtained in the period 2021 – 2023 for two journals Central European Public Administration Review (3.36) and Sustainability (2.6).

Table 7. Top most co-cited journals in CEPAR

Rank	Journal	Category in WoS	JIF	Year	Frequency	Degree	Centrality
1	Public Administration Review	SSCI – Public Administration	8.3 (Q1)	2018	25	102	0.23
2	Central European Public Administration Review	ESCI – Public Administration	0.7	2019	22	84	0.21
3	Public Management Review	SSCI – Public Administration	4.9 (Q1)	2019	18	84	0.16
4	Government Information Quarterly	Information Science & Library Science	7.8 (Q1)	2018	15	78	0.13
5	International Review of Administrative Sciences	SSCI – Public Administration	2.3 (Q3)	2019	14	76	0.12
6	Journal of Public Administration Research and Theory	SSCI – Public Administration	4.2 (Q1)	2019	12	75	0.09
7	Local Government Studies	SSCI – Public Administration	1.9 (Q2)	2019	11	55	0.05

Source: CiteSpace network summary

In conclusion, this part of the study leads to the observation that CEPAR and the contributors to CEPAR's volumes are among the journals and authors that were co-cited in CEPAR. It is inferred that the authors study the journal's objectives and the articles published by it before submitting a manuscript. From Figure 6 it could be also observed that co-citation exists with the journals in the region, which is potentially the result of cooperation inside the CEE network of Public Administration and Policy journals in the last three years. Secondly it is obvious that authors follow the manuscripts in the highest-ranking journals in the field of Public Administration.

3.4. CEPAR's publication themes

It is known that each journal has a purpose and objectives of publication, so each editor targets some general topics of publication, adapted to the specifics of the magazine. In this last part of the research, we aim to identify and group the topics of publication predilect within CEPAR. Keywords co-occurrence will use the keywords set by the authors in their own works, and the network and connections will be represented using the same parameters in CiteSpace. Keywords are the ones that best summarize the topic of an article; therefor keyword co-occurrence helps to get semantic proximities inside CEPAR. Keywords co-occurrence reveals those topics that have a higher frequency of occurrence in the articles published by CEPAR in the analyzed period.

Again, we are faced with a reduced keyword network (153 nodes), with a reduced number of connections (198 links), obviously a corresponding density (0.0170). No burst has been identified for any keyword. Moreover, the keyword frequency in the articles does not exceed 5, so only 7 keywords have a repeated occurrence greater than or equal to 3. Therefore, the ranking of the most common topics of publication in CEPAR includes studies on performance, public administration, comparative analysis, e-government, administrative courts, access to information. The results are not surprising, since the journal tries to cover the brother issues connected to public administration and shows interdisciplinarity of administrative science. In Figure 7 is labeled all the keywords with a degree greater than 3. A keyword's degree in a network is determined by how many connections it has with other keywords.

Figure 7. Keywords co-occurrence in CEPAR

Source: Derived by authors in CiteSpace

Cluster analysis of keywords allows us to group the articles published in CEPAR on research topics. CiteSpace has generated 4 clusters, which only 1/3 of the keywords are integrated into. Therefore, we conclude that most of the papers published in CEPAR (about 2/3) address individual and random research topics that cannot be connected to the 4 central publishing themes: digital maturity, public sector, digital tools, collaborative governance. Therefore, it would be necessary that editors put attention to the use of proper keywords by authors, since going through the contents most of the paper address public sector, public administration, government, regulation etc., which are usually not included into keywords by the perception of authors that the journal cover mentioned topics. Cluster labels were generated using algorithm keywords, and Figure 8 and Table 8 show a detailed situation of the component on clusters.

Figure 8. Keywords' clusters in CEPAR

Source: Derived by authors in CiteSpace

Table 8. Groups of keywords

Cluster ID	Cluster label	Size	Silhouette	Publication's themes
#0	Digital maturity	15	0.980	Barriers, transparency, accountability, budget, compliance costs, porter hypothesis, environmental regulation, transparency
#1	Public sector	15	0.987	Consensus orientation, content analysis, governance models, social responsibility, online local budget transparency, local self-government, panel data analysis, eastern Europe, public governance models
#2	Digital tools	11	0.829	Public administration, government effectiveness, principal component analysis, comparative analysis, comparative analysis, public values, regional impact, government effectiveness
#3	Collaborative governance	8	1	Digital transformation, e-governance, collaborative governance, collaboration, collaborative digital transformation, bibliometric mapping, literature review

From a temporal perspective, in Figure 9 we can see the evolution over time of the themes published in CEPAR in the period 2018 – 2023. Thus, it is noted in 2018-2019 that the publication theme prevails in the journal the following topics: local administration, e-government, Central and Eastern European economies, administrative law and comparative analysis. After the pandemic, the topics of publication in CEPAR have changed, focusing on covid-19 measures, public administration costs, budget, performance, economic growth, efficiency, corruption.

Figure 9. Time zone view of keywords network in CEPAR

Source: Derived by authors in CiteSpace

What does the future of publications look like in CEPAR? It's hard to pinpoint, but it will follow the international research trend. Thus, we estimate that future publishing topics studies that integrate concepts such as: digital transformation, digital tools, artificial intelligence, administrative culture, and science-metrics.

4 Conclusions

This paper's objective is to offer an overview of the Central European Public Administration Review, especially after its 20th anniversary. The analysis has been structured in such a way that authors interested in publishing an article in this journal can discover its particularities, strengths, and weaknesses. This is why the content of our research harmoniously combines findings about CEPAR from the area of descriptive analysis, scient metric analysis and authorship analysis. In the following we aim to summarize the most important findings:

- Throughout its 21 years of existence, a total of 425 articles have been published in CEPAR, with an annual average of 20.24 articles per year. It cannot be seen an upward trend in the number of published articles, but on the contrary, there is a constant trend of them. The change in the quantity of publications in the last two years is not desirable, the journal faces a reduction in the number of published articles, mostly because of higher rejection rate and wish to accept qualitative papers. This is proved by a positive evolution of the number of annual citations, which is visible, they increased 10 times in the 5 years after the indexation in WoS. Androniceanu A. (Romania) and De Vries M.S. (Netherlands) are the authors who have contributed most to the development of the journal in the last 5 years. The largest number of authors are affiliated at the University of Ljubljana (Slovenia), followed by Masaryk University Brno from Czechia and University of Rijeka from Croatia. Among the most cited articles published by CEPAR can be found the papers published by Androniceanu A. and Marton D.M. in 2021.
- Over the two decades, CEPAR published papers done by 684 authors from different countries, in average an article published in CEPAR was written by 1.61 authors. Predominant are single author articles. 85% of the articles published in CEPAR involved research activities submitted by 71% of the authors, articles with 1 or 2 authors. The articles with multi-authors show a sinusoidal evolution. 64% of the total authors were open to collaboration in their research activities, which generated the production of 43% from the articles published in the analyzed period. In the case of CEPAR, the degree of collaboration registers a slight upward trend, with a constant growth, but without large variations. The most collaborative countries are Slovenia, Hungary, the Czech Republic, and Croatia.
- Co-citation analysis is the method used to evaluate academic performance generated by papers, authors, and institutions in CEPAR. The low number of co-cited references generated an isolated distribution of nodes, without

a clear highlighting of the intensity of the connections between them. The level of co-citation of references is so low that ¾ of the 181 co-citations have a single occurrence frequency. The most co-cited authors are unidentified, they appear in the database as anonymous or unknown. The core observation is that the authors study the journal's objectives and the articles published by it before submitting a manuscript to CEPAR.

– Keywords are the ones that best summarize the topic of an article. Therefore, keyword co-occurrence helps to get semantic proximities inside CEPAR. We are faced with a reduced keywords network and a reduced number of connections. No burst has been identified for any topic. The most common topics of publication in CEPAR include studies on performance, public administration, comparative analysis, e-government, administrative courts, access to information. Most of the papers published in CEPAR (about 2/3) address individual and random research topics that cannot be connected to the 4 central publishing themes: digital maturity, public sector, digital tools, collaborative governance. We estimate that future publishing topics studies will integrate concepts such as: digital transformation, artificial intelligence, administrative culture and scient metrics.

Any author interested in submitting a manuscript for publication could know the journal's performance and publication specificity. Throughout the research process, several challenges emerged that determine the interpretation of the research results in the context of the selection strategy of the reviewed papers. Among the challenges encountered are those specific to scient metric analysis, i.e. the short period of indexing in WoS generated a reduced analysis sample for bibliometric analysis, and the downloaded database is incomplete (e.g. unidentified authors). In the following years, the analysis can be continued by tracking the evolution of the journal in the next 5 years of indexing in WoS and the first five years in Scopus, so the policy of journal would be evaluated again. In conclusion, the Central European Public Administration Review has great potential for growth in the category of journals from the public administration area. Analysis shows some issues that should be addressed by the editorial team, so that potential for growth will be realized.

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