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Unravelling Citation Rules: A Comparative Analysis of Referencing Instruction Patterns in Scopus-Indexed Journals

Pavla Vizváry¹  | Vincas Grigas² 

¹Department of Information Studies and Librarianship, Masaryk University, Brno, Czech Republic | ²Faculty of Communication, Vilnius University, Vilnius, Lithuania

Correspondence: Vincas Grigas (vincas.grigas@leidykla.vu.lt)

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ABSTRACT

The article analyses the citation rules of 270 scholarly journals indexed in the Scopus database to describe editorial politics in Czech and Lithuanian journals as representatives of local publishing markets. The quantitative analysis identified standard practices in in-text referencing, citation styles, using examples of references as guides for authors, and using DOI. We also statistically tested differences among journals according to countries, thematic focus, publishers, Open Access policies and publishing languages. Most (54.1%) journals did not name any citation style; this approach was the most common in life sciences and agricultural and natural sciences. The APA was the most commonly named citation style, mainly used by journals in the social sciences. The scientific field was the most vital determinant of citation rules—citation styles and in-text referencing. 84.4% of journals used examples of references as a main specification of citation style. We also found some country specifics, such as using ISO 690 and footnotes in the Czech Republic, and strong support of APA and requesting DOI in Lithuania. We drew attention to the challenges and disadvantages of citation practices that complicate authors' work, submission of articles, errors in citation records and automated linking of documents via references.

1 | Introduction

In the scientific world, the norm is for scholarly journals to use established citation styles for referencing, ensuring consistency and ease of comprehension. Properly using these styles is crucial as it affects the acceptance of manuscripts. If scholarly journals do not provide sufficient referencing information or require unique citation styles, this creates significant challenges for authors. However, as Camacho (2013) noted, some internationally recognised journals lack adequate referencing guidelines or mandate uniquely tuned citation styles specific to their publications. This practice leads to a broader issue in the scholarly community when authors spend excessive time reformatting their

work to meet diverse and sometimes obscure journal requirements. This reformatting, highlighted by Ali (2010), can result in manuscript rejection if not done correctly.

With over 10,377 citation styles listed in the Zotero Style Repository (2023), authors face the challenge of choosing and correctly applying the citation style for their work (Brahmi and Gall 2006; Kujur 2022; Rozell 2022). An estimated 1,550,000 h are spent annually on reformatting rejected articles (Khan, Montenegro-Montero, and Mathelier 2018), highlighting a significant time burden on researchers. This estimate was based on a 62% rejection rate for 2.5 million articles per year in 2014, with an average of 1 h spent per manuscript on reformatting.

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Summary

- The scientific field is the strongest determinant of citation rules—citation styles and in-text referencing.
- More than half (54.1%) of scholarly journals do not name any citation style in guides for authors.
- 84.4% of journals use examples of references to specify the citation style.
- Regional differences in citation preferences, with specifics noted in the Czech Republic and Lithuania, suggest the influence of local publishing traditions.
- The majority of journals use DOIs, especially those connected with non-profit publishers and gold or diamond open access models.

While the number of articles submitted has increased significantly since then—over 5 million articles were published in 2022 alone (Curcic 2023)—the challenges associated with reformatting may persist or even intensify. This considerable time and effort spent on reformatting underscore a further complication in the already complex task of citation style selection and application (Khan, Montenegro-Montero, and Mathelier 2018). Technological advancements have introduced tools to streamline manuscript preparation; however, many journals require unique or non-standard citation styles that may not be fully supported by reference management software. While citation managers like *Zotero* and *Mendeley* are helpful, they are only sometimes used, and some researchers still prefer manual typesetting (Nurkhin et al. 2019; Singh, Mahawar, and Singh 2022; Speare 2018). This situation suggests that the time burden identified by Khan, Montenegro-Montero, and Mathelier (2018) remains relevant. The scarcity of recent studies on this topic further emphasises the need for current research to assess whether these challenges persist in the evolving publishing landscape.

We should also consider the broader context in which researchers operate, where they frequently encounter various citation standards across publications. Researchers often have to disseminate their findings in different journals, each with specific citation requirements and references, which can be a ‘major stumbling block for potential authors’ (Bobbie Crew 2005; Jawaid and Jawaid 2018; Tazegul et al. 2022). For instance, researchers in fields like psychology or education might predominantly (but far from exclusively) use the APA style, aligning with the norms of their disciplines (Hughes et al. 2023). However, when their work transcends disciplinary boundaries or researchers aim to publish in other journals, they may need to adapt to different citation styles (Gasparyan et al. 2014; Malički et al. 2019). The situation is particularly challenging for researchers who want to publish in journals which suggest unique citation styles (Leye 2020; Park, Mardis, and Jo Ury 2011). Some journals do not even name particular citation styles; they just provide examples of how to typeset references (Long 2019; Malički et al. 2021). This scenario forces authors to prepare their reference lists manually, increasing the likelihood of errors and inconsistencies (Kratochvíl et al. 2022).

While some advocate for the simplicity and flexibility of style-free references (e.g., Ansorge 2022), it is essential to delve into

the broader scholarly discourse surrounding citation practices and their implications. The topic of proper citation and citation styles is widely discussed. However, most papers focus on the accuracy of references (Kratochvíl 2017), citation rules (Kratochvíl et al. 2022) and the challenges students face with referencing citations (Lamprey and Atta-Obeng 2013), as well as the problem of source identification (Garfield 1990). Despite these discussions, there is a noticeable gap in the literature regarding how scholarly journals communicate their referencing requirements to authors. As previously noted, Camacho (2013) highlighted a concern in academic publishing by noting that some internationally recognised journals lack adequate referencing guidelines. It is intriguing that, despite the relevance of this issue, there has been a paucity of subsequent research directly addressing it in the years following Camacho’s study. The absence of extensive follow-up studies leaves an open question about whether the situation has evolved over the past decade. Have journals improved the clarity and adequacy of their referencing guidelines, or do authors still face the same challenges identified in 2013? The ongoing complexities associated with citation styles, as discussed by other scholars (e.g., Khan, Montenegro-Montero, and Mathelier 2018; Kratochvíl et al. 2022), suggest that this issue may persist. This gap in the literature underscores the necessity for contemporary research to assess the current state of journal referencing requirements and their impact on authors.

National journals are essential for sharing scientific knowledge in local communities while addressing more targeted audiences and problems. Publishers specialising in scholarly works within countries that use less commonly spoken languages face distinctive challenges. These include constrained funding and resources, minimal global visibility and recognition and the overwhelming presence of international commercial publishers in the academic publishing industry (Gudinavičius et al. 2023). Despite the important role that small-language publishers play in promoting local scholarship, they face significant hurdles when competing with larger international publishers and the dominance of English-language journals. Potential strategies to address these challenges include collaborating with international publishers, adopting open access (OA) policies and enhancing the quality of editorial processes. Being friendly to authors by simplifying referencing by approaching standards corresponds to these strategies; on the contrary, it may be limited by the resistance of publication policies due to tradition. Therefore, we focused on two examples of small countries: the Czech Republic and Lithuania.

By 2024, Lithuania had around 230 scientific journals published by more than 70 publishers. Public publishers continued to dominate the market share of scholarly journal articles. However, commercial publishers established a presence in scholarly journal publishing. Although there were only about seven commercial publishers in 2020 (excluding public associations or societies), this is a noticeable change from 2000, when there were none (Gudinavičius et al. 2023). The increasing diversity among publishers (both public and commercial), the relatively affordable publication fees, and the growth in article production indicate that Lithuanian publishers are prepared for upcoming challenges, such as implementing the European Science Foundation’s Plan S recommendations (European Science Foundation 2020).

The actual list of all Czech scientific journals and publishers is not available. Current science funding (since 2017) is based on articles published in Web of Science (covering 114 Czech journals in 2024) and Scopus (covering 231 Czech journals in 2023); these databases provide the only lists of journals. Older sources listed 451 Czech peer-reviewed journals in 2013 (Burešová, Laiblová Kadlecová, and Tomanová 2013). Before 2017, around a fifth of all publication results were concentrated in Czech journals, with most articles by domestic (Czech or Slovak) authors (Macháček and Srholec 2017). The same study found that publicly funded publishers significantly predominated: universities (37 journals), scientific associations (31 journals), the Academy of Sciences (27 journals), government institutions (19 journals) and private subjects (14 journals). Although empirical data is not available, it was and is assumed that the funding change in 2017 changed both the policies of Czech journals and the behaviour of Czech authors. This change should bring journals closer to international practices.

This paper analyses how scholarly journals (publishers) communicate through submission guidelines with their authors regarding the expected citation style. Our explorative research contributes to the existing body of knowledge by adding insights into how requirements from scholarly journals (publishers) are seen by other ends or receivers (authors/researchers) and whether this message of requirements is clear enough to provide what is expected. Purity in referencing within a journal (or across journals) is important because it helps with two important reasons for referencing: (1) simple and unambiguous identification of the information source used and (2) chaining of sources and bibliographic information, allowing automation and further processing (linking across databases, bibliometrics etc.).

2 | Methods

We focused on how scholarly journals, primarily Czech and Lithuanian, indexed in the *Scopus* database communicate their required citation styles to authors during the paper submission process. Our research aimed to ascertain the prevalence of different citation styles, understand how journals establish and communicate the guidelines and what tools (like digital object identifiers—DOIs) they use to simplify reference purity. By focusing on the clarity of this communication, the study aims to understand the challenges and implications for authors, especially when dealing with journals that employ unique or unspecified citation styles.

We set these research questions for our analysis:

- What are typical journal requirements for in-text referencing and reference lists defined for submissions?

Defining the actual standards in referencing helps to reassess Camacho's (2013) findings with exploration specifics of small national publishing markets.

- What is the form for defining these requirements?

The editorial board can communicate the requirements for referencing in various forms, which can impact the

difficulty of processing by authors. We focused on the prevalence of these approaches.

- How common is using DOI to improve connection among information sources?

The lack of uniformity in references makes their aforementioned uses (identification and processing) difficult. A unique identifier can be helpful because it is a key for linking sources. We investigated to what extent the DOI, as one of the possible and widespread identifiers, is used both at the level of cited references and published articles in analysed journals.

- How do journal policies differ according to their descriptive characteristics (country, publisher type, OA policy, publishing language and thematic focus)?

We expected that the scholarly publishing market would not be unified. The question is, what are the specifics and which characteristics, on the contrary, have no demonstrable influence?

We decided to focus our analysis on journals indexed in the *Scopus* database. This helped us include journals of guaranteed quality often sought after for publication by authors who must reflect specific journal requirements described by guidelines. Because of our hypothesis about the specifics of targeted countries (small European countries with local languages), we included all Lithuanian journals (70 journals), a comparatively large randomly selected sample of Czech journals (100 journals), and a randomly selected sample of all other journals (100 journals serving as a control group) indexed in the *Scopus* database at the beginning of June 2023. Upon initial analysis, five journals from the international sample were replaced because their websites were unavailable or they ceased publication, with another five journals selected randomly to maintain the sample size. We did not strive for representative research of the entire *Scopus* database but rather an exploration of the issue, focusing on two representatives of small countries with a local language and a similar publishing tradition.

We used the metadata of journals downloaded from *Scimago JR*. We manually added information available anywhere on journals' websites (not only guides for authors) in the summer of 2023. We used *Google Translator* for websites with no English, Czech or Lithuanian versions. We searched for information about the format of in-text references and citation style. We did not compare the styles declared and used. We were also interested in providing DOI in reference lists and explicit requests for using DOI in references (e.g., 'Use of the DOI is highly encouraged') because of its essential role in identifying cited and citing publications.

We manually added data on the OA policy and publication languages as we expected a possible influence on our focus. Manual processing was essential because, especially with OA, the data in the reference sources was incorrect (e.g., many open journals were not registered in DOAJ). We categorised publishers into two distinct groups: commercial and non-profit, which included academic entities. This classification was based on the publishers' primary nature and operational objectives. Commercial publishers were identified as primarily driven by profit motives, typically operating under a business model focusing on revenue generation.

In contrast, non-profit publishers were recognised as mainly focused on educational, scholarly, or public service objectives, often under a model prioritising knowledge dissemination over profit. The thematic focus of the journal represented a critical variable. Therefore, we decided to use two classifications to verify the differences. We used *All Science Journal Classification Codes (ASJC) supergroups* listed in *Scopus* and the first level of the *Revised Field of Science and Technology (FOS) Classification* in the *Frascati Manual* (OECD 2007) because of small representations in more specific categories. We manually assigned one prevailing FOS to each journal, and where possible, we used the value from the metadata from *Scimago JR* (variables Areas or Categories).

We used IBM SPSS Statistics v. 29 to analyse the data. We used descriptive statistics to present our results. To compare differences among groups of journals according to targeted variables, we used the chi-squared test and Cramer's V.

3 | Results

The primary reason for including journals in our analysis was group membership—Czech, Lithuanian and all other (henceforth referred to as 'international' for simplicity) journals. Table 1 describes the sample characteristics in which we expected differences in citation rules, including the distribution in monitored groups. We grouped publishers into commercial, which prevailed in the international group, and non-profit, which was more common in national groups. We expected that Czech and Lithuanian journals would support their national languages for publication, to support national scientists and to be more competitive themselves in the international publishing environment. This was not confirmed; at least half of the journals were English-only in all groups, and national-only journals were exceptions (4.1%, the most in the Czech Republic with 7.0%). This reduces the explanatory value of publication language for differences.

That editorial policy can change according to publication trends. OA types can be an indicator of a certain progressiveness, which could also have an impact on the revision of the referencing

policy. The targeted groups differed in OA—the Czech Republic was more closed, and Lithuania was more open than the international group; hybrid OA, which hardly occurred in the Czech Republic and Lithuania, was preferred in the international group. This significant difference can relate to publisher types (80.9% of journals using hybrid OA had a commercial publisher; all other forms of OA and closed journals had the opposite ratio). Commercial publishers support more English-only journals (80.5% commercial journals), while non-profits also allow publishing in national languages (44.7%). This suggests that differences between groups may be due to differences between types of publishers.

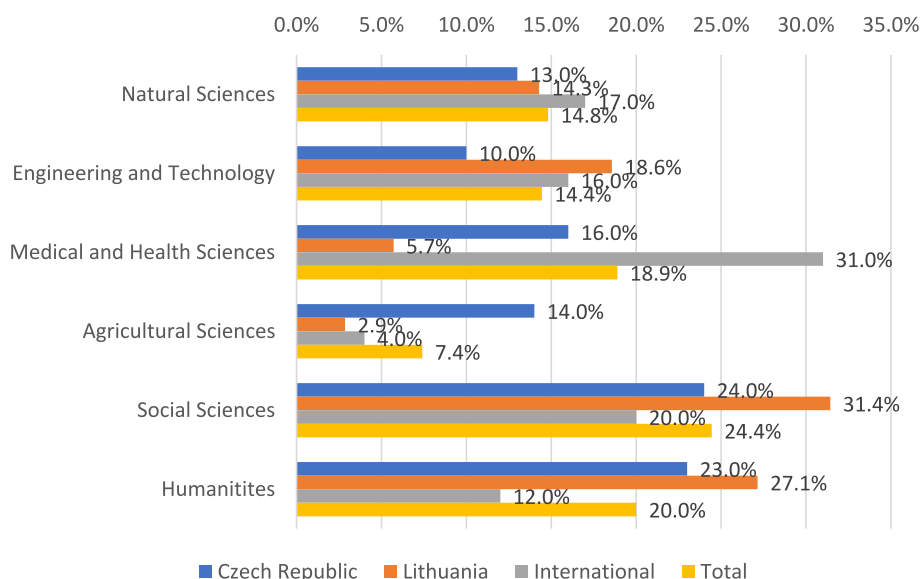
In general awareness, citation rules are often associated with field conventions. To test this, we used two classifications of the thematic focus: ASJC Supergroups indexed by *Scopus* and manually assigned codes of FOS classification. FOS categories were relatively evenly represented Graph 1; only agricultural sciences were significantly less represented (7.4%). According to ASJC supergroups, social sciences represented 44.1% of all journals, compared to 25.6% in physical sciences, 17.4% in health sciences and 13.0% in life sciences. We found statistically significant differences among groups in both thematic classifications using chi-squared ($p < 0.01$) but weak relationship strength (Cramer's $V = 0.253$ for FOS and 0.227 for ASJC supergroups). Graph 1 shows the groups' differences in journal topics (FOS). Social sciences (and humanities) were significantly more common in the Czech Republic and Lithuania; however, medicine (and health sciences) prevailed in an international group.

The primary focus of the analysis lies in rules for in-text referencing and reference lists (citation styles) defined at journal websites. For in-text references, journals used mostly the author-date system (52.6%) or numbers (38.5%), and significantly fewer used footnotes (7.8%). Three journals (1.1%) did not specify the style, and we did not identify it because we could not access full texts.

We found statistically significant relationships between the type of in-text references and all monitored descriptive variables

TABLE 1 | Description of the journal sample.

		Group			Total
		CR	Lithuania	International	
Publisher type	Commercial	10 (10.0%)	5 (7.1%)	67 (67.0%)	30.4%
	Non-profit/academic	90 (90.0%)	65 (92.9%)	33 (33.0%)	69.6%
Publishing language	English-only	50 (50.0%)	41 (58.6%)	79 (79.0%)	170 (63.0%)
	English/national/other	43 (43.0%)	29 (41.4%)	17 (17.0%)	89 (33.0%)
	National-only	7 (7.0%)	0 (0.0%)	4 (4.0%)	11 (4.1%)
Open Access	Diamond	53 (53.0%)	46 (65.7%)	21 (21.0%)	44.4%
	Gold	25 (25.0%)	20 (28.6%)	23 (23.0%)	25.2%
	Hybrid	2 (2.0%)	0 (0.0%)	45 (45.0%)	17.4%
	Green	1 (1.0%)	2 (2.9%)	1 (1.0%)	1.5%
	Closed	19 (19.0%)	2 (2.9%)	10 (10.0%)	11.5%



GRAPH 1 | FOS classification of journals according to groups.

(Table 2). Commercial publishers preferred numbers (62.2%), and non-profit publishers the author-date system (62.2%). 57% of journals from the international group used numbers, compared to less than 30% in national groups. 74.3% of Lithuanian journals used the author-date system; in the Czech Republic, it was 52.0%, but in this group, we found almost all journals using footnotes (18.0% of Czech journals). Numbers were more common in English-only journals; footnotes appeared more in journals supporting the national language. The author-date system was more connected with diamond (65%) and gold OA (60.3%); numbers with hybrid OA (70.2%) and closed journals (48.4%).

We found the strongest relationship in thematic classifications. Footnotes were rare (7.8% of the whole journal sample), and they appeared only in social sciences and humanities (FOS) and social sciences (supergroups). We also found a clear connection between medical/health sciences and number systems, and social sciences and humanities choosing author-date systems. The author-date system was standard (95%) in agricultural sciences (FOS). A more balanced approach to both types of in-text

TABLE 2 | Significance of the relationship between type of in-text references and journal characteristics.

	Pearson chi- squared	Cramer's V	Significance
Topic (FOS)	155.003	0.437	0.000
Publisher type	37.528	0.373	0.000
Supergroup (ASJC)	102.103	0.355	0.000
Group	47.833	0.298	0.000
Open Access	66.972	0.288	0.000
Publishing language	27.255	0.225	0.000

referencing showed natural sciences, engineering and technology (FOS), and life and physical sciences (supergroups ASJC) with a minimum of 35% representation each.

We expected a more complicated situation with citation style due to the higher number of options. We distinguished the styles with a minimum of nine journals in our sample: APA (49 journals; 18.1%), Vancouver (17 journals; 6.3%), Harvard (13 journals; 4.8%), Chicago (13 journals; 4.8%), ISO 690 (11 journals; 4.1%) and AMA (9 journals; 3.3%). We classified the others in the 'other' category (12 journals; 4.4%). The remaining 146 journals (54.1%) did not name any style, which often meant using their own style. We decided not to check whether a citation style is used without being named or whether the named citation style matches the form in the articles. We focused our analysis only on rules defined by the editorial office.

Similarly to in-text references, we found statistical relationships between all journal characteristics and citation styles (Table 3), the strongest for topic classifications and groups. ISO 690 is almost exclusively used in Czech journals (10 Czech and 1 Lithuanian). APA is the most dominant in Lithuania (38.6% of Lithuanian journals), but it is also among the most widespread citation styles in the Czech Republic (12%) and the international group (10%). However, in all groups (and most in the Czech Republic), journals often do not name the citation style and use examples of references to define the form of references (see below). In other variables, the more apparent results were:

- Non-profit publishers used APA (22.9% of these publishers).
- Almost all publishers used more citation styles and were not limited to a single approach. VILNIUS TECH was the only publisher which avoided the unnamed style.
- Diamond and gold OA journals are connected more to APA, and hybrid OA journals are connected with Vancouver.
- English-only journals mostly named APA (20.6%) and AMA (5.3%). Journals allowing national languages also used

TABLE 3 | Significance of the relationship between citation style and journal characteristics.

	Pearson chi-squared	Cramer's V	Significance
Topic (FOS)	177.969	0.363	0
Supergroup (ASJC)	105.571	0.361	0
Group	60.217	0.334	0
Publisher type	26.718	0.315	0
Publishing language	32.694	0.246	0.003
Open Access	43.566	0.201	0.031

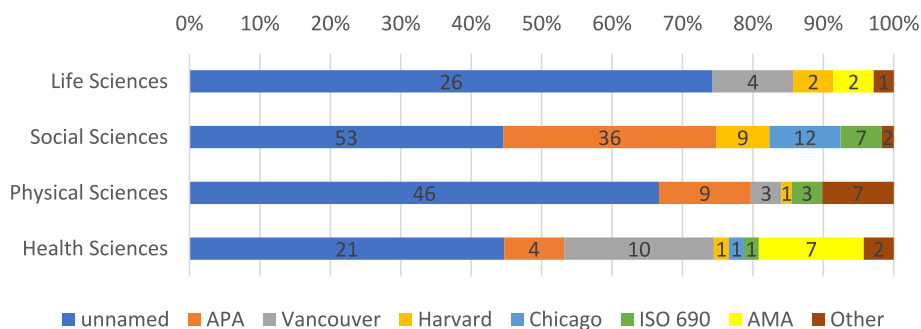
mostly APA (14.6%), followed by Chicago (10.1%), Harvard (7.9%) or ISO 690 (7.9%).

The prevalence of the unnamed approach limited satisfactory values of preference for citation styles within thematic categories. This was particularly evident in agricultural sciences (90%) and natural sciences (77.5%) in FOS and life sciences (74.3%) in supergroups. Therefore, we did not apply statistical analysis for comparison. As expected, our analysis confirmed a preference for different styles. The distribution

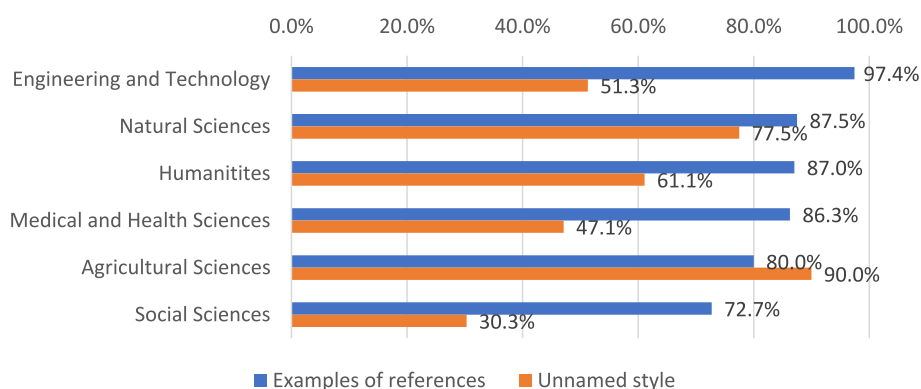
in ASJC supergroups is illustrated in Graph 2. Results were slightly different according to FOS classification: APA (17.9%) and Vancouver (12.8%) in engineering and technology, Vancouver (23.5%) and AMA (13.7%) in medical and health sciences, APA (51.5%) in social sciences and Chicago (13%) in humanities.

Another common practice was using examples of references (228 journals; 84.4%). Journals listed the correct form of the most used types of documents (typically articles, books and webpages, but sometimes generally more unusual types, such as religious texts). Because of such a high number, statistical differences for almost all descriptive variables were insignificant. The FOS classification was the only exception (Pearson chi-squared = 12.901, $\Phi = 0.219$, $p = 0.024$). Graph 3 shows examples of references and unnamed styles in individual fields according to FOS. As we already mentioned, many journals did not name the citation style but used examples of references instead (especially in engineering and technology, social sciences and medical and health sciences). However, we found all possible combinations of these values, including not naming the style and not using examples. Some journals did not comment on the form of references; others referred to the current issue or left the authors to choose any style, with the editor resetting the entries themselves before publication. Therefore, the number of unnamed styles exceeded the examples of references in agricultural sciences.

Naming the citation style and examples of references are two important tools for authors and editors. Some journals tried to simplify the creation of references by offering templates for citation



GRAPH 2 | Citation styles according to ASJC supergroups (the percentage axis allows relative comparison, and the values given are absolute counts).



GRAPH 3 | Journals using examples of references and unnamed citation style according to FOS classification.

managers (more often *Endnote*, less *Zotero*; we did not find others during our analysis), but most journals did not comment on citation managers. Another potent tool which could help in a situation where greater standardisation has still failed is DOI. For the best possible connection between cited and citing articles, DOI needs to be assigned to the article and also mentioned in references. We followed both ways of using DOI—‘DOI assigned’ by the journal to its articles and ‘DOI requested’ by the journal to be part of references in articles. 78.1% of journals assigned DOI to articles. National groups exceeded the international (84.0% CR, 81.4% Lithuania and 70.0% international group, where US journals brought a significant decrease). DOIs were more often assigned by non-profit (82.4%) than commercial publishers (68.3%). Assigning DOI was especially common in gold OA journals (91.2%) and diamond OA journals (84.2%), significantly less in closed journals (61.3%) and hybrid OA journals (59.6%). Assigning DOI was widely spread in engineering and technology (92.3%). On the contrary, only 66.7% of journals in medical and health sciences assigned DOI. Supergroups did not show significant differences in assigning and requesting DOI. Table 4 illustrates the statistical values of the relationship between both uses of DOI.

Although the DOI should be part of the reference if assigned, editors often emphasise in the reference part of guides for authors the need to use this identifier. While the national groups were similar and outnumbered the international group in the assignment of DOIs, in requiring DOIs, each country was approximately equally far but on the opposite side of the scale compared to the international group Graph 4. For other significant relationships, we found these preferences:

- English publishing language significantly raised requesting DOI (46.5% English-only, 34.8% English-also vs. 9.1% national-only journals).

- All types of OA journals gained more than 40% in requesting DOI, but only 6.5% closed journals.
- Journals requested DOI mostly in social sciences (54.5%) and engineering and technology (51.3%), but only in less than 1/3 of journals in medical and health sciences (33.3%), agricultural sciences (30.0%) and humanities (29.6%).

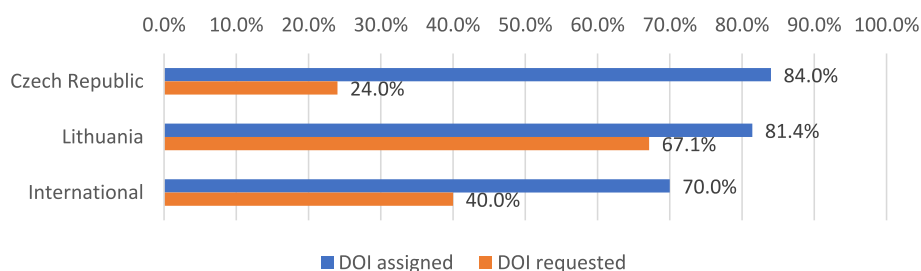
4 | Discussion

While scholarly communication is a global endeavour, regional factors significantly impact journal practices, particularly regarding citation style preferences. Countries like Lithuania and the Czech Republic, which were isolated from international scholarly communication during the mid-20th century, present unique cases for analysis. Their re-engagement with the global academic community has been accompanied by challenges in aligning with established citation norms. Although we did not aim for representative research but rather for exploring the specific publishing market of these countries, justifications can be found for several tendencies that may not be locally bound and that correspond to previous studies.

Considering the arguments for our analysis presented in the introduction of this article, a key finding was the enormous prevalence of the ‘unnamed’ citation style. At the same time, this was one of the strongest results in our analysis; therefore, despite our sampling, we can expect a similar tendency in the entire population of scholarly journals. The fact that many journals in our analysis did not name their citation style is somewhat disturbing, especially considering that we analysed journals indexed in the *Scopus* database, which adheres to a long list of inclusion criteria. Furthermore, journals indexed in this database are regarded as high quality and are expected to set and follow

TABLE 4 | Relationships between assigning and requesting DOI and journal characteristics.

	DOI assigned			DOI requested		
	Pearson chi-squared	Phi	Significance	Pearson chi-squared	Phi	Significance
Group	6334	0.153	0.042	31.738	0.343	0.000
Publisher type	6598	0.158	0.010			ns
Publishing language			ns	8125	0.173	0.017
Open Access	30.575	0.337	0.000	19.697	0.270	0.001
Topic (FOS)	12.881	0.218	0.025	11.842	0.209	0.037



GRAPH 4 | Assigning and requesting DOI in groups.

international practices. Therefore, the choice of not naming a citation style may indicate a disregard for the importance of citation styles and references or a lack of consideration for the effort required for authors to compose them properly. This aspect warrants a more profound analysis.

The high prevalence of journals not naming a specific citation style (54.1%), particularly in fields like agricultural and natural sciences, indicates a potential gap in standardised citation practices across disciplines, as was highlighted in the research of dos Santos, Peroni, and Mucheroni (2023). This lack of unanimity in citation styles according to disciplines can be problematic for authors, especially when their work spans multiple disciplines or who are less familiar with the nuanced expectations of a particular field. This layer of complexity reflects a broader issue of standardisation and clarity in scholarly publishing, as to Ansoorge (2022). This trend underscores the need for greater standardisation and clarity in the communication of citation requirements by journals (Salvagno et al. 2008). While respecting the diversity and specific needs of different fields and journals, there is a compelling argument for establishing clearer, more uniform guidelines for citation styles (Singhal, Motghare, and Verma 2023). However, some would argue that the authors are careless, and the main problem is a lack of attention to requirements (Pritchard 2013).

For authors, this practice of ‘unnamed’ citation styles can lead to confusion and additional workload, as they must adapt their manuscripts to comply with less standardised or unfamiliar citation formats. This could potentially increase the risk of citation errors, impacting the integrity and reliability of scholarly work (Setiarini 2021). Providing examples of references was a standard approach to how journals in our sample guided authors in formatting their references. However, the reliance on examples also has limitations. It may lead to a form of ‘rewriting’, where authors must meticulously adjust their citations to match the provided formats, sometimes focusing on minute details like the placement of points and commas. Although there is no reason to burden authors with different citation style names (which fall within the expertise of the publishing industry), not naming a citation style and using examples is thus a very problematic practice. A much simpler solution for both journals and authors would be to use the most expected named citation style when this expectation is most closely associated with field focus.

Our analysis reveals that the thematic focus of journals, as defined by the FOS and ASJC supergroups, emerged as the strongest determinant of in-text referencing and citation style preferences. This finding corroborates the notion that scientific disciplines have distinct citation traditions (similar to countries and publishers, which we discuss in more detail below). For example, the prevalence of the APA style in social sciences (Camacho 2013) and the Vancouver style in medical and health sciences (Masic 2013) align with the longstanding conventions in these fields. The preference for APA in social sciences aligns with the discipline’s emphasis on recent, empirically-based studies, where the author-date system of the APA style facilitates quick reference to recent works and prioritises the currency of information. The Vancouver style, characterised by its numerical referencing, was widely preferred in medical sciences. Other health-related fields, while also adopting concise citation

methods, showed a more diverse range of preferred styles. This diversity could reflect the interdisciplinary nature of these fields, incorporating elements from both medical science and broader health and social sciences. In the humanities, we observed a tendency towards styles that allow for extensive bibliographic details and commentary, such as Chicago. This preference can be attributed to the nature of humanities research, which often involves detailed analysis of texts and ideas, necessitating a more elaborate citation format to capture the richness of sources.

Using DOIs was another distinct practice observed. It represents a more universally beneficial practice that enhances the functionality and integrity of academic citations (Gorraiz et al. 2016). Journals help other researchers cite the content properly, better linking of sources, and use tools such as reference managers for speedier metadata collection. With the global nature of scholarly publishing, journals should consider international standards and compatibility. Compatibility of citation styles with commonly used reference management software and digital platforms is another crucial parameter, as Singh, Mahawar, and Singh (2022) pointed out. Incorporating feedback from authors and readers can provide valuable insights into the effectiveness and user-friendliness of submission guidelines regarding reference preparation.

Furthermore, our analysis identified a significant dichotomy in citation style preferences based on the characteristics of publishers. This dichotomy was primarily between ‘national’ non-profit publishers and ‘international’ commercial publishers. On the one hand, ‘national’ non-profit publishers, prevalent in targeted countries, demonstrated a preference for diamond or gold OA. These publishers supported publications in both English and national languages. On the other hand, ‘international’ commercial publishers, which often published only in English, showed a preference for hybrid OA models. However, in both groups, we saw the influence of the primary determinant of the preferred citation styles because they aligned with the broader scholarly practices of their primary disciplines. Unlike their gold OA counterparts, diamond OA journals operate without charging authors or readers, often resulting in limited financial resources. This financial constraint can affect various operational aspects, including developing and maintaining comprehensive submission guidelines and standardised citation requirements.

Additionally, cultural contexts significantly influence scholarly communication practices (Late 2014). Our study uncovered notable country-specific trends in citation practices, particularly in the Czech Republic and within international/commercial groups. The Czech Republic had a distinct preference for using footnotes and the ISO 690 citation style. This trend could be indicative of a deeper cultural or scientific tradition. Footnotes, for example, are often associated with detailed commentary or elaboration. This aspect was well described in research on economic journal citation practices in Romania (Ghivirigă 2022). The discussion of footnotes’ use in research papers is very old, as shown in an article by Kaplan (1965), who thought there was a ‘relationship between footnoting practices among scientists and the social system of science’. However, the question arises to what extent footnotes retain their justification in contemporary scholarly publishing, which is increasingly associated with the electronic environment.

As an exploratory research focused on two countries, generalising our findings is impossible. We included an international sample of journals as a control group in our analysis, but the sample was too small to bring clear findings. However, its use and results indicate possible tendencies in the entire group of scholarly journals, or at least those in the Scopus database, which would be appropriate to further verify on a larger sample. Future research should also aim to collect and analyse data from a broader range of countries. This could explore questions such as: Do larger countries with more resources tend to have more standardised citation practices? How do geographical location and cultural factors influence the choice of citation practices? The answers could significantly enhance our understanding of global scholarly publishing practices and aid in the development of more universally applicable guidelines for citation styles (Rozell 2022). A bigger research sample should also help connect citation practices with finer disciplinary categories, considering the confirmed strong relationship. Our sample did not allow for more detailed statistical analyses because most groups were underrepresented within the second-level classification, and we were limited to descriptive statistics.

A big limit for the statistical assessment of citation styles was the broad representation of the ‘unnamed’ approach. Further research is needed to explore why journals employ ‘unnamed’ or unique citation styles. Additionally, investigating the impact of these practices on the author’s experience and the overall quality of scholarly literature could inform future recommendations for standardisation in citation practices. Actual practices besides declared editorial politics should follow our research in more aspects. We limited our focus to declared approaches to in-text references and citation styles. However, we did not address the question of what styles are actually used and to what extent the editorial staff monitors the purity of compliance with the set guidelines. It is also important to embed our analysis within the broader topic of integrity, both at the level of editorial policy and practical enforcement.

5 | Conclusions

Our research was focused on understanding how scholarly journals focused on indexed in the *Scopus* database communicate their requirements for citation practices to authors. We focused on the Czech Republic and Lithuania as examples of small publishing markets. By exploring the interplay between the region, financial models, journal types and disciplinary scopes, we aimed to shed light on how these factors influence citation practices. Understanding this interplay is essential for improving submission guidelines, aiding these journals in integrating more seamlessly into the international scholarly community, and supporting the sustainability of national journals.

While some journals clearly articulated their preferred styles, many left authors to infer these from provided examples or past publications. We observed a diverse range of citation styles across the journals. A notable prevalence of different citation styles was evident, with a significant proportion of journals, especially in fields like agricultural and natural sciences, opting for unnamed and often unique styles or providing examples without explicitly naming a style. We identified some

geographical specifics in citation practices (e.g., using ISO 690 style in the Czech Republic), underscoring the influence of regional scholarly traditions.

Moreover, our research revealed that using DOIs is a prevalent tool among scholarly journals. DOIs are particularly common in journals from regional, non-profit publishers and those adhering to gold and diamond OA models. The provision of DOIs varied across disciplines, with journals in engineering and technology more likely to use them than those in medical and health sciences.

Despite the similarities and prevailing approaches identified, our analysis shows that the scholarly publishing market still needs stronger standardisation in citation requirements and improving the communication of these requirements to authors.

Author Contributions

Pavla Vizváry: conceptualization, methodology, formal analysis, investigation, writing – original draft, writing – review and editing, visualization. **Vincas Grigas:** conceptualization, methodology, formal analysis, investigation, writing – original draft, writing – review and editing.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Research data are not shared.

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