Evaluation and publication delay in Ibero-American scientific journals

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Abstract: This article analyses the review, acceptance and publication dates of a sample of 21,890 articles from 326 Ibero-American scientific journals from all subject areas and countries included in the Latindex Catalogue 2.0 and published between 2018 and 2020 (freely available as an open access dataset). The aim is to discover evaluation and publication times. The evaluation process takes a median of 110 days, the publication process, a median of 82 days, and the whole process, a median of 224 days. Statistical differences are found according to periodicity, subject areas, countries, existence of a printed version and article type (*Call for Papers* or *General articles*). From the data we find that the delay in publication is longer than publishers themselves report to the DOAJ. STEM areas present the most similarity in publication patterns, having a higher number of *evaluation days* (*Ed*) than *publication days* (*Pd*); Arts and Humanities present the opposite pattern, with a higher *Pd* than *Ed*. In the case of Social Sciences, the times are similar. *General articles* and *Call for Papers* articles differ in terms of *Ed*, but not *Pd*, indicating that *Call for Papers* revisions are faster.

Keywords: scholarly publishing, review time, processing time, publication delays, Ibero-American journals

INTRODUCTION

Current situation

In the context of scientific publication, one of the aspects that most concerns both authors and editors is the time that elapses between the submission of a manuscript and its final publication. When there is a delay, it occurs at one of the following phases: peer review time and editing time (Björk & Solomon, 2013), and this article attempts to analyse these variables.

Excessive prolongation of either of these two stages jeopardizes the immediacy with which some data must be published before becoming obsolete (Packer et al., 2016), affects the recognition, evaluation and promotion of scientific careers (Delgado López-Cózar, 2017) and strains and affects the current scientific communication system (Aguado-López & Becerril-García, 2021; Amat, 2008).

Studies have identified the main causes of delay in peer review:

- immediate or desk rejection time, the time editors take to reject an article considered unsuitable (Huisman & Smits, 2017);

- difficulty in finding reviewers who are both suitable and available (Fernández-Llimos, 2019; Pautasso & Schäfer, 2010);
- delay in the acceptance/rejection of invitations for review (Assad et al., 2020);
- reviewer workload (Pautasso & Schäfer, 2010);
- reviewer response time (Luwel et al., 2020);
- reviewer fatigue as more and more opinions/reviews are requested (Publons, 2018);
- deadlines for reviewers and authors to respond (Assad et al., 2020);
- last-minute deadline compliance and outright failure to meet deadlines (Alves-Silva et al., 2016);
- rejections in other journals before final acceptance (Assad et al., 2020; Mendes et al., 2021); and
- inefficiency (Huisman & Smits, 2017) and malpractices (Kumar, 2014).

Several causes of editorial delay have been identified:

- the time needed by authors to make the modifications suggested by reviewers (Björk & Solomon, 2013);
- the time for authors to approve galley proofs (Alves-Silva et al., 2016);
- poor editorial practices (Ralph, 2016);
- coexistence of printed versions, or the legacy of their tradition in fully electronic journals, since it is still common to group articles in issues, which usually appear long after the originals manuscript have been accepted; and
- the material and economic limitations of printing copies, subordinated to the costs of layout and the print run of a maximum number of pages; the need and/or impossibility of outsourcing management processes (Kumar, 2014).

A journal's subject area and scientific discipline are determining factors in its publication habits and rhythms and affect not only the speed of publication of research results, but also the quality and scope of peer review (Björk & Solomon, 2013).

Some electronic-only journals are adopting the growing trend of continuous publication, publishing each article immediately on acceptance (Packer et al., 2016), with the intention to shorten considerably the time between article acceptance and publication in a full issue. In addition, journals that still publish both online and in print are publishing their electronic version first (*ahead of print* or *online-first*), but still have to face coordination and logistical problems such as the final pagination/layout of the printed volume (Björk & Solomon, 2013).

The number of manuscripts received and the journal's capacity to manage them is another reason for delay (Delgado López-Cózar, 2017), especially in journals that are well positioned in information systems with visibility or impact indicators. This is because their prestige increases in proportion to their popularity

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Key points

- Delay in the publication of scientific articles is due to two main reasons: peer review time and editing time.
- Delays in publication are the responsibility of authors, reviewers and editors, and it is possible to reduce publication delay (50%–80%) when a real need exists, as happened in the COVID-19 pandemic.
- The difference between our study's results and those published in the DOAJ suggests the unreliability of the data submitted by editors.
- The maintenance of print publication increases Td (total days from submission to publication) in comparison with journals that only publish digitally.
- There is huge variability in editorial and production times, and 28% of analysed journals appear to undertake 'bulk' acceptance of articles on a single day.
- Continuous publication journals are not faster than traditional periodic journals in both editing and production times.
- The median total time of Ibero-American jorunals from submission to publication was just under 7.5 months.

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among authors who need to publish in order to be evaluated or obtain funding for their research. For this reason, occasionally a journal suspends acceptance of any new submissions due to overload in the editorial office (Rilce, 2021).

In any case, researchers, authorities and users of scientific information demand that their papers, articles, essays and opinions be published as quickly as possible. This was confirmed by the work of Solomon and Björk (2012), who found that speed of publication was the third most important factor for authors when choosing a journal for publication, only after subject suitability and journal quality.

But delays in publication are the responsibility of authors, reviewers and editors. And it is possible to reduce publication delay when a real need exists, as happened in the recent COVID-19 pandemic (Forti et al., 2021; Horbach, 2020).

There are numerous and varied studies that have attempted to quantify and explain the factors associated with delay in the scientific publication process, but there are few papers about Ibero-American academic journals. A study has recently been conducted about the duration of the peer review process in Latin America (Aguado-López & Becerril-García, 2021), but there is no study for journals in this geographic/linguistic region based on a broad, representative sample that also covers the time elapsed between peer review/acceptance and final publication. This is precisely the gap that this work aims to fill.

Objectives

This study analyses the delay in the publication process of 326 electronic journals included in the Latindex Catalogue 2.0 in terms of *total days* (*Td*) which includes *evaluation days* (*Ed*) and *publication days* (*Pd*). *Ed* is the time between manuscript submission and final acceptance (including reviewing time, author revision plus editorial time to evaluate and make the final decision). *Pd* is the time from this point (editorial acceptance) until the date when the article becomes publicly available for reading, the publication date. The aim of this article is to find out how Ibero-American scientific journals behave in relation to the publication process. To that end, the following questions are posed:

- How long does it take a journal to evaluate a manuscript? How long does it take to publish an original manuscript once it has been evaluated?
- Are there differences in evaluation/publication times when a journal publishes thematic issues?
- What differences are there among subject areas, periodicities or countries of publication?
- Are there differences when e-journals are still published in print?

The study is conducted on a representative sample of 21,890 articles from 326 peer-reviewed journals that have been active in the last three years (2018–2020), mainly journals published by public institutions, covering all scientific disciplines included in Latindex.

Data compilation and revision have been carried out manually due to the impossibility of automated processing. The volume of data collected, its thematic and geographical diversity and the amount of human review and supervision have rarely been seen in previous studies, for this reason these have been made available for free use as a dataset (see Data availability statement at the end of the article).

METHODOLOGY

Population and sample size

In April 2021, 11,297 journals were registered in the Latindex Directory, and 2,412 in the Latindex Catalogue. Of these, 2,107 qualified for use in this study, as they complied with point 14 of the Latindex criteria, thus enabling the retrieval of 'dates of receipt and acceptance of originals manuscript'. To find the representative sample *n* from the population *N* (2,107 journals), the following formula was used, and typical values were established for confidence level *Z* (95% = 1.96 according standard *Z*-scores), margin of error *e* (5%) and population proportion *p* (50%):

$$n = \frac{N \cdot Z^2 \cdot p \cdot (1-p)}{(N-1) \cdot e^2 + Z^2 \cdot p \cdot (1-p)}$$
$$= \frac{2107 \cdot (1.96)^2 \cdot .5 \cdot (1-.5)}{(2107-1) \cdot .05^2 + 1.96^2 \cdot .5 \cdot (1-.5)} = 326.$$

Selection of journals (filters)

After calculation of the sample (*n* = 326), five additional filters were applied to systematize the selection.

The first filter was to take simultaneous account of two additional Latindex points: 19 ('compliance with periodicity') and 31 ('use of interoperability protocols'), in order to ensure the data were meaningful regarding publication dates (2018–2020), and to guarantee the use of a journal system (for example, OJS) when checking the dates through the source code of a web page (for example, OJS *abstract pages*). This reduced the population *N* to 1,289. So, in order to obtain the sample, 25.3% of the cases were considered.

The second filter was thematic. Latindex contains seven general areas, which are listed in Table 1. The percentage of qualified journals that comply with points 14 + 19 + 31 is shown.

The third filter was geographical. Latindex includes journals from 26 different origins, 22 of which are countries. To include this variety, the same percentage was recalculated according to this new parameter. The data obtained are available, see the Data availability statement at the end of this article. Rounding produced a total of 1,263 journals (instead of 1,289).

The fourth filter was the inclusion of these journals in the Directory of Open Access Journals (DOAJ), because the DOAJ states the number of weeks that authors have to expect on average from submission to publication, calculated and declared by the publishers themselves to the Directory. These data were used as a reference for comparisons.

There were four exceptions, indicated with an asterisk in the data (see González-Albo et al., 2022a): three journals that were not included in DOAJ, but were not eliminated from the study because they were the only ones from their geographical origin that passed the rest of the filters; and Honduras, from which no qualified journals could be analysed.

The last filter was to include the largest possible number of Latindex sub-topics so the sample would be sufficiently heterogeneous and not only focus on the major thematic sub-areas.

Data collection

To calculate *Ed* and *Pd*, three dates were collected from each of the 21,890 articles from the 326 journals, excluding non-original research articles: date of receipt (submission date), date of review/acceptance and date of publication. For this purpose, the *abstracts pages* offered by OJS (or similar software) and their respective PDF files were consulted manually.

When a journal only stated the month of receipt and evaluation without indicating the day, the first day of the month (in the case of receipt) and the last day of the month (for acceptance and publication) were recorded to penalize the vagueness by adding days to the evaluation and publication periods. The date of publication, on the other hand, was taken from the plugin included in OJS, which was checked against the Dublin Core (DC) metadata embedded in the HTML source code (plain text) of

TABLE 1 Results of first and second filters (formal and thematic), for the selection of the journals in sample *n*.

Latindex subject	Journals (Latindex points 14 + 19 + 31)	% sample (25.3)	Rounding
Agriculture	38	9.6	10
Arts & Humanities	198	50.1	50
Engineering	84	21.3	21
Medical Sciences	130	32.9	33
Multidisciplinary Sciences	59	14.9	15
Natural & Exact Sciences	140	35.4	35
Social Sciences	640	161.9	162
Total	1,289	326.1	326

the *abstract page*, indicating in this order the date of modification (*modified*) or the date of publication (*issued*), in case it was typeset and uploaded (*created*) to OJS well in advance of publication.

Unfortunately, since the date of acceptance usually follows author revisions or corrections, it is impossible to know how many days of *Ed* are due exclusively to the editors and how many days are due to the authors.

The data were recorded in an online template created *ad hoc*, together with the following data:

- Number of weeks elapsed between receipt of the original version of manuscript and its publication as declared in DOAJ.
- Periodicity.
- Whether a journal has a print version, and its print run (mostly obtained from the editorial staff by e-mail).
- Indication of *Call for Papers* if the articles belonged to a thematic section for which a special call had been made, or *General articles* for all other cases.

These disaggregated data, by journal and document, are available in the CSIC's institutional repository (see the Data availability statement).

Data analysis

The variables considered for the statistical analysis were *Ed* (day of acceptance minus day of receipt), *Pd* (day of publication minus day of acceptance) and total days, or *Td* (*Ed* plus *Pd*).

The following grouping variables were considered: the type of article (*Call for Papers* or *General articles*); periodicity of publication (annual, biannual, four-monthly, quarterly, bimonthly, monthly or continuous); the country/area of origin and thematic classification according to the Latindex system (Table 1) and the year of publication (2018, 2019 or 2020).

In addition, the Composite Index of Secondary Dissemination (ICDS), offered by the Information Matrix for the Analysis of Journals platform (MIAR), was used for each journal to analyse possible relationships between *Ed* or *Pd* and visibility, since the ICDS shows the presence of publications in different citation databases, as well as evaluation resources.

SPSS Statistics v.27 was used for data processing. Due to the variables not having normal distribution, no-parametric statistics have been used: Krusall Wallis, *U*-Mann-Whitney and W-Wilcoxon tests to compare the variables, and Spearman Rho test to analyse the correlation between variables. The significance for the contrasts is *p*-value<0.05. Microsoft Access was used for debugging and consolidation of the data tables, and Microsoft Excel was used for preparing some graphs.

RESULTS

General results

The *Ed*, *Pd* and *Td* variables in the sample of articles published between 2018 and 2020 present a non-normal distribution with very heavy tails, that is, there is a concentration of cases at the lower values of the distribution, as well as a significant number of outliers at the end of the distribution.

Ed has a median of 110 days (mean 145), *Pd*, 82 days (mean 143), and *Td*, 224 days (mean 289). In all cases, the standard deviation is very high.

Comparing *Ed* in each of the three years revealed no significant differences, but there are differences when considering *Pd* or *Td* as a whole, with a decrease in *Pd* (and consequently *Td*) in the short period analysed.

When the two types of documents identified in the sample were analysed, no significant differences were found in *Pd*, with slightly less delay in *Call for Papers* than in *General articles* (80 vs. 83 median, 134 vs. 146 mean). Differences were found in *Ed* (95 for *Call for Papers* and 112 for *General articles*; means of 130 and 147, respectively) and in *Td* (medians of 193 for *Call for Papers* and 230 for *General articles*; means of 264 and 293, respectively). The disaggregated data by year and document type can be accessed at González-Albo et al., 2022b, 2022c. When the sample was segmented into the three years analysed, the differences in *Ed* and *Td* between *Call for Papers* and *General articles* remained (Fig. 1).

Analysis by periodicity

Ed, *Pd* and *Td* differ significantly by journal periodicity (data in González-Albo et al., 2022a). The highest value for *Ed* corresponds to continuous publications, while the lowest one corresponds to annual publications (139 vs. 98 days median, 157 vs. 123 mean). Monthly publications show a lower value in both cases, but the results for monthly periodicity correspond to only one journal.

Journals with shorter periodicities have lower *Pd* values. In this sense, journals with continuous publication should have the lowest values for this variable. However, they have the second-highest *Pd* values, only behind annual journals.

Results for *Td* (Fig. 2) are very similar to those of *Pd*, with no differences found in the biannual/quarterly, biannual/four-monthly and four-monthly/quarterly cases.

Significant differences are always found in *Ed*, *Pd* and *Td* when comparing *Call for Papers* versus *General articles*, except in the case of *Pd* for annual journals. Remarkably, quarterly journals show longer *Call for Papers* times than *General articles* times in all three variables (Fig. 3).

Analysis by subject area

Significant differences are observed between subject areas, both for *Ed* and for *Pd* and *Td* (the disaggregated data are in González-Albo et al., 2022a), and these differences persist in each year studied separately.

Comparison of *Ed* and *Pd* shows that evaluation is longer in all areas with the exception of Arts and Humanities, where *Pd* is longer than *Ed*, and Social Sciences, where the two parameters are quite similar (Fig. 4).

Significant differences are always found between *Call for Papers* and *General articles*, except for *Td* in Natural and Exact Sciences and *Ed* in Medical Sciences.

Analysis by country

The three variables also differ according to the country of publication (disaggregated data by area are included in González-Albo et al. (2022a)). However, when studied two by two, there are a good number of pairs that do not differ. These patterns are repeated in each of the years studied.

Venezuela has the lowest *Td* (median 66 days, mean 77: median 33 for *Ed* and 34 for *Pd*, mean 44 and 32, respectively), but it should be kept in mind that only 2 journals and 84 articles from this country were considered. Venezuela is followed by the only journal from International Organizations (median 67 days, mean 88: 33 for *Ed* and 31 for *Pd*, mean 43 and 46), with 93 articles collected. At the other extreme lies Guatemala (median 458, mean 439), which has a median *Ed* of 13 but a median *Pd* of 421 (mean 33 and 425, respectively); however, only 24 documents from a single journal were analysed for this country. European and American Ibero-Americanist journals have the longest total delays, due to publication times, especially the American journals (Fig. 5).

Analysis of the differences between *Call for Papers* and *General articles* found no differences for *Ed* in the cases of Colombia, Cuba, Ecuador and Mexico; for *Pd* in Argentina, Chile, Nicaragua and International Organizations; or for *Td* in Colombia and the Dominican Republic.

Journals with print publication and relationships between variables

Delays may be conditioned by the fact that a journal maintains a print version. In the analysed set, 50% of the journals have an electronic edition only, 30% have a simultaneous print publication, and the remaining 20% did not respond to the data collection survey. The median and mean for *Ed*, *Pd* and *Td* is higher when the journal has a print edition (Table 2), and significant differences are always found between the two groups.
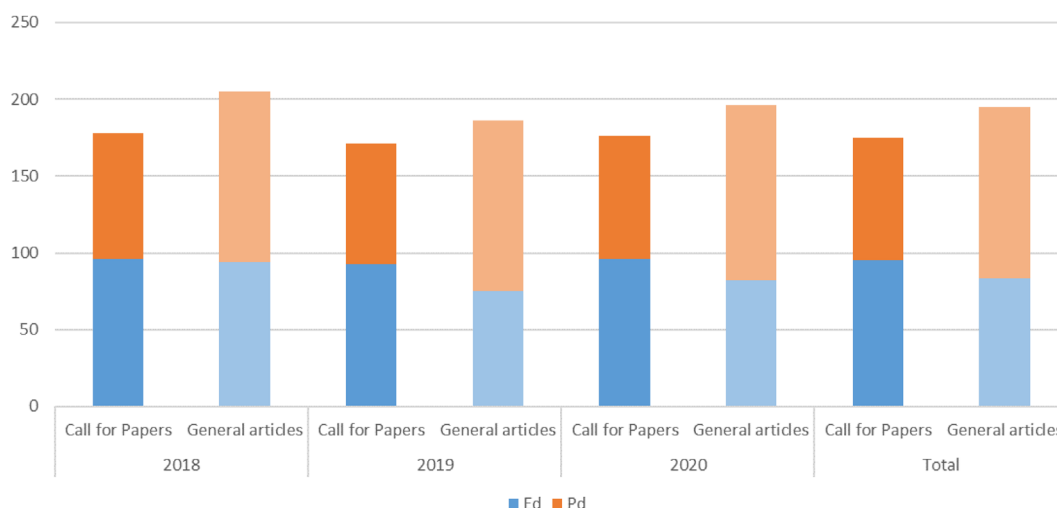

FIGURE 1 Median *Ed* and *Pd* by document type and year of publication.
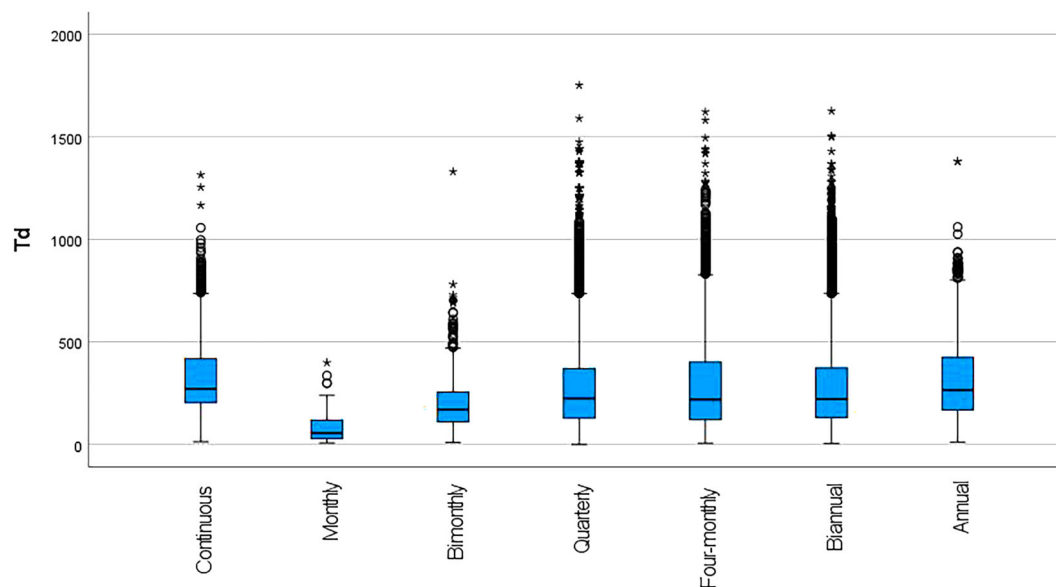
FIGURE 2 *Total days* of editorial process (*Td*) by journal periodicity.
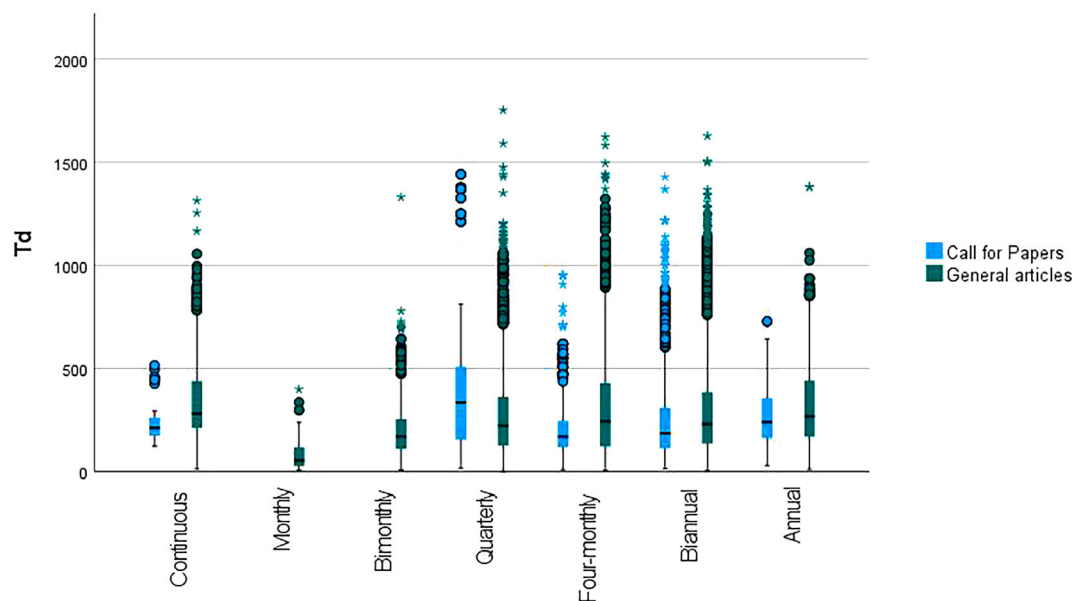

FIGURE 3 *Td* by periodicity for document type (*Call for Papers* and *General articles*).

No correlation is found between the median *Ed* and median *Pd* for the journals as a whole or by subject area. When *Ed* and *Pd* are examined in relationship with *Td* to determine which of the two processes has a greater weight in *Td*, higher coefficients of correlation with time of publication are obtained in the study as a whole (with significant correlations using Spearman's Rho), at both the article and the journal level.

The possibility that the amount of work involved could determine delays was explored. No relationship was found between the number of documents published by the journals and any of the three variables studied.

Distributions of the median *Td* (in weeks) found by the study and the data reported in the DOAJ were compared by the Wilcoxon test and found to be different. The values obtained in this study are usually higher than those included in the *Directory* (Fig. 6).

The relationship between the ICDS provided by MIAR—visibility of the journals—and *Td* does not seem clear (Fig. 7); similar results are obtained when ICDS is correlate with *Ed* or *Pd*. However, it seems clear that the higher visibility of a journal increases the variability in the time lapse that it takes to publish an article (*Td*).
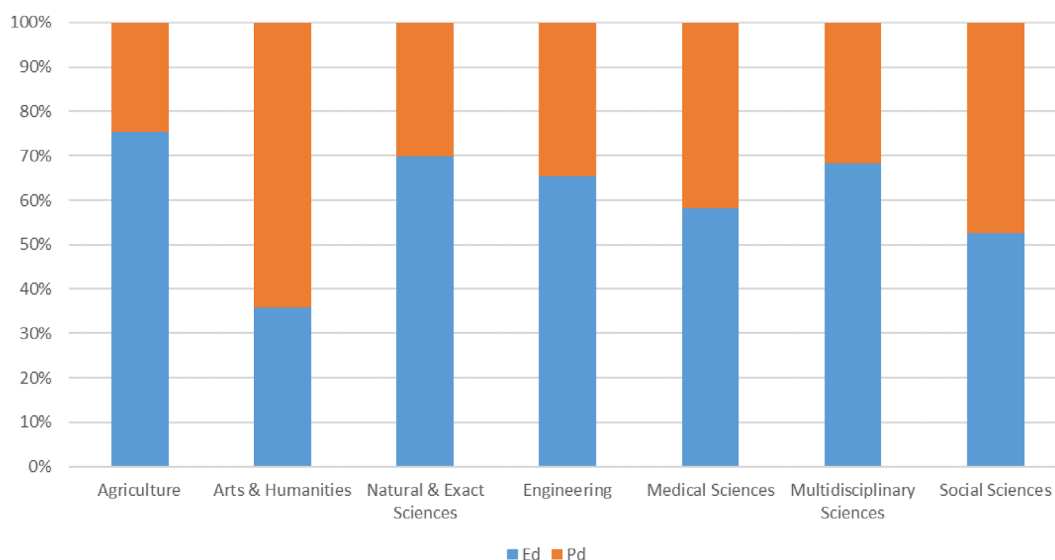
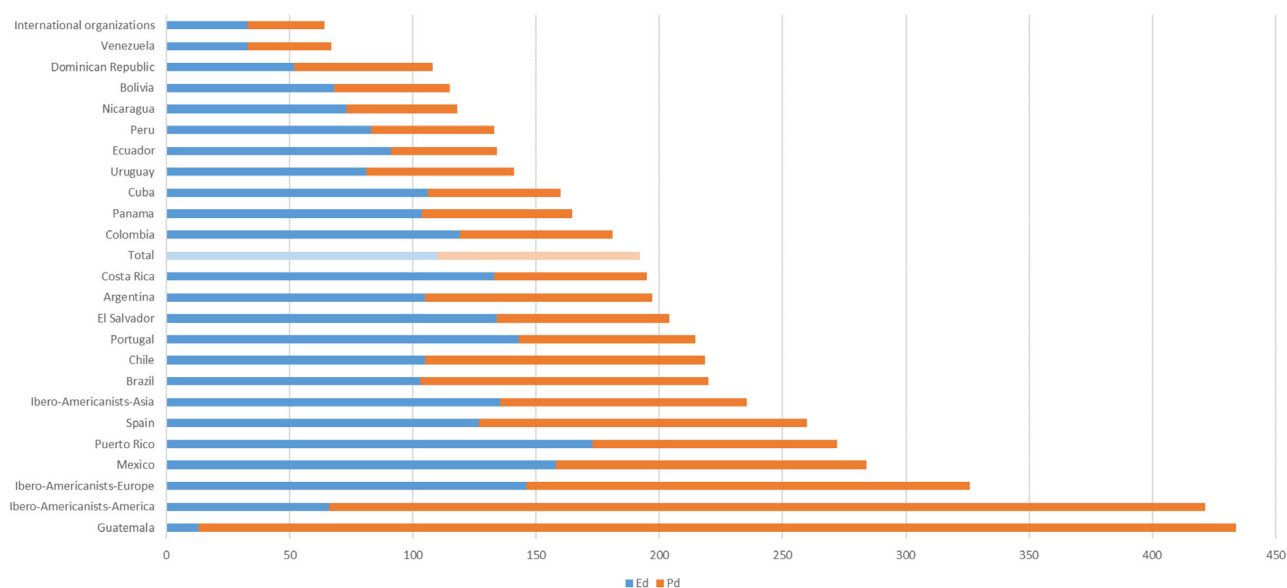**FIGURE 4** Median for *Ed* and *Pd* by subject area.

FIGURE 5 Median for *Ed* and *Pd* by country of publication.

DISCUSSION

One of the main characteristics of *Td* in scientific journals seems to be a non-normal distribution with multiple outliers, as this and other studies (Chen et al., 2013; Luwel et al., 2020) have found. The high number of outliers for *Ed* and *Pd* cannot be attributed to mistyped data, as data collection was done manually, a more accurate method for this type of statistics (Björk & Solomon, 2013), and multiples cases were randomly checked to ensure that they were entered correctly.

The enormous variability of *Ed* and *Pd* data on articles published between 2018 and 2020 in journals in the Latindex

Catalogue is not due to a single cause, but rather speaks to a wide range of reasons, from dubious cases in which an original manuscript is received, evaluated and published in the same day, to questionable cases in which the peer review process or the publication process takes more than 4 years.

Strikingly, many manuscripts from the same issue of a journal were accepted on the same date. Of the 326 publications surveyed, in 13 journals acceptance date data are not repeated, but in 92 journals (28% of the total) half or more of the articles bear the same acceptance date. This could be because this is the date of the editorial board/committee meeting in which all peer reviews are validated simultaneously. The coincidence could be a

TABLE 2 *Pd*, *Ed* and *Td* of journals with/without print publication.

		Evaluation days (*Ed*)			Publication days (*Pd*)			Total days (*Td*)		
		Median	Mean	Standard deviation	Median	Mean	Standard deviation	Median	Mean	Standard deviation
Print edition	No	108	146.9	136.8	66	118.9	146.3	208.5	265.8	212.3
	Yes	117	147.1	119.7	118	194.6	209.6	272	341.6	248.5
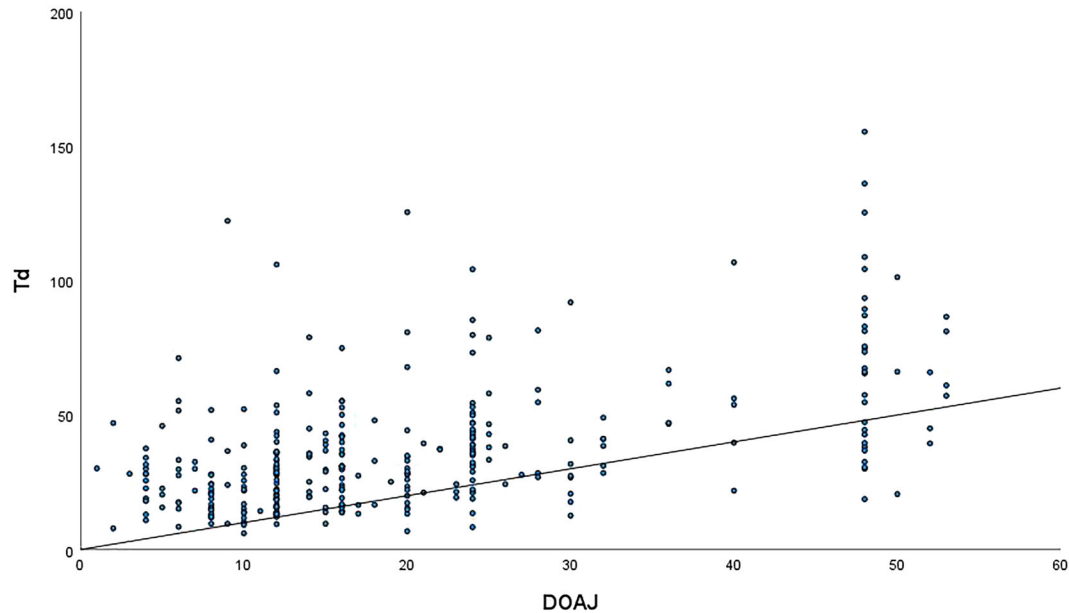
FIGURE 6 Correlation between *Td* (in weeks) and DOAJ's 'expect on average'.

matter of editorial policy/procedure if this were the case, and if all issues of the same journal had the same pattern, but this only occurs in seven journals out of the total. The cases where all the articles in an issue have the same date of receipt, acceptance and publication are more serious: 48 articles were found in which the date of submission and acceptance are the same; 197, where the date of acceptance is the publication date; and three, where the dates of submission, acceptance and publication are identical. These latter anomalies could be due to carelessness, if not sloppiness, in data reporting, blatant failures in peer review or, as suggested by Björk and Solomon (2013), a ploy to avoid providing the actual data and thus not exposing long lead times in publication, which is perhaps the most likely reason for omitting any kind of dates.

Delays do not have a clear trend. Most studies are local or are confined to a single discipline, and the values obtained vary widely. The data in the present study show that *Td* is slightly less than 7.5 months (median), in contrast to the multidisciplinary analysis by Björk and Solomon (2013), who found that *Td* was 12 months for their set, or the work by Amat (2008) about journals in the food area, whose delay amounted to almost a year (348 days). However, in contrast to Amat's data, our data show a longer delay for *Ed* than for *Pd* in general.

Likewise, our *Td* (110 days, mean 145) is lower than that found by Huisman and Smits (2017) if review times by journal and authors are added together (119 + 39 = 158 days on average), and it is also lower in the cases of comparable areas. These authors emphasize that the delay is attributable not only to peer review, but also to editorial management times between receiving the original version and sending it to the reviewers, and that long review processes are more highly valued by authors than short ones, although they value rapid review positively.

Other authors (Björk & Solomon, 2013; Dióspatonyi et al., 2001) have also found, as we have, that delays for *Pd* weigh heavily in *Td*. In this sense, it seems simpler and more feasible to reduce *Pd*, which can be systematized, in contrast to *Ed*, which involves multiple variables.

The existence of some long *Ed* periods for *Call for Papers* is striking, because *Call for Papers* usually have shorter *Ed* times than *General articles*. It could be deduced from this that reviews for thematic/special issues are more agile, as they are clearly treated differently in the editorial process (Björk & Solomon, 2013), but this difference does not seem to affect *Pd*, a more technical process, which is maintained as an independent variable, and which is similar for *Call for Papers* and *General articles*.
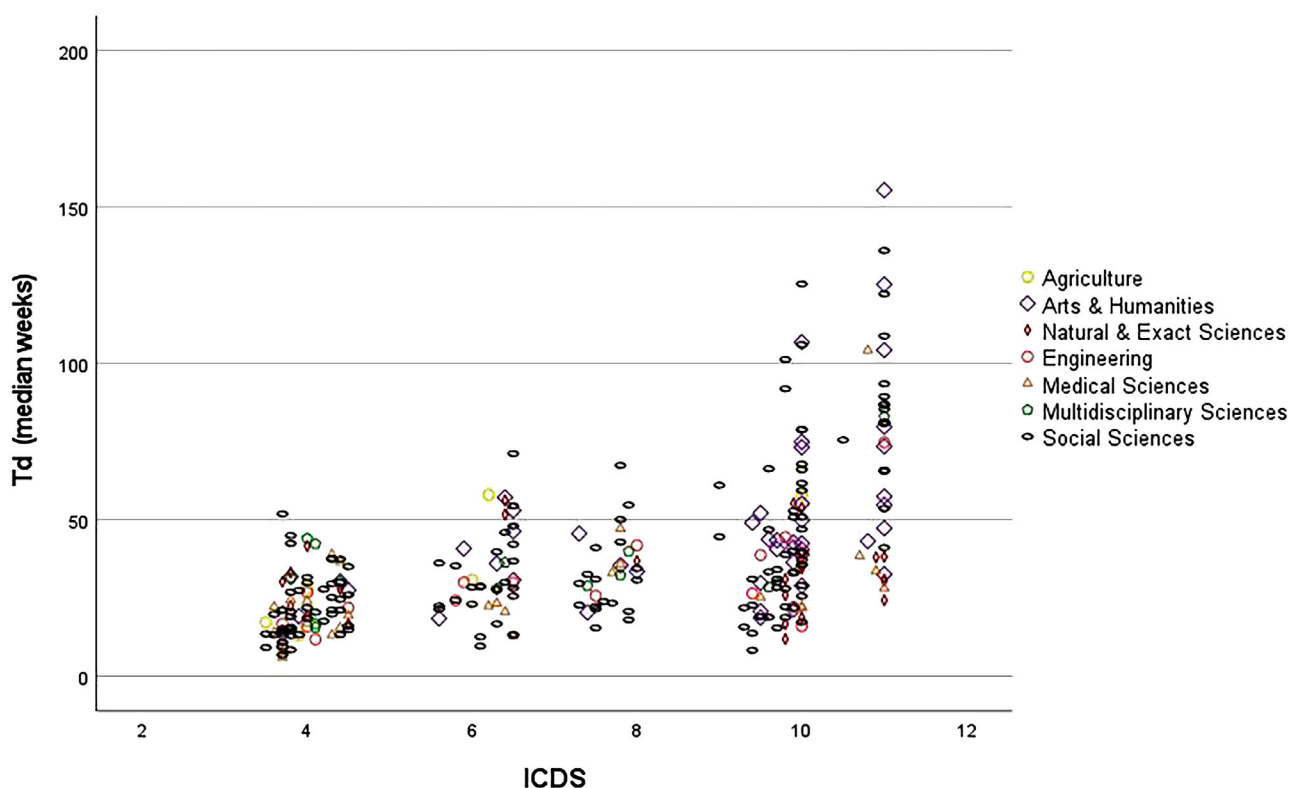
FIGURE 7 Correlation between *Total days* of editorial process (*Td*) versus MIAR's ICDS (visibility indicator).

STEM areas show the most homogeneous behaviour in the analysed population. Humanities, despite not relying on articles as the main means of disseminating its results (Stone, 1982), presents the best *Ed*, excluding Medical Sciences, but its *Pd* presents a greater lag than in the other disciplines, and this affects the area's *Td*.

The work by Aguado-López and Becerril-García (2021), covering a wider chronological range than ours and using Redalyc as a source, presents a limited positive correlation for *Ed* by country ($R^2 = 0.32$), showing a greater number of days in all the coinciding countries except Bolivia. This could indicate that this variable is decreasing over the years.

The same reduction in time is observed in the periodicity of journal publication, as there is a good correlation between the present study and the research by Aguado-López and Becerril-García, with the sole exception of monthly publications (only one journal in the present study), where the difference is large, a mean of 36 days in our study, compared to 319 in the study by Aguado-López and Becerril-García. So, it is evident that *Td* duration is conditioned by publication periodicity, a conclusion also reached by Miyahira Arakaki (2008).

Subject areas have their own differentiating features that also characterize the publishing process (Björk & Solomon, 2013), but they do not behave homogeneously, even within the same disciplines. Björk and Solomon (2013), Garg (2016) and Björk (2021) also found differences for *Pd* between subject areas, and also among journals within the same subject area or discipline (Huisman & Smits, 2017; Luwel et al., 2020; Mendes et al., 2021).

No dependence is found between the number of articles published and *Td*, *Pd* or *Ed*, something also noted by Luwel et al. (2020). This seems to indicate that the volume of documents published by journals is not a determining factor for delays, but also that the journals with the highest production are those that probably have the most human resources to tackle editorial tasks with agility.

The difference between our study's results and those published in the DOAJ suggests, first, the unreliability of the data submitted by editors and, second, the relative ease with which these data can be quantified and published, thus favouring the transparency of the editorial process, which is always positive for the scientific community.

Our results seem to indicate that there is no clear correlation between delay and journal visibility or impact. This topic has also been addressed on a subject-by-subject basis by other authors (Chen et al., 2013; Khosrowjerdi et al., 2011; Shah et al., 2016). Some studies have found positive correlations (Forti et al., 2021), but only weak ones linked to the availability of greater resources for identifying problems and addressing delays (Sebo et al., 2019), while other researchers (Alves-Silva et al., 2016; Pautasso & Schäfer, 2010) show precisely the opposite, concluding that well-positioned publications are hampered in their management by a huge flow of manuscripts. In fact, some authors indicate that

delay in the management process (i.e., delay between online publication and subsequent final print publication) is a means of attempting to inflate visibility indicators (Tort et al., 2012).

CONCLUSIONS

- There are differences for *evaluation days* (*Ed*) between **General articles** and **Call for Papers**, but there are none for *publication days* (*Pd*), thus indicating that **Call for Papers** revisions are faster.
- Continuous publications have the longest *Ed* periods and the second longest *Pd* periods.
- STEM areas present the most homogeneous publication patterns and have a higher *Ed* than *Pd*. However, Arts and Humanities present an opposite pattern, with a higher *Pd* than *Ed*, and in the case of Social Sciences the times are similar. Within each area, however, journals display unique behaviours.
- The maintenance of print publication increases *total days* (*Td* = *Ed* plus *Pd*) in comparison with journals that only publish digitally.
- The workload of a journal, as measured by the number of articles published, and its *Ed* or *Pd* times are not correlated.
- Data reported by editors in the DOAJ are in most cases much lower than those obtained in this study.
- Visibility indicators do not show a clear relationship with *Td*.

The visibility of a journal, its consideration among the scientific community, the quality of the editorial team, the likelihood of acceptance (Rousseau & Rousseau, 2012) and the commitment to shorten response times are factors that potential authors look for in journals. However, as Horbach (2020) and Kumar (2014) also point out, there needs to be a balance between delay and quality of review and publication.

LIMITATIONS

- This study analyses the publication delay of three consecutive years (2018–2020), so the diachronic analysis of variables is limited.
- The population analysed has a clear bias of provenance (Ibero-America) and type (non-commercial public sector journals), although this feature makes this study complementary to previous studies (Luwel et al., 2020).
- Some of the results could have been interpreted better if the total number of manuscripts received by journals and their rejection rate had been known, but the general impossibility of accessing these data in practically all the journals made such analysis unfeasible.
- Author/institution prestige and researcher country of origin were not considered as variables in the study, as, for example, Taşkın *et al.* (2022) do, although they could have enriched the analysis.

RECOMMENDATIONS FOR PUBLISHERS

- Speeding up the editorial and review process will help journals position themselves better. Claudio-González and Villarroya's (2017) surveys considered speed of editing and review the first and third most competitive advantages; Solomon and Björk's (2012) survey found it the third most important factor considered by authors for publishing in a journal; and Solomon's (2014) survey, conducted among megajournal authors, found it the second most important reason.
- Shortening *Td* (*total days* = *evaluation days* (*Ed*) plus *publication days* (*Pd*)). This is clearly one of the main objectives of a nimble editorial management, but not at the expense of rigorous recording of the exact dates of the duration of the *Ed* and *Pd* processes. Transparency must be promoted.
- Taking advantage of OJS (or those of other systems) options on this point, that is, implementing the manuscript management module, which not only records the exact dates of workflow milestones, but also facilitates the automatic, transparent generation of statistics and reports for editors, contributors and authors.
- Generating and publishing management statistics, where a journal's rejection rate can be consulted, for a fuller overall picture.
- Meeting announced evaluation and publication deadlines can (and should) be considered a criterion of quality, ethics and good editorial practice.
- Reducing response/review deadlines. This may increase rejection rates in invitations for review, but it would speed up *Ed*, because assignments could be passed on quickly to a new reviewer. Moreover, it is important to review only those original manuscripts that really have a chance of being published, which increases the *desk rejections* and the work of editors, but reduces the pressure on reviewers. In fact, it would be worthwhile to seriously analyse and discuss whether all research should be peer-reviewed, and whether the obligation to publish in order to evaluate authors is truly guaranteeing their research quality.
- Warning authors of the negative consequences for all involved of not meeting the deadlines for returning the corrections recommended by the reviewers. Although this could increase the authors' workload, it is desirable that reasonable deadlines are set, otherwise *Ed* could be greatly extended, and this would be disrespectful to other's work of editors and reviewers.
- Establishing a formalized structure for date of receipt, acceptance and publication, both online and in hard copy. The variety of forms has made automated processing impossible. Their unambiguous standardized inclusion in the source code (in the DC metadata, for example) could resolve this issue and facilitate more extensive, faster studies.
- Favouring professionalization and semi-exclusive dedication to editorial process management would not only shorten *Ed* and *Pd*, but also solve many other problems that plague academic journals.

AUTHOR CONTRIBUTIONS

Jon Zabala conceived the project, developed the methodology, collected the data and wrote and translated the article. Borja González-Albo collected and curated the data, performed the statistical analysis, created the figures and wrote the article. Teresa Abejón-Peña collected the data and wrote the article; the rest of the authors collected the data and contributed to the critical review of the article.

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DATA AVAILABILITY STATEMENT

The data underlying this article are available as follows.

1. Number of journals in the sample *n* that were analysed by subject area & country (González-Albo et al., 2022a)
2. Descriptive statistics of *Ed*, *Pd* and *Td* by document type and year (González-Albo et al., 2022a)
3. Descriptive statistics of *Ed*, *Pd* and *Td* by periodicity (González-Albo et al., 2022a)
4. Descriptive statistics of *Ed*, *Pd* and *Td* by subject area (González-Albo et al., 2022a)
5. Descriptive statistics of *Ed*, *Pd* and *Td* by country (González-Albo et al., 2022a)
6. Journal level disaggregated data (González-Albo et al., 2022c)
7. Document level disaggregated data (González-Albo et al., 2022b)

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