

Time-Looping in Scholarly Publishing: An Investigation of the FT50 Journals

Salim Moussa

(<https://orcid.org/0000-0003-2589-0719>)

Institut Supérieur des Études Appliquées en Humanités, Cité des Jeunes,
Gafsa 2133, Tunisia
salimmoussa@yahoo.fr

ABSTRACT

Background. In scholarly publishing, time-looping is the practice of assigning papers that were online-published at a specific point in time to post-dated journal volumes/issues.

Objectives. This study investigated to what extent time-looping was practiced by journals, and whether this practice was likely to have increased the journal citation metrics. The journals in Financial Times' list of top 50 business and economics journals (known as the FT50 list) were used as the sample.

Methods. All FT50 journals' websites were visited on the same date (February 15, 2022) to identify journals that practiced time-looping. The Journal Impact Factor (JIF) and CiteScore values of the journals over the last ten years (2011-2020) were analyzed.

Results. As of mid-February 2022 when the analysis was conducted, the practice of time-looping was identified for four FT50 journals, published by the same publisher. The time-loops ranged from 48 to 111 days (with an average of 79 days). Examining the JIF and the CiteScore values for these four journals over the last ten years, it was observed that the 2020 JIF values for these four journals saw a significant increase. The results of further analysis suggest that time-looping is a likely cause of this increase in JIF values. The paper discusses the implications of the practice of time-looping for journals, publishers, and the scholarly community as a whole.

INTRODUCTION

Time-looping in scholarly publishing is the practice of publishing an article today but immediately assigning it to a journal volume/issue post-dated some months later. An example is this article in the Journal of World Business (JWB):

<https://doi.org/10.1016/j.jwb.2022.101316>. According to the available metadata, the article was published online on 13 February 2022, yet immediately and officially published in the October 2022 issue (i.e., a time-loop of 230 days). At the time of writing of this paper (mid-February 2022), the issue in progress for JWB was the October 2022 issue—JWB's sixth

issue for its 57th volume¹. The online page of that issue stated: “This issue is in progress but contains articles that are final and fully citable.” This statement indicates that each article published in that issue had been assigned a digital object identifier (DOI), volume, issue, and page numbers.

Is this a new publishing practice? This practice is not new. Already in 2012, Krell (2012) wrote a two-page opinion piece raising the issue of time-looping in academic publishing, and noting that “all major publishers do it” (p. 153). He also wondered whether time-looping was a way to manipulate Clarivate’s Journal Impact Factor (JIF). Krell’s (2012) claim has been dismissed as “based on personal anecdote” and that it “should be considered as conjecture” (Davis, 2012). It is interesting to note that, though published a decade ago, the opinion piece by Krell (2012) has received no citation at all (according to a Scopus search performed on 15 February 2022).

This paper revisits the issue of time-looping in scholarly publishing, by examining a set of journals included in the well-known list of top 50 business and economics journals identified by The Financial Times (commonly known as the FT50 list) (Moussa, 2021; Rodenburg et al., 2022; Zhang, 2021). The questions (RQs) that this analysis sought to answer were:

- RQ1: How many (and proportion) of the “top” business and economics journals practice time-looping?
- RQ2: How long is the period (time difference) of these time-loops?
- RQ3: How much of a journal’s content could be published now and assigned to issues far in the future?
- RQ4: What is the impact of time-looping on journal-level citation-based metrics?

To the best of the author’s knowledge, no published study has systematically investigated the issue of time-looping in scholarly publishing.

LITERATURE REVIEW

Time-looping in Scholarly Publishing: What is it? What is it Not?

As mentioned earlier, Krell (2012) was the first to write about the practice of time-looping in scholarly publishing. Inspired by sci-fi movies, Krell depicted this practice as “academic publishers [using] their time machines to catapult their products back in time” (Krell, 2012, p.153). Time-looping is also referred to as publication post-dating. For Davis (2012), publication post-dating is the “practice of publishing a journal article and then post-dating its official release several months later”. Time-looping is here formally defined as the practice of assigning papers published at a certain point in time (noted T) to journal issues far in the future (i.e., post-dated T+n), final and fully citable (starting from T). The expression “final and fully citable” means that the articles have their DOIs as well as volume, issue, and page numbers. The practice of time-looping is depicted in Figure 1.

Time-looping differs from and should not be confused with online queuing (Martin, 2016; Wilhite, Fong, & Wilhite, 2019). Online queuing in scholarly publishing (also called publication delay) involves the posting of accepted manuscripts online and delaying their printed issue date (Tort, Torgino, & Amaral, 2012). These accepted papers in the online queue are commonly named “online first articles” (by Springer Nature), “early view” (by Wiley), or

¹ The fixed URL of the particular JWB issue is available at:
<https://web.archive.org/web/20220220102815/https://www.sciencedirect.com/journal/journal-of-world-business/vol/57/issue/6>.

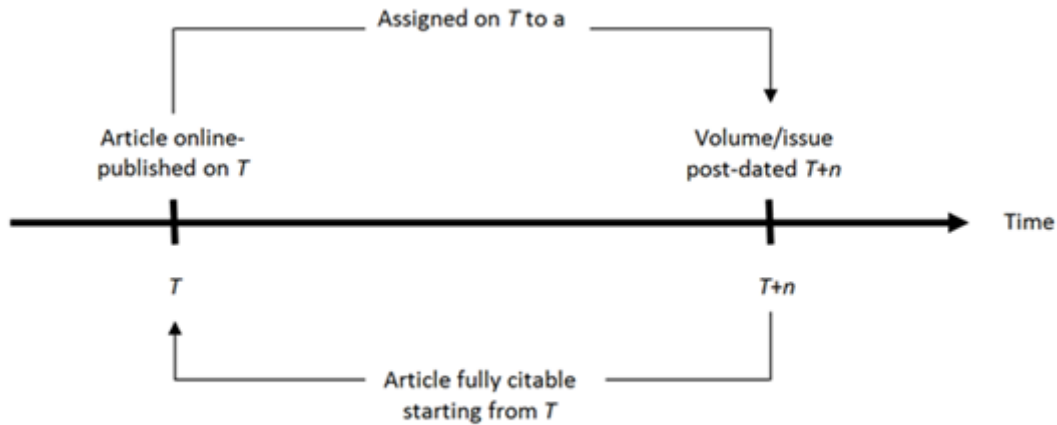


Figure 1. The practice of time-looping

“articles in press” (by Elsevier) (Teixeira da Silva, 2022). These in-press papers have DOIs but not volume and issue or pagination information. According to a recent study, an in-press paper might wait in the online queue for less than a month and up to 16 years before being finally assigned to a journal’s issue (Teixeira da Silva, 2022). While pending formal publication in the online queue, these in-press papers can collect some bonus citations that will be counted in the numerator of the JIF calculation without being included in the denominator (since these manuscripts are not citable items yet) (Tort et al., 2012). Then, as Martin (2016) explains:

The astute editor, when deciding which papers in the online-queue should be chosen to publish in the next issue, can “cherry pick” those accruing citations at a faster rate. Conversely, those online papers still earning few citations can be left in the online-queue where, because they do not count in the JIF denominator, they do not ‘dilute’ the JIF. (p. 4)

Cognizant of and to mitigate the positive effect of the online queue stratagem on the JIF, Clarivate has decided, in 2021, to use the date of a document’s online publication rather than the date of print publication for the calculation of the 2020 JIF values (Clarivate, 2021).

The Benefits of Time-Looping for Articles and Journals

Articles published in scholarly journals need time to be discovered, read, and eventually cited. By using time-looping, journals buy time for their articles (Krell, 2012). In this subsection, I argue that journals that use time-loops have not one but three advantages: an exposure advantage, a perceived recency advantage, and a citation advantage (an advantage that derives from the two first advantages).

Take the case of the JWB journal issue mentioned in the Introduction section. The JWB published its October 2022 issue in mid-February 2022. According to Scopus, 27 documents were published in JWB from January 2022 up to 15 February 2022. In the last three years (i.e., 2019-2021), JWB published annually between 43 and 69 documents. Stated more plainly, about half of the customary annual of documents published in JWB was already available in mid-February 2022. Let us take the case of another business journal, say the International Journal of Research in Marketing (IJRM). This journal was not practicing time-looping, at least in mid-February 2022. At the time of the writing of this paper, the latest issue

of IJRM was the December 2021 issue². This implies that JWB's 2022 articles are having an earlier and longer exposure period when compared to IJRM's articles. So, the first benefit of time-looping is an earlier and longer exposure period for each article.

The second benefit of time-looping is perceived recency. By stating a later publication date in an article, the JWB or any journal that uses time-loops keeps that article appearing recent, up-to-date, and brand new for longer (Krell, 2012). Articles that have an earlier and longer exposure period and look up-to-date for longer have, by consequence, more chances to be cited. Someone who is writing a manuscript in February 2022 might cite JWB's articles published in the October 2022 issue or any of JWB's five previous 2022 issues. That same person has only IJRM's articles appearing in the December 2021 issue or in the previous 2021 IJRM issues that are final and fully citable. The IJRM has, of course, an online queue of 61 "articles in press". However, these in-press papers have no volume and issue or pagination information. No one knows when and to which volume/issue each of these 61 in-press papers will be assigned. Hence, the third benefit is more potential citations for articles published in a journal that adopts time-loops.

Time, Time-Looping, and Journal-Level Citation-Based Metrics

Time-looping is a serious publishing issue. All journal-level citation metrics are based on a time window. Most known/used among these metrics are Clarivate's JIF and Scopus' CiteScore (Fang, 2021; Van Leeuwen & Wouters, 2017). The time window for Clarivate's JIF is a three-year window with one year citing (e.g., 2023) and two years cited (e.g., 2021 and 2022). The time window for Scopus' CiteScore is a four-year window. For example, the 2022CiteScore counts the citations received in 2019-2022 to documents (i.e., articles, reviews, conference papers, book chapters, and data papers) published in 2019-2022, and divides this by the number of these documents published in 2019-2022.

By practicing time-looping, a journal may (unintentionally or not) boost all of its metrics. For instance, let us imagine that JWB's articles published in the October 2022 issue, or in any of its five previous 2022 issues, and already available in February, were cited in 100 manuscripts written during the month of February. Let us imagine further that 20% of these citing manuscripts were accepted and published as articles in Clarivate/Scopus-indexed journals. Ten of these citing articles were published in late 2022. The other 10 appeared in 2023. The articles published in the available issues of JWB and cited in the 2022 citing articles can hence contribute to the 2022 CiteScore of JWB. Citations in the 2023 citing articles will be counted in the calculation of JWB's JIF for 2023. Journals that use time-loops have an advantage if the official publication dates are always several months ahead. These journals and the articles published in them are more likely to be cited in the same year or the year after.

In 2021, Clarivate decided to use the date of the online publication of a document and not the date of print publication (Clarivate, 2021). This decision may work well for neutralizing the positive effect of time-looping on the JIF when an article is online-published in one year (e.g., December 2021) but assigned to another print year (e.g., February 2022). It is, however, ineffective for countering any possible positive effect caused by time-looping when it is practiced during the same calendar year (e.g., articles online-published in February 2022 and assigned to the October 2022 issue).

² The fixed URL of that particular IJRM issue could be seen at:
<https://web.archive.org/web/20220221072039/https://www.sciencedirect.com/journal/international-journal-of-research-in-marketing>

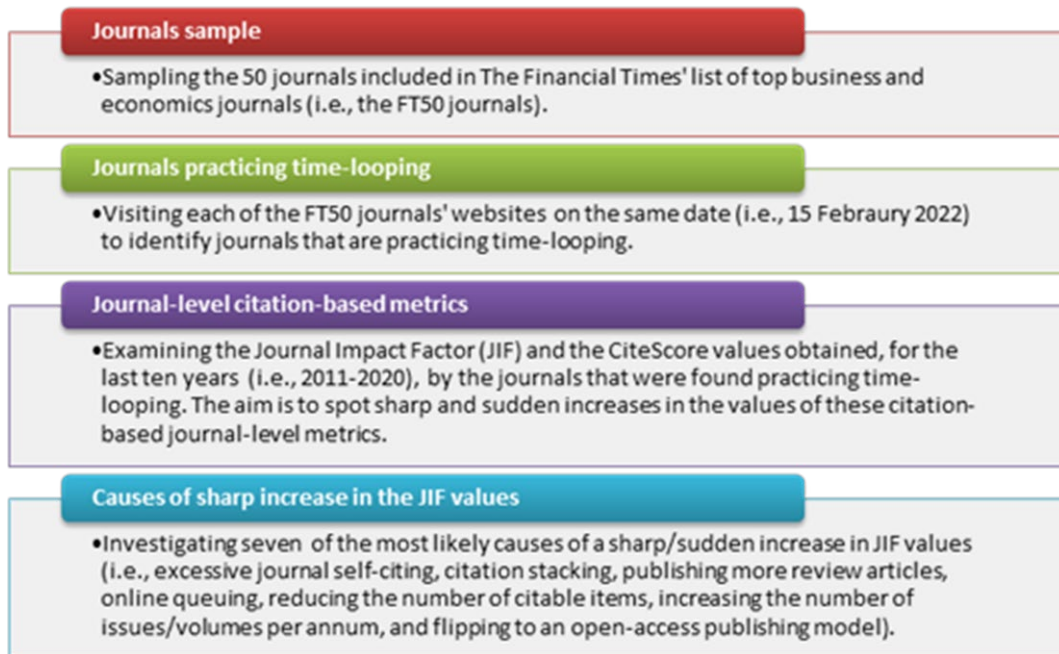


Figure 2. Adopted methodology

According to Elsevier, in-press papers are not included in Scopus' CiteScore calculation (Elsevier, 2021). The CiteScore hence favors journals that use time-looping and disfavors journals that do not practice it. The disfavored journals include journals that have online queues of in-press papers and those that have not.

METHOD

Figure 2 summarizes the method used in this analysis.

Sampled Journals

This study analyzed 50 journals included in The Financial Times list of top 50 business and economics journals (i.e., FT50). The Financial Times is a British daily newspaper that covers business and economic news. It was founded in 1888 in London and is now owned by Nikkei Inc., a Japanese for-profit media company. The Financial Times began providing annual rankings for MBA programs in business schools in 1999. The number of faculty-staff publications in a list of selected academic and practitioner business and economics journals is used to establish the MBA rank. The Financial Times list featured 40 publication venues in the early 2000s. In 2010, the list was reshuffled and increased to 45 journals. That list was reshuffled and expanded to include up to 50 journals in 2016. Rodenburg, Rowan, Nixon and Christensen Hughes (2022) provided a comprehensive historical account of the three versions of the FT journals list.

The FT50 list was selected for five reasons:

1. According to Krell (2012, p.153), "all major publishers" practice time-looping. Davis (2012) stated that publication post-dating "is not uncommon". The FT50 list was selected as it includes journals published by diverse entities representing the wide spectrum of the scholarly publishing landscape. The publishers of these 50 journals include research centres (e.g., Management Information Systems Research Center), research institutes (e.g., Institute for Operations Research and the Management Sciences [INFORMS]),

academic associations (e.g., Academy of Management), university-operated publishers (e.g., MIT Press), as well as big publishing houses (e.g., Elsevier, Sage, SpringerNature, Taylor & Francis, and Wiley).

2. Since its inception in the early 2000s, the FT journals list has sparked fierce competition among business and economics journals, as nearly every business and economics publication outlet wishes to be part of it. To be included or to secure their inclusion in the FT journals list, some journals have developed editorial strategies to boost their citation-based metrics to appear as impactful and leading journals (Moussa, 2021; Wilhite, Fong & Wilhite (2019). Since previous research by Moussa (2021); and Wilhite et al. (2019) indicated that some FT50 journals tampered with their JIF values, it is expected that some of these 50 journals will employ time-looping.
3. The FT50 journals list was chosen because it includes journals with overlapping scopes and that cover closely related disciplines (i.e., business and economics). This is important for meaningful comparisons across journals.
4. All FT50 journals are indexed in Clarivate's Social Sciences Citation Index and are JIF-carrying journals.
5. These 50 journals are also indexed in Elsevier's Scopus.

The last two reasons are of paramount importance because the selected journals have to be covered by these two bibliometric databases to investigate the eventual positive effect of time-looping on journal-level citation-based metrics.

Identifying Time-Looping FT50 Journals

To identify time-looping practice in journals, the author visited each of these 50 journals' online pages on the same date (i.e., 15 February 2022). After identifying the journals that practice time-looping, the author used Scopus to collect information on the number of published articles in these journals during the first month and a half of 2022. The author also collected data on the number of published articles in these journals for the 2018-2021 period. The aim was to gain insight into the proportion of articles published in the first month and a half of 2022 when compared to what has been published in the last four years.

Tracking Sharp Increases in Journal-Level Citation-Based Metrics Values

To examine the effect of the current (mid-February 2022) use of time-loops on journal-level citation-based metrics, one has to wait a year or two. The 2022 CiteScore will be available in May 2023. The 2023 JIF will be released in June/July 2024. It is also quite difficult to know exactly when these journals started using this particular publishing practice. A sharp and sudden increase in the values taken by these two citation metrics would, however, flag an anomaly that might be caused by the adoption of citation-boosting editorial strategies (time-looping included) (Wilhite, Fong & Wilhite, 2019). Based on this premise, citation metrics for journals using time-looping were collected for the last 10 years (i.e., 2011-2020). These metrics are the JIF and the CiteScore. The JIF values were collected from Clarivate's 2020 Journal Citation Reports release 2021 (accessed via an institutional subscription on 17 February 2022). The CiteScores were collected using Scopus.

Table 1. The four FT50 journals using time-looping

Journal name (acronym)	Publisher	In-progress volume/issue	Online publication date of the article first assigned to the in-progress volume/issue	Time-loop	Fixed URL of the in-progress volume/issue
<i>Journal of Business Venturing</i> (JBV)	Elsevier	May 2022 (third issue of Volume 37)	3 rd February 2022	87days	https://web.archive.org/web/20220220093721/https://www.sciencedirect.com/journal/journal-of-business-venturing/vol/37/issue/3
<i>Journal of Financial Economics</i> (JFE)	Elsevier	April 2022 (second issue of Volume 144)	20 January 2022	71 days	https://web.archive.org/web/20220220093459/https://www.sciencedirect.com/journal/journal-of-financial-economics/vol/144/issue/2
<i>Organizational Behavior and Human Decision Processes</i> (OB&HDP)	Elsevier	March 2022 (volume 169)	12 January 2022	48 days	https://web.archive.org/web/20220220094143/https://www.sciencedirect.com/journal/organizational-behavior-and-human-decision-processes/vol/169/suppl/C
<i>Research Policy</i> (RP)	Elsevier	June 2022 (fifth issue of volume 51)	10 February 2022	111 days	https://web.archive.org/web/20220215130351/https://www.sciencedirect.com/journal/research-policy/vol/51/issue/5

Note: Data collection took place on 15 February 2022. Fixed URLs are provided for corroborating the author's claims.

RESULTS

FT50 Journals Practicing Time-Looping

Based on data collected on 15 February 2022, the analysis found that only four of the FT50 journals were practicing time-looping (see Table 1). These journals are the Journal of Business Venturing (JBV), Journal of Financial Economics (JFE), Organizational Behavior and Human Decision Processes (OB&HDP), and Research Policy (RP). The time-loops for these journals ranged from 48 (for OB&HDP) to 111 days (for RP) (mean=79 days; median=79 days).

For example, the time-loop for RP was calculated as follows: at the time of analysis, the issue in progress for RP was the June 2022 issue. That issue in progress contained two articles. The first article assigned to that issue was online-published on 10 February 2022. Computing the number of days from 10 February to the first of June 2022 inclusive, the time-loop for RP was 111 days.

At the time of analysis, the volume in progress for OB&HDP was volume 169 or the March 2022 volume. The issue in progress for JFE was the April 2022 issue. It is JFE's second issue for 2022 (i.e., volume 144). The issue in progress for JBV was the May 2022 issue. It is the third issue of JBV's volume 37. The one in progress for RP was the June 2022 issue, which is the fifth issue of volume 51.

JBV, JFE, OB&HDP, and RP are Elsevier journals. Two other journals published by Elsevier and included in the FT50 list are Accounting, Organizations and Society (AOS) and the Journal of Accounting and Economics. These two journals were not using time-looping, at the date of the analysis.

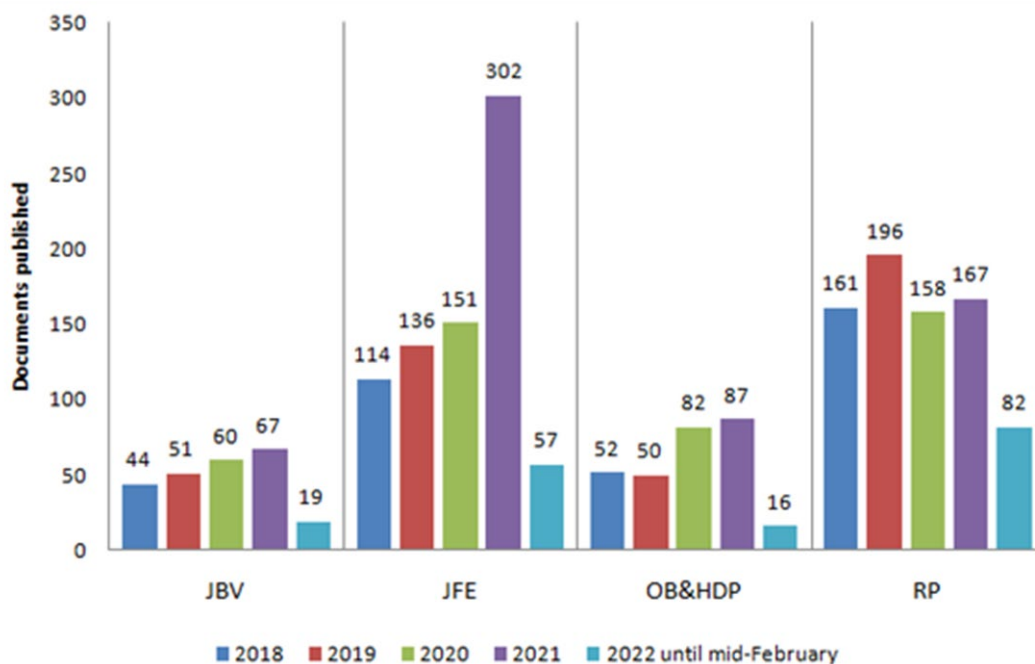


Figure 3. Number of published documents in the four FT50 journals practicing time-looping (2018-mid-February 2022)

Table 2. Journal Impact Factor and CiteScore values (for the 2011-2020 period) of four FT50 journals that were found using time-looping plus four control journals

Journal acronym	Metric	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
JBV*	JIF	3.06	2.98	3.27	3.68	4.20	5.77	6.00	6.33	7.59	12.07
	CiteScore	6.00	7.70	9.40	10.10	11.10	14.40	15.20	12.40	11.30	13.30
JFE*	JIF	3.73	3.42	3.77	4.05	3.54	4.51	5.16	4.69	5.73	6.99
	CiteScore	7.80	7.00	8.10	9.00	9.30	8.80	8.40	10.20	8.70	9.60
OB&HDP*	JIF	3.13	2.82	2.90	2.20	2.81	2.45	2.26	2.91	2.30	4.94
	CiteScore	4.90	5.40	4.50	5.10	5.10	5.40	5.80	5.40	5.40	4.60
RP*	JIF	2.52	2.85	2.60	3.15	3.47	4.50	4.66	5.43	5.35	8.11
	CiteScore	6.00	6.50	6.90	6.80	8.20	8.30	10.00	8.90	10.40	11.40
AOS	JIF	2.88	1.87	2.11	1.67	2.46	2.16	2.08	3.15	3.96	4.00
	CiteScore	7.30	8.30	6.50	5.10	5.30	5.20	4.80	5.10	5.80	6.60
JCP	JIF	†	†	1.71	2.24	2.01	3.39	2.81	2.47	2.96	3.33
	CiteScore	4.20	4.20	4.50	4.50	5.80	5.20	6.20	5.30	5.10	5.80
MISQ	JIF	4.45	4.66	5.41	5.31	5.38	7.27	5.43	4.37	5.36	7.20
	CiteScore	10.20	13.20	18.60	21.80	19.70	21.60	16.20	15.60	11.00	14.70
ETP	JIF	2.54	2.24	2.60	3.14	3.41	4.92	5.32	6.19	10.75	10.08
	CiteScore	6.00	6.50	6.90	7.70	8.90	9.50	11.60	14.70	13.40	17.70

Notes:

† Suppressed

* denotes FT50 journals that were found using time-looping. A red cell denotes the highest JIF value ever obtained. A yellow cell denotes the highest CiteScore ever obtained. AOS= *Accounting, Organizations and Society*; ETP= *Entrepreneurship Theory and Practice*; JBV= *Journal of Business Venturing*; JCP= *Journal of Consumer Psychology*; JFE= *Journal of Financial Economics*; MISQ= *MIS Quarterly*; OB&HDP= *Organizational Behavior and Human Decision Processes*; RP= *Research Policy*.

Quantity of Already Published Documents

Using data from Scopus, Figure 3 illustrates the number of published documents in these four journals for the 2018-2021 period, plus the number of documents published during 2022 up to mid-February 2022. For instance, RP (the journal with the longest time-loop) had already published in the first month and a half of 2022 about 50% (more precisely 49.10%) of what was published during the entirety of 2021. Assuming that RP will publish in 2022 nearly 170 papers (the average number of articles published in RP in the last four years), almost half of what is to be published in RP is already available to readers and citers in mid-February 2022.

Citation-Based Metrics of the Journals Practicing Time-Looping

For the four journals that were found using time-looping, Table 2 presents the JIF and CiteScore values for the last 10 years. Table 2 indicates that the JIF scores for 2020 were the highest ever for the four journals. JFE never had a JIF score higher than the one for 2020. The same applies to JBV, OB&HDP, and RP. When compared to those for 2019, the increase in

the JIF scores for 2020 for the four journals is quite astonishing. For instance, OB&HDP's JIF for 2020 is 4.941, which is more than twice the 2019 JIF value. The JIF score for JBV leapt from 7.590 in 2019 to 12.065 in 2020 (an increase of 59%). For RP, the increase in the JIF between 2019 and 2020 is 52%. As for the JFE, it saw a JIF increase of 22%.

When compared to those for 2019, the CiteScore values for three of the four journals increased in 2020. For JBV, the increase was two points (from 11.30 to 13.30). For RP, the CiteScore value increased from 10.40 to 11.40. For JFE, its CiteScore increased from 8.70 for 2019 to 9.60 for 2020. As for OB&HDP, that journal's 2020 CiteScore value is lower than the one for 2019.

For JBV and RP, it is interesting that the highest values of the two citation-based metrics were obtained in 2020. Recall that RP and JBV are the two journals with the longest time-loops (see Table 1).

For the sake of comparison, Table 2 also includes JIF and CiteScore values for the last ten years for four FT50 journals (published by various publishers) that were not found practicing time-looping (i.e., a control group of journals):

1. The first journal is AOS³. AOS was selected because it is an FT50 journal also published by Elsevier. Though the 2020 JIF score for AOS is the highest among those for the last ten years, the increase in the JIF value between 2019 and 2020 is relatively small: from 3.958 in 2019 to 4.000 in 2020. The highest CiteScore value for AOS was recorded in 2012 and not in 2020.
2. The second FT50 journal that was not found practicing time-looping and thus included as a control journal is the Journal of Consumer Psychology (JCP)⁴. The JCP was selected as a second control journal because: (1) JCP was an Elsevier journal up to December 2017 and is since 2018 a Wiley title; and (2) A decade ago, Clarivate found that JCP was manipulating its JIF values (using excessive self-citations) and suppressed it from the 2011 and 2012 versions of its Journal Citation Reports. Interestingly, and as shown in Table 2, JCP received its highest JIF (CiteScore) value ever in 2016 (2017) while it was an Elsevier journal.
3. The third control journal is MIS Quarterly. This journal is published by the Management Information Systems Research Center at the University of Minnesota. MIS Quarterly was chosen as a control journal because it was published by a university-led, non-profit publisher. As shown in Table 2, MIS Quarterly received its highest JIF (CiteScore) value ever in 2016 (2014).
4. The fourth and final control journal is Entrepreneurship Theory and Practice. This journal was published by Sage Publishing—a for-profit competitor of Elsevier. As Table 2 indicates, this journal received its highest JIF (CiteScore) value to date in 2019 (2020).

To sum up, the first control journal's 2020 JIF increased marginally when compared to the 2019 JIF. The last three control journals had their highest JIF values not in 2020, but in the years preceding 2020.

³ The fixed URL of the latest issue of AOS is available at:
<https://web.archive.org/web/20220220201239/https://www.sciencedirect.com/journal/accounting-organizations-and-society/vol/96/suppl/C>

⁴ The fixed URL of the latest issue of JCP is available at:
<https://web.archive.org/web/20220307172608/https://myscp.onlinelibrary.wiley.com/journal/15327663>

Limiting the Number of Possible Causes of the Sharp Increase in the 2020 JIF Values

Table 2 shows that the four journals that were found using time-looping have seen a substantial increase in their JIF scores for 2020. This section addresses the question: Which editorial strategy is the most likely cause of the sharp increase in the JIF values for these journals? To answer the question, the author employs the process of elimination.

For Clarivate, two types of citation-boosting editorial stratagems warrant denial of the JIF score: excessive journal self-citation and citation stacking (Moussa, 2022). Excessive journal self-citation means that a journal has an unusually high percentage of self-citations, as compared to non-self-citations, within the JIF window (i.e., a one-year citing and a two-year cited period). Citation stacking happens when two or more journals team up (or form a citation ring) to increase their JIFs by disproportionately and mutually citing each other. Since Clarivate has assigned JIF values for these four journals for 2020, excessive journal self-citation and citation stacking are not the causes of the sharp increase in these journals' JIF scores.

Publishing more review articles is another editorial strategy that can boost JIF scores of business and economics journals (Moussa, 2021). According to Clarivate's Journal Citation Reports, RP has not published review articles during the 2018-2019 period. The JFE has published only one review article in the 2018-2019 period. That JFE's review paper collected seven citations that contributed to the 2020 JIF score exactly by 0.028. OB&HDP published two review articles during the 2018-2019 period. According to Clarivate, these two review papers gathered 25 citations contributing to the 2020 JIF score by 0.245. The JBV published three review articles in the same period. According to Clarivate, JBV's three review articles received 56 citations and contributed exactly by 0.609 to the 2020 JIF score. So, according to data from Clarivate's Journal Citation Reports, review articles and citations to them are not the cause of the sharp increases in the 2020 JIF scores of these four journals.

Journals can boost their JIF values by wittingly publishing fewer articles and thus reducing the number of citable items that count toward the JIF denominator (Falagas & Alexiou, 2008, p. 224; Zhang, 2021, pp. 866-867). This strategy was easily ruled out as the cause of these sharp increases after examining data from Clarivate's Journal Citation Reports, as the number of citable items has increased rather than decreased for all four journals. For example, the number of OB&HDP's citable items increased from 92 (for the 2019 JIF) to 102 (for the 2020 JIF). As for JBV, the number of citable items went from 83 (for the 2019 JIF) to 92 (for the 2020 JIF).

Because these four time-looping journals have not increased the number of issues/volumes per year, an increase in the number of issues/volumes per annum is unlikely to be the cause of this sudden increase in JIF values. For example, from 2017 to 2020, RP published ten issues per volume/annum. Each year between 2017 and 2020, the JFE published four volumes (with three issues per volume).

For the calculation of the 2020 JIF, Clarivate (2021) has finally decided, and for the first time, to use the online publication date rather than the print publication date. That decision was made to counteract the online queue JIF-boosting stratagem. So, the online queuing editorial strategy is not the likely cause of this sharp increase.

Flipping from a subscription-based to an open-access journal might also cause a sharp increase in citation counts and hence a sudden increase in the JIF value (Bautista-Puig, Lopez-Illescas, de Moya-Anegón, Guerrero-Bote, & Moed, 2020). These four journals, according to their online pages, are still fee-walled journals.

To sum up, the reason behind the sharp increase of the 2020 JIF scores for JBV, JFE, OB&HDP, and RP is not excessive journal self-citing, citation stacking, publishing more review articles, online queuing, reducing the number of citable items, increasing the number of issues/volumes per annum, or flipping to an open-access publishing model. Which JIF-boosting editorial strategy was adopted in 2019 by these four journals? Could it be time-looping?

DISCUSSION & CONCLUSION

This study has found that four FT50 journals were using time-looping: JBV, JFE, OB&HDP, and RP. Among these four journals, RP is the journal with the longest time-loop, 111 days (or 3.7 months). At the time of the analysis (i.e., mid-February 2022), the issue in progress for RP was the June 2022 issue, which is the fifth issue of RP's 51st volume. A time-loop of 3.7 months is not a short period. It is nearly a third of a year. It was also found that RP has published already in mid-February about half of its customary annual number of documents. Hence, and by applying time-looping, RP is buying half of its 2022 articles nearly a third of a year of exposure, perceived recency, and citation advantages.

The JBV, JFE, OB&HDP, and RP are Elsevier journals. No FT50 journal published by INFORMS, SpringerNature, Wiley or any other publisher was found using time-looping, at least at the date of the analysis. According to data from SciLit (updated on 21 February 2022)⁵, Elsevier is the second biggest publisher in terms of published journals (with 2,674 journals). Springer Nature is the first publisher in terms of owned journals (with 2,694 titles). According to SciLit's data, Elsevier is, however, the leading publisher in terms of the number of published articles since the beginning of 2022 and up to 21 February 2022, with 96,785 published articles. SpringerNature has published, since the beginning of 2022 and up to that date, 65,943 papers. Is Elsevier using time-looping systematically for all of its journals? The answer is a no. The findings reported in this paper indicate that two other Elsevier journals included in the FT50 list were not practicing time-looping.

Journals that practice time-looping have exposure, recency, and citation advantages over other journals that do not use such a publishing practice. Journals that use time-loops have also a fourth advantage: the advantage of attracting more submissions. According to recent statistics from SciRev (<https://scirev.org/statistics/total-duration/>), the total review time of accepted papers in business and economics is 25 weeks. After a frustrating long peer-reviewing cycle and two or more revision rounds, authors would like to see their accepted papers published and assigned a volume/issue number as soon as possible. They do not want to see their papers left perpetually in-press, in a limbo state, without volume/issue numbers (Teixeira da Silva, 2022). Time-looping journals assign accepted papers to journal issues far in the future the same day the papers are published online. From an author's perspective, journals that use time-loops are better than journals that have long online queues of in-press papers that may stretch back to several months or years. By strategically using time-looping, a journal may hence attract more submissions.

Time-looping is a publishing practice of questionable ethicality. These four journals (and their publisher) are stating false publication dates. If someone has a subscription to Fortune, Fast Company or any other popular business magazine, what would that person feel if he/she receives the June issue in February? That person would be outraged—and rightly so.

⁵ A fixed URL of the SciLit rankings page is made available at:
<https://web.archive.org/web/20220221075026/https://www.scilit.net/rankings>

As Krell (2012) rightly said, “the publication date should be the date of the actual publication, not a clerical tool that can be used at will to influence citation metrics” (p.153). When used purposely, time-looping can distort any journal-level citation-based metric, and especially Clarivate’s JIF (because of its shorter time window). Krell (2012) highlighted that time-looping was essentially practiced at the end of the calendar year. The findings reported in this paper show that time-looping may be applied throughout the year.

Although criticized for several reasons, the JIF and the CiteScore are still the most widely used citation-based metrics for evaluating journals (Krell, 2000; Teixeira da Silva, 2017; Teixeira da Silva & Menon, 2017). The overuse/misuse of the JIF and the CiteScore in journal evaluation has led to some questionable editorial practices commonly known as “citation metrics games” (Baccini, De Nicolao & Petrovich, 2019; Biagioli & Lippman, 2020). Whether it is the editor-in-chief or the publisher, boosting a journal’s citation-based metrics using citation gaming is unethical, unfair of the journal evaluation, and is unlikely to improve either the quality of the journal or the papers published in it. A decade and a half ago, Falagas and Alexiou (2008) provided a list of the 10 most effective citation-boosting stratagems. Since then, new citation-boosting tactics have been devised (Martin, 2016; Wilhite, Fong & Wilhite, 2019). Time-looping is perhaps the latest and the most “ingenious” stratagem. One of the aims of this paper has been to identify the top-tier business and economics journals and the publishers that are currently using it. The findings indicate that only four of the FT50 journals were practicing time-looping. Is time-looping more adopted by second-tier business and economics journals trying desperately to move themselves into the first tier? That question could be the subject of a future investigation. For example, the JWB mentioned in the introduction section is a second-tier business journal that was found to have a time-loop of 230 days (or 7.67 months).

Future studies of time-looping may also investigate journals in fields other than business and economics. For instance, in his paper Krell (2012, p.153) mentioned by title some biology and ecology journals that were then using time-looping.

Clarivate’s JIF and Scopus’ CiteScore appear to benefit journals that use time-loops. Future researchers should critically examine the rankings provided by Clarivate and Scopus, taking into account the effect of the use of time-loops.

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