

## NOTE

# A note on performance indicators for agricultural economic journals

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## Abstract

We investigate various performance indicators of ten leading journals in the field of Agricultural Economics and Policy over the period from 2000 to 2020. More specifically, we combine various data sources to derive a coherent record of indicators including acceptance rates, times between submission and first response and impact factors. We show that, for the discipline at large, the turn-around times have decreased, and impact factors have increased substantially over time. However, this has been accompanied by a sharp decrease in the proportion of accepted articles. Our analysis also reveals large differences across journals in all dimensions. Results show there is no free lunch, that is, authors face trade-offs. For example, submitting to a higher impact factor journal means on average longer turn-around time and lower acceptance rates. The dataset compiled and presented here gives the first coherent overview of relevant information to guide authors' submission decisions, and inform our fellow professionals.

## KEYWORDS

agricultural economics, journal performance, journal rankings

## JEL CLASSIFICATION

A11; H89; I23; Q00

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## 1 | INTRODUCTION

The quality of journals in the field of Agricultural Economics and Policy has been assessed in different studies (e.g., Herrmann et al., 2011; Rigby et al., 2015). The indicators used are often based on bibliometric information such as the ‘Impact Factor’, or on subjective reputation rankings (Herrmann et al., 2011). In addition, Halkos and Tzeremes (2012) use a data envelopment analysis fed by bibliometric information to generate a ranking for agricultural, environmental and resource economics.<sup>1</sup> However, there are relevant factors beyond bibliometric indicators. Rigby et al. (2015) found in a survey among agricultural and applied economists that metrics like the ‘Impact Factor’ may not correspond with the expected career impact of publishing in specific journals. Moreover, authors’ journal choice is also driven by a variety of other criteria such as refereeing speed, likelihood of acceptance, turn-around time, and prestige (Mabe & Mulligan, 2011; Salinas & Munch, 2015). As Durmuşoğlu and Durmuşoğlu (2021) formulate it: ‘Authors are assumed to select the journals by considering their future expectations regarding the maximization of prospective impact of the study, increasing the probability of acceptance and minimizing the total time consumed until the paper is published.’

For journals in the field of Agricultural Economics and Policy, we lack a broad overview on such metrics and information to support authors’ publication choices. Indeed, the underlying data are often not easily accessible and comparable. Moreover, existing comparisons of journals in the field of Agricultural Economics and Policy have taken a cross-sectional perspective, that is, did not consider developments over time.

We fill these gaps by analysing various performance indicators of agricultural economics journals over the last 20 years. We investigate the number of submissions, acceptance rates, times between submission and first response and impact factors for 10 leading journals in the field of Agricultural Economics and Policy over a period from 2000 to 2020. To create the dataset used in this paper, we screened hundreds of editor reports, interacted with all journals to validate extracted data and fill data gaps, and harmonise the information. We test for differences in indicators and their development over time and explore interdependencies between different indicators. Our analysis aims to provide transparent information to authors and editors in the field, guiding both groups to better decisions. We also identify conclusions for journals editors and associations in our field.

## 2 | METHODS

To select the 10 journals in the field of Agricultural Economics and Policy to be considered, we combined six different rankings (e.g., based on survey-based rankings, impact factors and other metrics) in a Borda-ranking-like approach, that is, by creating mean ranks (see Droste et al., 2021). We select the 10 highest ranked journals (Table 1). A detailed description of this approach is documented in Appendix S1, online. The rankings used to select journals favour long-term established journals, so that newer top journals in the field, such as the *Annual Review of Resource Economics*, are not considered. However, this is consistent with our goal to capture developments over time.

Our data collection and preparation consisted of three steps. Note that all information collected, the final dataset but also a documentation of all adjustments is available as supplementary material online. First, we collected all information available on journal websites and in editorial reports, aiming to cover the period 2000–2020. All editor reports are available in the

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<sup>1</sup>Such indicators serve as proxy for quality and relevance of publications, and thus also researchers and institutions (e.g., Kalaitzidakis et al., 2003). Rankings of this type do not substitute for an in-depth quality assessment of publications and journals and their use requires critical reflection (see e.g., Laband, 2013).

**TABLE 1** Journal ranking based on six different rankings (e.g., based on survey-based rankings, impact factors and other metrics), see Appendix S1, online, for details

Rank	Journal name	Abbreviation
1	American Journal of Agricultural Economics	AJAE
2	Food Policy	FP
3	Journal of Agricultural Economics	JAE
4	Agricultural Economics	AE
5	European Review of Agricultural Economics	ERAE
6	Australian Journal of Agricultural and Resource Economics	AJARE
7	Journal of Agricultural and Resource Economics	JARE
8	Applied Economic Perspectives and Policy	AEPP
9	Canadian Journal of Agricultural Economics	CJAE
10	Agribusiness	AB

Online Appendix. We created a file with a wide range of metrics including number of submissions, acceptance and rejection rates, time between submission and first response. We also added information on the Impact Factor in each year from the *Journal Citation Reports*. Initially, our data were incomplete—there were multiple gaps in terms of years and/or specific variables not covered. Second, we contacted the journals in October 2020, sending a background on our project and the existing stock of information for each specific journal. We asked for verification of the information and for updates on missing information. We also sent reminders. Most journals returned information and/or additional editorial reports. A few journals were not able to report and/or validate details or to provide data spanning the whole period of interest (e.g., *Canadian Journal of Agricultural Economics*, *Food Policy*), Agribusiness neither had any data online nor responded to emails. All communication with journals is available upon request. Based on the information provided, we expanded and/or corrected the entries in the database. Third, we revisited all variables used in subsequent analysis and (i) transformed numbers to make them comparable (e.g., for acceptance rates), and (ii) documented an extensive log-file for our data summarising all pitfalls and limitations of individual data points and series (see the Data description in the Online Appendix for details). The database is freely accessible.<sup>2</sup> This allows other researchers to extend and use the data for further analysis.

Based on our final dataset, we conduct a wider range of analysis. We provide descriptive plots on developments over time and comparisons across journals. We also provide correlations across different metrics. Finally, we also conduct a data envelopment analysis (DEA) to aggregate the first response time, impact factor and acceptance rate in one holistic score.

### 3 | RESULTS

We here present only selected results; further results can be found in the Online Appendix. Figure 1 shows the development of the share of accepted articles. We find that acceptance rates reduced over time for all journals. For example, acceptance rates at the *American Journal of Agricultural Economics* dropped from about 25% in the early 2000s to 11% in 2019. However, differences across journals are substantial (Figure 1, panel b). Note that it is not necessarily the journals that are most ‘prestigious’ (see e.g., Herrmann et al., 2011) that

<sup>2</sup>See Online Appendix for further details. Data is accessible at: <https://www.research-collection.ethz.ch/handle/20.500.11850/518441>.

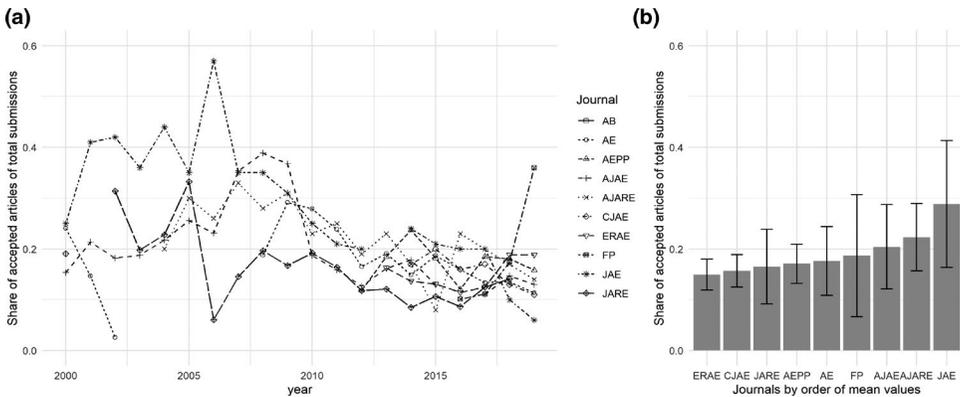


FIGURE 1 Share of accepted articles (a) over time, and (b) variance, by journal. *Source:* own elaboration

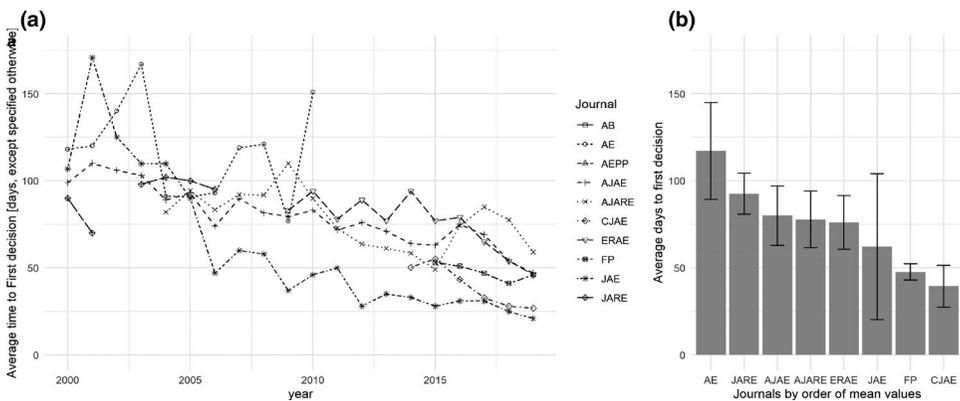


FIGURE 2 Time to first decision (a) over time, and (b) variance, by journal. *Source:* own elaboration

have the lowest acceptance rates.<sup>3</sup> Reduced acceptance rates also may be partly the result of substantially increased submissions over time. For example, *Agricultural Economics* had 49 manuscripts with decisions in 2000, which increased to 812 in 2019 (see Appendix S2, online, for details).<sup>4</sup>

Figure 2 shows that time spans from submission to first decision (including desk rejections) decreased over time in all journals. For example, while the average time from submission to first decision at the *Journal of Agricultural Economics* was 170 days in 2001, this decreased to 21 days in 2019. Despite this trend, there remain substantial differences across journals. However, the range across journals decreased substantially. Differences in turn-around time across journals may reflect differences in the efficiency of editorial handling procedures but also may be due to different shares of desk rejections. Regarding the latter, however, we lack sufficient information for inference across journals and years. The decrease in turn-around times over the last 20 years almost certainly reflects the increased use and efficiency of electronic submission systems.

<sup>3</sup>This may indicate self-selection of submitting authors, that is, that less promising papers are not sent to 'prestigious' journals.

<sup>4</sup>The effects of the Covid-19 pandemic on acceptance rates, turn-around times and reviewer responses during the first half of 2020 are examined in Biondi et al. (2021).

Figure 3 shows that journal impact factors increased for the considered journals at large, but not for all at the same magnitude. More specifically, FP, AEPP and AJAE realised substantial increases in impact factors, whereas others remained at rather low levels.

Next, we explore how these indicators relate to each other. Figure S3, online (see also Figure 4), shows correlation patterns that reveal clear trade-offs between journals in terms of different variables. For example, a high share of accepted articles comes with longer times to first response, a high impact factor is associated with a lower share of accepted articles (correlation:  $-0.34$ ) but also a longer time to decision ( $-0.53$ ). Thus, there are no clear-cut sweet spots for authors because quicker decisions may well mean less chance of success.

Correlating the ranking used to select journals, that is, based on six different rankings (see above), with indicators (turn-around, impact factor, acceptance rate), we find weaker correlations (Figure 4). The ranking correlates negatively and significantly with impact factor ( $-0.36$ ) and accepted article shares ( $-0.23$ ), but not significantly with time to decision. Again, there is no sweet spot because climbing the ranks comes with lower impact factor and fewer accepted

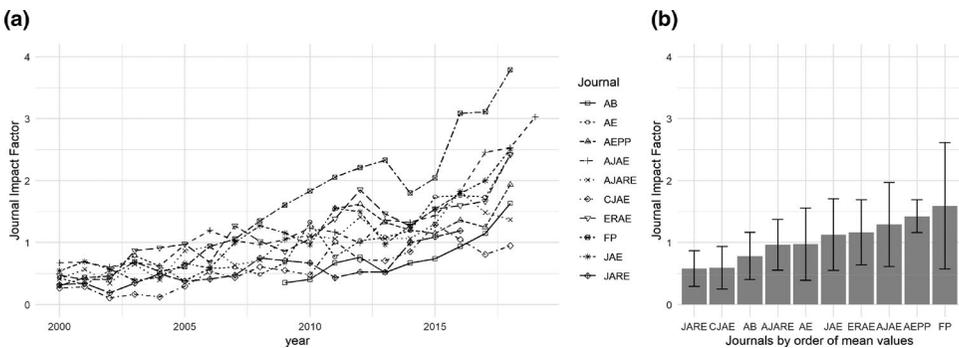


FIGURE 3 Impact factor (a) over time, and (b) variance, by journal. Source: own elaboration

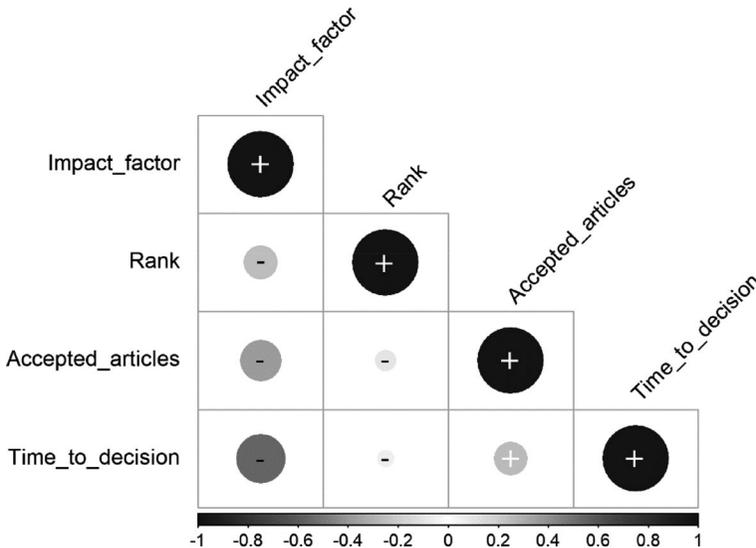


FIGURE 4 Correlation between different indicators, where the direction is colour coded, and the absolute size of the coefficients corresponds to circle size. Source: own elaboration

articles as well as no clear gain in waiting times. Additionally, if one aims for a journal with a high acceptance rate, this comes on average with more time until a decision. Given these trade-offs, authors need to consider which indicator they value most to optimise their submission choices. There are, however, substantial variations across journals, and specific journal performance may nevertheless suit individual preferences more than others. See Appendix S3-S5, online, for further details on the relationships between indicators, including two-dimensional production possibilities across journals.

Appendix S6, online, also shows a DEA covering the years 2016–2018 for AJAE, AJARE, CJAE, ERAE, FP and JAE, and a DEA covering the years 2014–2018 for AJAE, AJARE, CJAE, ERAE and JAE. The first response time and acceptance rate<sup>5</sup> are treated as strongly disposable inputs, whereas the impact factor is treated as a strongly disposable output. We estimate output-oriented efficiency scores under constant returns to scale, which thus rewards the impact factor given the first response time and acceptance rate. The scores are non-negative and 1 is the maximum. The scores fluctuate substantially, which is caused by the low number of observations due to a lack of data availability. We should thus remain cautious regarding the interpretation. Nevertheless, we observe that FP and JAE consistently have an excellent score. AJAE also scores very well, except for the year 2016 in Figure S5, online, in which FP occurs as an influential peer. Finally, DEA seeks for weights that are as optimal as possible for the journals, which may differ from individual preferences.

## 4 | CONCLUSION

We here investigate various performance indicators of 10 leading journals in the field of Agricultural Economics and Policy over the period from 2000 to 2020. We show that for the discipline at large the turn-around times decreased, and impact factors increased substantially. However, this was also accompanied by a substantial decrease in share of accepted submissions to an average of under 20% in the last years. Our analysis also reveals a large difference across journals in all dimensions.

For authors, our results show there is no free lunch, that is, authors face trade-offs. For example, submitting to a higher impact factor journal means on average also longer turn-around time and lower acceptance rates. Yet, a low acceptance rate may to some extent also be seen as desirable as it indicates competitiveness, which may signal quality. The dataset presented here gives the first coherent overview of relevant information for authors to guide submission decisions. Our analysis also provides important conclusions for editors and publishers. There are substantial data gaps on rather simple information and the comparability of key indicators is often low (e.g., because calculation of values like acceptance rates differ). Thus, efforts are needed to make data available in coherent standards, comparable across journals. Note that we need journal comparisons based on more than impact factors (see also Seppelt et al., 2018). Along these lines, other important metrics like share of open access papers, available code, available data, successful replications of papers in the journal, the diversity of authors and reviewers, and so on, are not yet available. Agricultural economic associations may also stimulate further surveys to synthesise where we are and what authors actually need and value, for example when making submission decisions.

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<sup>5</sup>We thus assume that acceptance rate is also a proxy of prestige, since our DEA rewards lower acceptance rates, *ceteris paribus*.

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## SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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