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JEL Classification: A14, L00, O39

Keywords: conference, submission, presentation, publication, ranking, Citations

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From conference submission to publication and citations: Evidence from the EARIE conference*

Yossi Spiegel† Otto Toivanen‡

January 16, 2022

Abstract

Disseminating research results through academic conferences is important for scientific progress. We shed light on this process and on research in IO using data from five annual conferences of the European Association for Research in Industrial Economics (EARIE). Our data has the advantage that we observe the grades that each submission received from two members of the scientific committee, and also observe whether, where, and when submitted papers were published, and how many citations published papers have received. Among other things, we find disagreements between reviewers about grades in almost half of the cases, though large disagreements occurred in only 6% of the cases. Between $40\% - 50\%$ of the submitted papers remain unpublished years after the conference and those that are published, take over 3 years to get published. Presentation at the conference is associated with a higher likelihood of publishing in an IO journal, although only 19% of the published papers are in IO journals. Empirical papers and co-authored papers are more likely to get published and get more citations when published. Accepted papers receive more citations when published and publications in economics journals receive substantially fewer citations than publications in adjacent fields like entrepreneurship and finance.

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1 Introduction

The dissemination of academic research is crucial for scientific progress. One of the key mechanisms to facilitate this process are scientific conferences. Indeed, there are many scientific conferences today. For instance, EconBiz, which is a comprehensive searchable database of economics and economics-related events from around the world, lists 911 academic conference in economics for 2019 (the last year before the COVID-19 crisis).[1] Sarabipour et al. (2021) report that the academic conferences industry is worth "tens of billions (US $) worldwide" and the total cost for a participant of attending large national and international scientific meetings is "in the thousands of dollars, equivalent to one or more months of graduate and postdoctoral researcher net salary worldwide." Apart from money, academic conferences are also time consuming, which adds to the cost of participation. The natural question then is whether this money and time are well spent.

In this paper, we shed light on this question using data from the annual conference of European Association for Research in Industrial Economics (EARIE). As far as we know, the conference is representative of field-specific large annual conferences in economics, and is one of the two largest and well-respected annual conferences in Industrial Organization.[2] Our data covers all papers submitted to the EARIE conferences in 2010, and 2012-2015 (the data for the 2011 conference was sadly lost). Using this data, we will examine how many papers were submitted and what are their characteristics in terms of type (theoretical, empirical, or experimental) and authorship; whether, where and when they were published; and how many citations they got after being published. Our analysis informs us not only about the functioning of academic conferences in general, but also provides an insight about research in Industrial Organization (IO) more specifically.

Overall we have data on $2,261$ submissions. For each submission, we observe the evaluation of the paper by the scientific committee of the conference; whether the paper was accepted or rejected and whether an accepted paper was presented or withdrawn by the authors; whether, where, and when the paper was eventually published; and conditional on publication, how many citations it has received.

Our dataset has several advantages relative to datasets that were used in the literature to study academic conferences and the publication process in economics. First, all papers in our data were submitted to the EARIE conference, so by revealed preference, their authors viewed them as related to IO broadly defined. This facilitates the comparison of papers to one another. By contrast, most existing research on the topic (which we discuss below) is based on data from general-audience conferences and journals and therefore covers much more diverse set of papers. Second, we observe papers at an earlier stage in their life cycle than most other studies, which rely

[1] See https://www.econbiz.de/Events/Results?date=archive&type=AllFields&filter%5B%5D=%7Edate%3A%222019%22 EconBiz is a service of ZBW - Leibniz Information Centre for Economics.

[2] The other large conference is the International Industrial Organization Conference (IIOC) organized by the Industrial Organization Society and held in the Spring in the U.S. See https://cssh.northeastern.edu/iioc/iioc-history/

on data of published papers. We can therefore assess the time it takes research in economics to get published. Third, our data also includes papers that were not yet published or may never be published, which allows us to study the determinants of publications.

A special feature of our data is that each paper submitted to the EARIE conference was reviewed by two members of the Scientific Committee (SC), which includes close to 100 senior researchers from all areas of Industrial Organization. Each reviewer gave papers that he/she reviewed one of seven possible grades: A ("Definite accept"), B+ ("Accept"), B ("Maybe accept"), B- ("Borderline"), C ("Probable reject"), D ("Reject"), and F ("Definite reject").[3] The reviewers' grades give us a measure of paper quality, which we use as a control in order to study how other factors, such as acceptance and presentation at the conference, whether the paper is theoretical, empirical, or experimental, and whether it is single or co-authored, affect the eventual publication of the paper and the number of citations it has received if published. This type of quality measure is rarely available for researchers and makes it hard to separate the effects of various characteristics on publication and citations from the effect of unobserved quality.

We begin the analysis by documenting the submissions and reviewers' grades. Of the 2,261 submissions in our data, 50% are theoretical, 42% are empirical, 5% combine theory and empirics, 3% involve experiments, and a small number involve either policy, case studies, or surveys. The distribution of presented papers is similar, indicating that the SC was not biased towards one type of work or another.[4] In terms of authorship, 38% of the submissions are single authored, although this fraction is higher for theoretical papers than for empirical papers (46% vs. 32%), but is much lower for experimental papers (only 17% are single authored).

We then turn to the grades that submissions received from the SC members. Not surprisingly, papers with higher grades were more likely to be accepted. In particular, most papers with two positive grades (grades A or B+) were accepted, whereas most papers with two negative grades (grades C, D, and F) were rejected. We then compare the grades that two different reviewers gave the same paper. This comparison is interesting because peer review plays a key role in the evaluation of scientific research, so it is obviously important to assess the extent of agreement or disagreement between reviewers. We find that disagreements between reviewers are common: in 43% of the cases, one reviewer was positive and the other neutral (grades B or B-) or negative, or one reviewer was neutral and the other was negative. Large disagreements, however, with one positive reviewer and the other negative, occurred in only 6% of the cases. These results suggest that evaluations of research output are affected in large part by the reviewers' idiosyncratic tastes, though large disagreements are not common.

[3] The EARIE conference in 2015 used numerical grades, which were otherwise identical to the letter grades used in earlier years.

[4] Throughout, we refer to the distinction between theoretical, empirical, and experimental work as paper "type." Angrist et al. (2017) and (2020) refer to this distinction as "research style."

Almost half of the submissions in our data were still unpublished by July 2021. Those that were - 1,171 papers in all - were published in 306 different outlets, mostly peer-reviewed journals, which vary a great deal in terms of quality and discipline. Although the most popular journals for papers that were accepted for the conference are in essence IO journals (*International Journal of Industrial Organization*, *Journal of Economics and Management Strategy*, *Rand Journal of Economics*, *Review of Industrial Organization*, and *Journal of Industrial Economics*), only 19% of all publications are in IO journals. The rest are published in general audience or field journals in economics, or in journals outside economics, including innovation studies, entrepreneurship, operations research (OR), management, and finance;[5] a few papers were published in books, some of which had a peer-review process. The relatively large number of publications outside economics reflects the fact that the conference is quite broad and open to work which is not at the core of IO. Moreover, a little over 15% of the publications are in one of 28 highly-ranked journals, which we define as "high-quality" journals. These journals include high profile journals in economics, including the the top-five journals, but also journals in other fields.

When looking at the probability of publishing papers, we find that controlling for quality through the reviewers' grades, empirical and experimental papers are $6-12$ percentage points (p.p.) more likely to be published than theoretical papers or papers that combine theory and empirics, and co-authored papers are almost 29 p.p. more likely to be published than single-authored papers. Presentation at the conference, however, is associated with a higher probability of publishing in an IO journal.

There is concern in the economics profession that it takes too long to publish papers in economics (see, e.g., Yohe (1980), Ellison (2002) and Conley et al. (2013)). Although we do not know when papers were first written (we only observe them when they are submitted to the conference) our data shows that indeed there is a long lag between submission to the conference and eventual publication (we will refer to this gap as "publication lag"). The average publication lag in our data is over 3 years, and 23% of all published paper in our data are published 5 years or more after the conference. Regression analysis reveals that on average, we control for paper quality, presented papers take 22.1% longer and withdrawn papers take 16.7% longer to publish than rejected papers, and theoretical papers take around 15.5% longer to publish than empirical papers. Authorship and reviewers' grades do not have a significant effect on publications lags.

Finally, we examine the citations that published papers receive. First, we find that withdrawn papers receive more citations than rejected ones, but presented papers do not. This result may arise because some withdrawn papers may have also been accepted to other conferences that take place at the same time as the EARIE conference,[6] or because authors of higher quality papers

[5] We have a classification of journals' fields only for 847 published papers. Of these, 19% were published outside economics.

[6] For example, the joint congress of the European Economic Association and the Econometric Society European

may be busier. Second, controlling for acceptance and presentation at the conference, authorship, publication year, and paper quality, we find that relative to empirical papers, theoretical paper receive 59% fewer citations, experimental papers receive 55% fewer citations, and papers that combine theory and empirics receive 49% fewer citations. Third, single-authored papers, which as mentioned above, are less likely to be published and have longer publication lags when published than co-authored papers, also receive around 37% fewer citations than co-authored papers with similar characteristics in terms of acceptance and presentation at the conference, paper type, publication year, and paper quality. Fourth, for papers that are published in journals for which we observe the relevant field, those published outside economics receive substantially more citations than publications in economics with similar characteristics in terms of paper type, authorship, and paper quality. The difference in citations is 156% for papers in entrepreneurship, 120% for papers in innovation studies, 108% for papers in finance, and 88% for papers in OR and management. Importantly, the cross-field comparison is based on papers that were all submitted to the EARIE conference, so by revealed preference, their authors believe that they are all related to IO broadly defined and therefore comparable. Moreover, the cross-field differences arise after controlling for papers' characteristics (presentation at the conference, paper type, authorship, and paper quality), and therefore are likely to reflect different norms of citation across fields rather than intrinsic differences between papers.

Our paper contributes to the literature on the production and dissemination of scientific research, and in particular to the literature that studies the relationship between conference participation and publication outcomes. Welch (2014) uses data from the 2012 SFS (Society for Financial Studies) Cavalcade Conference, as well as from eight prominent economics and finance journals,[7] to study whether referee recommendations reflect a shared consensus rather than referee-specific perspectives. He finds only a modest consensus among referees: while the unconditional probability that a referee at the SFS Cavalcade would recommend acceptance was 28.5%, the probability conditional on the other referee recommending acceptance increased to only 38.2%. The corresponding figures at the eight journals were 31% and 34%. Moreover, he finds that when two SFS Cavalcade referees evaluated the same two papers, they agreed on which paper was better in only 58% of the cases (972 cases out of 1,674). Unlike our paper however, Welch does not examine the eventual publication of papers, nor the citations they receive after being published.

Gorodnichenko, Pham, and Talavera (2021) study data on over 4,000 papers presented at three large conferences in economics (the American Economic Association (AEA) meetings, the

Meetings or the world congress of the Econometric Society (in 2010 and 2015) are also held at the end of August like EARIE and may create a conflict for presenters.

[7] The journals are *Econometrica*, the *International Economic Review*, the *Journal of the European Economic Association*, the *Journal of Economic Theory*, the *Quarterly Journal of Economics*, the *Rand Journal of Economics*, the *Journal of Finance*, and the *Review of Financial Studies*.

European Economic Association (EEA) meetings, and the Royal Economic Society (RES) meetings) over the 2006–2012 period and 60,000 non-presented papers by the authors of the presented papers. They find that conference participation is associated with a higher probability of publishing in high-quality journals (but not in other journals),[8] more citations, and more abstract views (especially in the month of the conference or the following month). They also find that presented papers take almost 6 months longer to get published. But since they do not observe all submitted papers, the non-presented papers in their data may include papers that were never submitted to conferences. Moreover, they do not observe reviewers' grades and cannot control for paper quality when comparing presented and non-presented papers or papers across conferences and fields. By contrast, we compare papers that were submitted to the same conference and were either presented, withdrawn, or rejected, and examine the determinants of publications and citations after controlling for paper quality.

Leon and McQuillin (2020) study data on all 29,142 papers included in 2009-2012 on the programs of the two largest conferences in Political Science: the annual meetings of the American Political Science Association (APSA) and the Midwest Political Science Association (MPSA). They find that the cancellation of the 2012 APSA meeting due to Hurricane Isaac led to fewer citations and fewer SSRN downloads.[9] Campos, Leon, and McQuillin (2018) use the same data and setting, and find that the cancellation of the 2012 APSA meeting led to a 16% decrease in the likelihood of subsequently co-authoring with another conference participant, especially from a different academic institution. They also find that the conference-initiated collaborations lead to better publication outcomes. Both papers however do not observe all submitted papers and therefore cannot compare papers that were accepted to and rejected from the same conference. Moreover, they do not observe reviewers' grades and cannot control for paper quality. As a result, they can assess only indirectly whether the cancellation of the 2012 APSA meeting had an adverse effect because papers could not be "advertised," or because their authors did not benefit from useful feedback.[10] In addition, they do not observe the eventual publication of papers.

There is a large literature on the publication process in economics. Unlike our paper, most of these studies observe papers only after they are published. For instance, Ellison (2002), Azar (2007), Hamermesh (2013), Card and DellaVigna (2013), and Angrist et al. (2017, 2020) document trends in publication in economics journals, but since they only observe published papers, they

[8] The link between conference presentations and publication in high-quality journals is especially strong for the AEA meetings, and when the authors team includes a prominent author, but the link disappears when the presenter is a female.

[9] Specifically, they find a decrease of around $4.5 - 5.4$ SSRN downloads per paper, and a decreases in citations of about 3 p.p. within two years and by about 5 p.p. within four years.

[10] If the main effect of presentation at the conference is to advertize papers, the adverse effect of the conference's cancellation should be larger for papers of higher quality. By contrast, if the main effect is to provide useful feedback to authors, the adverse effect should be larger for lower quality papers.

cannot tell how many and which papers are rejected, how long it takes papers to get published, and what are the determinants of eventual publication. Moreover, most existing studies do not observe the reviewers' grades and cannot control for paper quality like we can. For instance, papers that study the relationship between authorship on citations (e.g., Card and DellaVigna (2013), Kuld and O'Hagan (2018), and Hsu and Huang (2011)) cannot tell if co-authored paper receive more citations because they benefit from researchers' collaboration and are therefore better, or because they have more authors who can draw attention to the paper. Our results suggest that it is the latter effect, as we show that co-authored papers get more citations than single-authored papers with similar reviewers' grades. Likewise, when we compare citations across fields, we show that publications in innovation studies, entrepreneurship, finance, and OR and management receive more citations than publications in economics with similar reviewers' grades.

Other than Welch (2014), we are aware of only one other paper - Card and DellaVigna (2020) - which has access to referees' recommendations. Specifically, they study how editors at four leading economics journals decide which papers to publish and show that referees' recommendations are strong predictors of eventual citations.[11] However, they do not examine many of the issues that we examine, such as the determinants of publication lags, the effects of authorship and paper type on publication and citations, and cross-field differences in citations.

The rest of the paper is structured as follows: In the next section, we describe the EARIE conference in detail. We then move on to discuss our data collection in Section 3. In Section 4, we examine the data on paper submission and on the grading of the submitted papers by the SC members. In Section 5 we examine what happened to the submitted papers and in particular if, where, and when, they were published. Then in Section 6 we examine how many citations published papers have received by the end of November 2021. We conclude in Section 7. In the Appendix we provide some further analysis.

2 The EARIE conference

As its name suggests, EARIE focuses on Industrial Organization (or Industrial Economics) and, as mentioned earlier, is one of the two largest conferences in the field along with the IIOC. The conference, founded in 1974, is held each year on the Labor Day weekend (early September) or the preceding weekend (late August), in a European city.[12] The conferences in our data were held in Istanbul (2010), Rome (2012), Evora (2013), Milan (2014), and Munich (2015).

The EARIE conference has been traditionally rather inclusive and seen its role as fostering

[11] Cherkashin et al. (2009) have access to submissions and editor assignments at the *Journal of International Economics* and use them to assess how well the publication process at the journal works. However they do not have information about the referees' evaluations like we have.

[12] For details, see http://www.earie.org/r/home

the Industrial Organization community, at least as much as being selective with its program.[13] Over the period $2009-2019$, the conference has attracted on average 459 participants, most of whom actively participated in the conference by presenting or discussing papers (in 2020 and 2021 the conference was held online due to the COVID-19 crisis).[14] The participants come from nearly 60 different countries. The most represented countries are Germany, France, the U.S., UK, Italy, Japan, and Spain.

To get a sense of the conference's size, recall that in our data, there were 452 submissions on average per conference, of which 252 were eventually presented. Angrist et al. (2020) examine $137,000$ publications in economics from 1970 to 2015 found in both EconLit and the Web of Science and classify $9,515$ of those as IO papers. On average then, 211 IO papers have been published each year in economics journals. Although some papers that are submitted to and presented at EARIE end up being published outside economics, it nonetheless appears that the conference features a large number of IO papers and is probably representative of research in IO.

Since 2010, EARIE has run its annual conference by appointing a Scientific Committee (SC) separately from the local organizing committee. The SC includes around $80-90$ senior researchers from all areas in Industrial Organization.[15] Many SC members stay on the committee for several years, though the chair of the SC in any given year (the SC chair serves in this role for only one conference) can replace some existing members, or ask new researchers to join. The call for papers is typically published in the winter and the deadline for paper submission is in mid March. The SC chair allocates the submitted papers to SC members for evaluation; typically, each member is asked to evaluate $8-13$ papers. The evaluations are then submitted by mid April and include a letter grade (A for "Definite accept," B+ for "Accept," B for "Maybe accept," and so on) and often some written comments. In the conferences in our data, each paper was evaluated by two SC members.[16] Based on the evaluations, the SC chair selects papers for the program. Traditionally, the acceptance rate is quite high in order to accommodate young researchers and researchers from small and remote universities or research centers from all over Europe.[17] The final program is assembled, however, only after the deadline for registration at the beginning of June, as some authors of accepted papers fail to register for the conference (in which case their paper is not included on the program). Some papers that are included on the program are eventually withdrawn, typically because authors are unable to attend the conference for various personal reasons.

[13] Since 1999, EARIE has been complemented in Europe by the CEPR Conference on Applied Industrial Organisation, which is much more selective, and includes on the program fewer than 18 papers, compared with well over 300 papers on the EARIE program.

[14] There is variation in attendence however: the largest conference was in 2012 in Rome with 551 participants and the smallest was in 2011 in Stockholm with 388 participants.

[15] For the conferences in our data the number of members ranged from 78 (in 2013) to 92 (in 2012).

[16] In recent conferences, each submitted paper is evaluated by only one SC member.

[17] The number of papers on the program also reflects the need to have a minimal number of participants in order to ensure that the conference is financially viable.

3 The data collection

We were granted access to all submissions to EARIE annual conferences in 2010-2015 by the EARIE executive committee, subject to keeping the grades that specific papers received, as well as the identity of SC members who evaluated each paper, confidential. In this paper though we only use data from the 2010 and 2012-2015 conferences, as the password for accessing data from the 2011 conference was sadly lost.[18]

Our data include 2,261 submissions. Of these, 92 were submitted to two EARIE conferences covered in our data, and 6 were submitted to three EARIE conferences covered in our data. Our data then includes 2,157 unique papers. For each submission, we observe the author(s) and their affiliations, paper title, the year of submission, grades and verbal comments by the two reviewers (when available), the acceptance decision of the SC chair, and whether the paper was eventually presented or withdrawn by the authors. We have complemented this information by collecting, through internet searches, information on whether submitted papers were eventually published in a peer-reviewed journal or a book (some books also involve a peer-review process). In particular, we searched for papers and the authors names in Google Scholar, ideas.repec.org, and/or the authors' CVs or webpages. In all, 1,171 submitted papers were published by mid 2021. For each published paper we recorded the journal, the year of publication, whether the paper's title has changed, and the full set of coauthors.

Determining whether a paper submitted to the conference was eventually published is not easy because many papers change titles and, in some cases, even coauthors. In particular, of the 1,171 submitted papers that were eventually published, 59% had a different title than the one used for the EARIE submission. A change in the paper's title is particularly common for papers that involve both theory and empirical work (72%), papers that involve experiments (65%), and empirical papers (61%). Theory papers are least likely to change titles, though still, 55% of them changed their title. Determining whether a published paper with a new title refers to a paper submitted to the EARIE conference was in many cases challenging, because papers often evolve, develop, divide, or combined in ways that make it difficult to objectively determine whether they are still the same as the version submitted to the conference (this is particularly true for papers that were submitted to the conference at the initial stages of research). When we suspected that a submitted paper was eventually published under a different title, we checked the published paper to see if the authors mention the relevant EARIE conference in the acknowledgement footnote in the paper, or whether the model/dataset/experiment, or the main results, or parts of the text in the published version are similar to those in the EARIE version.[19] When in doubt, we contacted

[18] Even more sadly, Webmeets, which was the platform used for organizing the 2010-2014 conferences does not exist anymore. Since 2015 the conference is organized on Conference Maker.

[19] In some cases, the published version did not mention the EARIE conference in the acknowledgement footnote, but did mention an earlier version of the paper, which either had the same title as the EARIE version, or mentioned

coauthors by email to ask what happened to their paper.[20] Overall, we are fairly confident that we managed to trace nearly all published papers in our dataset. In addition, we also collected the Google Scholar citations for the published papers in our data.[21] The citations are as of the end of November 2021 and refer to the published version of the paper.[22]

Apart from recording publications and citations, we have classified papers in our dataset into one of the following types: Theory, Empirical, Theory and Empirical (papers that combine a theoretical model with empirical work), Experimental (including papers that have theoretical part which is then tested in the lab), and Other (policy papers, case studies, and literature surveys). When possible, the classification was based on the paper's titles or abstract.[23] Interestingly, the most common keywords in papers' titles are "evidence" (255 papers), "empirical" (79 papers), "Europe" (66 papers), "estimate"/"estimation" (44 papers), and "data" (40 papers), and "SME" (39 papers) (these keywords are mostly associated with empirical work); "information" (112 papers), "monopoly"/"duopoly"/"oligopoly" (104 papers), "vertical" (77 papers), "collusion" (60 papers), "optimal" (57 papers), and "equilibrium" (37 papers) (these keywords are mostly associated with theory); "experiment" (40 papers) (this keyword is mostly associated with experimental work); and "regulate"/"regulation" (98 papers) (these keywords are associated with both theoretical and empirical work).

When it was not clear from the title or the abstract how to classify a paper, we looked at the paper itself. In a number of cases where we were unable to find a copy of the paper and the authors could not have been reached, we looked at other work done by the same authors to learn whether they are theorists, empiricists, or experimental economists, or relied on the identity of the two SC members who evaluated the paper (naturally, theory papers were primarily assigned to theorists, empirical papers to empiricists, and experimental papers to experimentalists).

A final piece of information that we collected is the quality of the journals where papers were published. We rely on two publicly available and widely used sources: the SCImago journal rank indicator and the Academic Journal Guide (AJG).[24] SCImago ranks journals in different fields

the relevant EARIE conference in the acknowledgement footnote.

[20] Unfortunately some authors could not have been reached or even traced as they left academia.

[21] Only one published paper did not appear in Google Scholar. We then have Google Scholar citations for 1,170 papers.

[22] Many papers have multiple versions on Google Scholar; sometimes even 30 or 40 versions. The citation data does not refer to unpublished versions of the paper.

[23] For example, it is easy to establish a paper's type when the title contains the keywords "empirical analysis," or "evidence from," or "theory of," or "Theory and evidence," or "experimental"; or when the abstract contains the keywords "data," "estimation," "equilibrium," "game," "in the lab." We also checked the titles to verify that the keywords identify the paper's type correctly. For instance, while the keyword "model" suggests that the paper is theoretical, the title may actually contain the words "empirical model." Likewise, the keyword "game" suggests that the paper is theoretical, but it can also be associated with an experimental paper.

[24] See https://www.scimagojr.com/aboutus.php and https://charteredabs.org/academic-journal-guide-2021/)

of science in a decreasing order of quality; over 600 journals in economics and econometrics are ranked, with *Quarterly Journal of Economics* being ranked 1. AJG ranks journals on a 5 points scale, with 1 being the lowest ("modest standard"), 4 being the second highest ("top journals in their field"), and 4* being the highest ("exemplars of excellence").[25]

Of the 306 outlets in our data, 115 (38%) have both a SCImago and AJG ranking, 18 (6%) have only a SCImago ranking, 60 (20%) have only an AJG rankings, and 113 (37%) have neither ranking. Based on this data, we create a single five-points ranking for all journals, with 1 being the lowest rank and 5 the highest. We use the following procedure. First, we regress the SCImago ranking on the AJG ranking, and the AJG ranking on the SCImago ranking. The two regressions give us a predicted SCImago ranking for journals that only have an AJG ranking, and a predicted AJG ranking for journals that only have a SCImago ranking. We then have a pair of rankings for each of the 193 journals that have at least one ranking (for 115 journals these are the actual rankings, and for 78 journals, one ranking is predicted by the regressions). Second, we convert the SCImago ranking into a five-points scale by splitting journals into five groups (those with the highest rankings, those with the next highest rankings, etc); the relative size of each group is similar to its relative size in the AJG ranking. That is, the share of journals that have a particular grade is equal in the two rankings. Third, we have examined the 113 journals that did not have either ranking, and based on our judgement, placed them in the lowest group (i.e., rank 1). Finally, we define as "high quality" the 27 journals that have a grade of at least 4 in both rankings; we also add AEJ: Micro to this list.[26] The list of 28 high-quality journals appears in Table A1 in the Appendix. Of the 1,171 published papers in our data, 177 (15.1%) were published in high-quality journals.

4 Paper submission and grading

In this section, we examine the data on paper submission and the grading of the submitted papers by the SC members.

4.1 Submissions

We begin by describing the papers submitted to the conference. Table 1 below shows that of the 2,261 submissions to the conference (an average of 452 per conference), 1,262 were accepted

[25] Specifically, Table 1 in AJG (2021) defines rating 1 journals as publishing "research of a recognised, but more modest standard in their field"; rating 2 journals as publishing "original research of an acceptable standard"; rating 3 journals as publishing "original and well executed research papers and are highly regarded"; rating 4 journals as publishing "the most original and best-executed research"; and rating 4* as including "journals of distinction."

[26] Our choice to classify AEJ: Micro as a high-quality journal is supported by Ham, Wright, and Ye (2021). They provide an updated citation-based rankings of journals in economics and find that AEJ: Micro is ranked 14th among over 200 journals. In particular, AEJ: Micro is ranked above the *Economic Journal*, *Journal of Econometrics*, and *Journal of International Economics*, which are among our high-quality journals.

and subsequently presented at the conference (56% of the total number), 274 were accepted but subsequently withdrawn by the authors for various reasons (12% of the submissions and 17% of the accepted submissions), and 725 were rejected (32% of the total number). In all then, the acceptance rate for the conference is quite high - 68% - and reflects the stated goal of the conference to be inclusive, while still being selective (32% of the submissions were rejected).[27]

Table 1: EARIE submissions by acceptance and presentation

	Presented	Withdrawn	Rejected	Total
2010	287	57	58	402
2012	257	68	243	568
2013	209	56	137	402
2014	198	76	106	380
2015	311	17	181	509
Total	1,262	274	725	2,261
Percent	56%	12%	32%	100%

In the next table, we tabulate the submissions by type: Theoretical (T), Empirical (E), Theoretical and Empirical (T/E), Experimental (X), and Other (O).

Table 2: EARIE submissions by paper type

	T	E	T/E	X	O	Total
2010	214	166	16	6	0	402
2012	292	230	21	21	4	568
2013	181	193	18	9	1	402
2014	184	168	18	8	2	380
2015	261	197	34	16	1	509
Total	1,132	954	107	60	8	2,261
Percent	50%	42%	5%	3%	0%	100%

As Table 2 shows, 50% of the submissions to EARIE were theoretical, 42% were empirical, 5% combined theory with empirical work, 3% involved experiments, and the rest involved either policy, case studies, or literature surveys. Notice that although half of all submissions are theoretical, the share of submissions that contain empirical work (the E and T/E categories) - 47% - is

[27] Although the IIOC is somewhat bigger (over the period 2013-2019, it received on average 518 submissions per conference, which is 15% more than the EARIE conference), the figures for the IIOC are similar: 58% of the submitted papers were accepted and presented, 8% were accepted but subsequently withdrawn, and 34% were rejected. We thank Katja Seim for this information.

not far behind. Only a small number of submissions involve experimental work, and only a handful involve other types of work.

The share of theoretical work in Table 2 is somewhat smaller than that reported by Angrist et al. (2020). As we already mentioned, they identify 9,515 IO publications from 1970 to 2015. Of these, they identify 5,314 (56%) as theoretical and the rest as empirical (44%). Interestingly, the share of theoretical work in IO is larger than in international economics (49%), macroeconomics (47%), public finance (40%), development economics (20%), and labor (17%).[28] They also report that the share of empirical papers in all publications in economics has increased from about 50% in 1980 to about 60% in 2015 at the expense of theoretical work. Hamermesh (2013) documents an even larger increase in the share of empirical papers and a decrease in the share of theoretical work published in the *American Economic Review* (AER), *Journal of Political Economy* (JPE), and *Quarterly Journal of Economics* (QJE).[29] He also documents an increase in the share of experimental papers in these journals from 0 in 1963 and 1973 to over 8% in 2011. Our data suggests that the distribution of paper types in IO (as represented by submissions to the EARIE conference) is close to what it was in economics in general in the early 1980s, although one should bear in mind that the data in Table 2 is based on papers that are not yet published, while Angrist et al. (2020) and Hamermesh (2013) report data on published papers.

In Table A2 in the Appendix, we show that the distribution of the types of the 1,262 papers that were presented at the conference is similar to that of submitted papers. This suggests that the selection of papers to the conference by the SC was not biased for or against certain types of papers.

We now turn to the authorship of submitted papers. Table 3 tabulates the submitted papers by type and authorship.

[28] These numbers are based on Table 2 in Angrist et al. (2020) (Distribution of final field).

[29] Specifically, he examines data from these journals in 1963, 1973, 1983, 1993, 2003, and 2011, and shows that the share of empirical work (especially based on data collected by the author(s)) has increased from under 40% in 1983 to nearly 64% in 2011 whereas the share of theoretical work has declined from over 50% in 1963, 1973, and 1983, to less than 30% in 2011.

Table 3: EARIE submissions by authorship

	All papers		T		E		X	
	Single	Co-auth	Single	Co-auth	Single	Co-auth	Single	Co-auth
2010	134	268	79	135	48	118	1	5
2012	194	374	129	163	52	178	4	17
2013	160	242	96	85	60	133	1	8
2014	155	225	92	92	55	113	1	7
2015	225	284	120	141	89	108	3	13
Total	868	1,393	516	616	304	650	10	50
Percent	38%	62%	46%	54%	32%	68%	17%	83%

The first two columns of Table 3 show that 38% of all submissions were single authored and 62% were co-authored. The share of co-authored papers is smaller than that reported in other studies. For instance, Gorodnichenko, Pham, and Talavera (2021) report that 81% of the papers submitted to the AEA, the EEA, and the RES meetings over the 2006–2012 period were co-authored. The share of co-authored papers that we find is also smaller than that in published work. Hamermesh (2013) reports that the share of co-authored papers in the AER, JPE, and QJE, grew steadily from 16.3% in 1963 to 79.6% in 2011; Card and DellaVigna (2013) report that the share of co-authored papers in the top-five journals in economics has increased from around 25% in the early 1970s, to 50% by the early 1990s, and then to over 75% by 2011-2012; and Kuld and O'Hagan (2018) report that the share of co-authored papers in the top 255 journals in economics grew from about 50% in 1996 to almost 75% in 2014. Our data suggests that as with paper types, authorship patterns in IO lag about a decade behind those in economics in general.[30]

The last six columns of Table 3 break down the authorship figures by paper type. Theoretical papers have the largest fraction of single-authored papers (46%), followed by empirical papers (32%), with experimental papers having the lowest fraction of single-authored papers (15%).[31]

We summarize the main findings in this subsection in the following observation.

Observation 1 (submissions): *Of the papers submitted to the EARIE conference,*

(i) *the share of theoretical papers is larger than the share of empirical papers, but the difference is not large; the share of experimental papers is small;*

[30] The share of co-authored papers in our data though is much larger than in Political Science: Leon and McQuillin (2020) report that 29.1% of the papers submitted to the APSA and MPSA annual meetings are co-authored, though the share of co-authored papers increases to 48.3% when papers are written by academics affiliated with a top-100 institution.

[31] The division between single authored and co-authored papers in the T/E category is similar to that in the E category (30% of the papers are single authored) and hence is omitted. There are too few papers in the O category for a meaningful break down of this category.

(ii) *close to two thirds of the papers are co-authored papers and their share is particularly large for empirical and experimental papers.*

4.2 The grading of submitted papers

As mentioned earlier, the SC of the EARIE conference has used the following grades to evaluate papers: A for "Definite accept," B+ for "Accept," B for "Maybe accept," B- for "Borderline," C for "Probable reject," D for "Reject," and F for "Definite reject."[32] Almost 90% of the papers also received written comments from at least one reviewer. Of the 2,261 submissions in our data, we have two grades for 2,042. For 187 submissions (8.3% of the total) we only have one grade, and for 32 (1.4% of the total) we have no grades.[33] In Table A4 in the Appendix, we tabulate the frequency of the different combinations of grades for the 2,042 submissions that have two grades.

One can argue however that the differences between the grades "Definite accept" and "Accept," or between "Reject" and "Definite reject" are rather minor (the first two are positive and the last two are negative). To focus on meaningful differences between referees, we therefore classify the grades A and B+ as "Positive," the grades B and B- as "Neutral," and the grades C, D, and F as "Negative." Accordingly, there are six different combinations of grades: (Positive, Positive), (Positive, Neutral), (Positive, Negative), (Neutral, Neutral), (Neutral, Negative), and (Negative, Negative). As might be expected, papers with higher grades were more likely to be accepted for the conference. In particular, around 95% of the papers with two positive grades were accepted,[34] whereas less than 10% of the papers with two negative grades were accepted. In the Appendix, we present a regression analysis on the acceptance decisions of papers to the conference. The analysis suggests that, conditional on quality, papers of different type and authorship were treated similarly. In other words, acceptance decisions were based on the reviewers' grades and were not biased for or against particular types of papers.

In the next table we show the frequency of the different combinations of grades for papers that received two grades.

[32] The EARIE 2015 conference used numerical grading which otherwise was identical to that used in the earlier years covered by our data.

[33] Missing grades typically arise when the Chair of the SC selected papers for the program directly.

[34] The few papers with two positive grades that were rejected were deemed to be unrelated to IO broadly defined, and hence a poor fit for the conference.

Table 4: The frequency of combinations of grade categories for submissions with two grades, $N = 2,042$

	Positive	Neutral	Negative	Grade freq.
Positive	29%	31%	6%	47%
Neutral		15%	12%	36%
Negative			7%	16%
Total	6%	23%	24%	100%

Since each of the 2,042 submissions in Table 4 has two individual grades, the table covers 4,084 individual grades. The last column in Table 4 shows that almost half of those (47%) are positive, slightly over a third (36%) are neutral, and about one in six (17%) is negative. For 51% of the submissions (the diagonal terms in the table), the two reviewers had the same assessment. For the remaining 49% of the submissions, the reviewers disagreed with one another: in 31% of the cases, the grade combination was (Positive, Neutral), and in 12% it was (Negative, Neutral). Large disagreement, where one reviewer is positive and recommended acceptance and the other is negative and recommended rejection (the grade combination is (Positive, Negative)), occurred in only 6% of the cases. These figures suggest that meaningful disagreements between reviewers are common, but most of them are not very large.

The results in Table 4 are roughly comparable to those in Table 4 in Welch (2014), which reports the frequency of different grade combinations for the 2012 SFS Cavalcade Conference. His results also show a modest degree of agreement among referees.[35] To compare the grade combinations in Welch with those in Table 4, we also classify the grades in Table 4 in Welch as "Positive," "Neutral," and "Negative."[36] We then have 6 different combinations of grades, similarly to Table 4 in our paper. It turns out that the two grades are in the same category in 55% of the cases; they are (Positive, Neutral) in 15% of the cases; (Negative, Neutral) in 18%; and (Positive, Negative) in 12%. As in our data, the grades in Welch reflect meaningful disagreements between the reviewers in almost 50% of the cases. Large disagreements, however, with one positive and one negative reviewers are twice as common in Welch than in our data (12% in Welch vs. 6% in our data).[37]

[35] Although Card and DellaVigna (2020) do not focus on this question, they nonetheless report that, similiarly to Welch (2014), the referees' recommendations in their data are modestly positively correlated, with rank-order correlations of around 0.25 for two-referee papers.

[36] The reviewers in that 2012 SFS Cavalcade Conference graded papers on a five-grade scale: "Accept," "Should Accept," "Neutral," "Should Reject," and "Must Reject." We classify "Accept" and "Should Accept" as "Positive," and "Should Reject" and "Must Reject" as "Negative." Each of the 367 submissions to the 2012 SFS Cavalcade ConferenceIn was reviewed by $1-28$ reviewers, with an average of 5.1 reviewers per submiussion. On average then, there are 10 pairs of grades per paper.

[37] Notice that in our data, positive assessments are more frequent than in Welch (66% of the grade pairs include

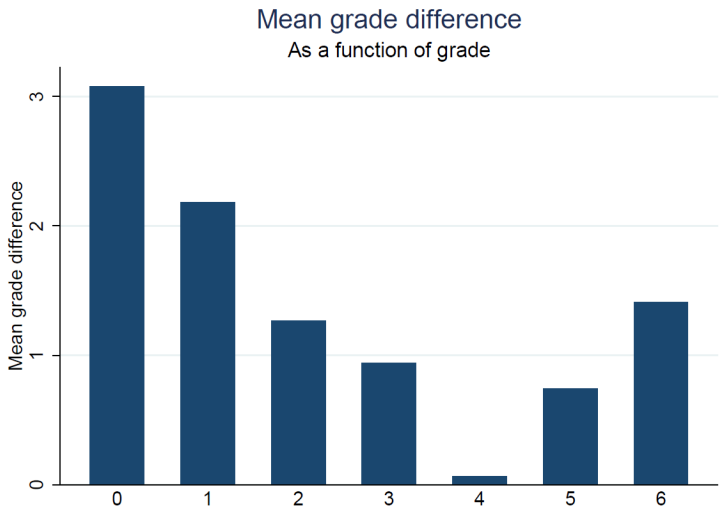

Figure 1: The extent of disagreement between reviewers on the same paper

Another way to assess the extent of agreement or disagreement between reviewers is to examine the grade given by one reviewer, conditional on the grade given by the other. To this end, we convert the letter grades into numerical grades by assigning the number 6 to grade A, 5 to the grade B+, 4 to B, 3 to B-, 2 to C, 1 to D, and 0 to F. We then compute for each grade, the average gap between that grade and the grade given by the other reviewer who reviewed the same paper. The results are presented in Figure 1.

Figure 1 shows that larger disagreements where especially common when one reviewer gave the submission one of the two lowest grades (D or F). In particular, when one reviewer gave the submission an F, the average grade of the other reviewer was three letter grades higher (i.e., B-), and when one reviewer gave the submission the grade D, the average grade of the other reviewer was slightly more than two letter grades higher (again B-). There was also a large gap between the reviewers' grades when one reviewer gave the highest grade (i.e., A): the average grade of the other reviewer was then one and a half letter grades lower (i.e., between B and B+). For intermediate grades, the disagreements were more limited, and were slightly more than one letter grade apart (for C), but less than one letter grade apart (for B+, B, and B-).

The main findings regarding reviewers' grades are the following:

Observation 2 (reviewers' grades): *There are meaningful disagreements between reviewers of*

a positive grade vs. only 41% in Welch) and negative assessments are less frequent (25% of the grade pairs include a negative grades vs. 55% in Welch). The difference stems from the fact that by design, EARIE is an inclusive conference, while the SFS Cavalcade conference is highly selective: in 2012, only 38 out of 367 submissions were selected for the program. .

the same paper in almost half of the cases, though large disagreements, with one positive reviewer and the other negative, arise in only 6% *of the cases.*

5 The publication of papers submitted to the EARIE conference

In this section we examine what happened to papers submitted to the EARIE conference: if, where, and when, they were published.

5.1 Publications

Of the papers in our data, 1,171 (52% of all submissions) were eventually published by mid 2021 in a peer-reviewed journal or a book (for some of the books, papers were peer-reviewed). Naturally, the share of submitted papers published by mid 2021 is larger for earlier conferences as more time has passed since the conference (some papers from later conferences may still be under review; once they are published the share of publications will obviously increase). Specifically, 60% of the papers submitted to the conference in 2010 were published by mid 2021, 56% of the papers submitted in 2012, 47% in 2013, 46% in 2014, and 49% in 2015. Arguably, data for 2010 (60%) is the most indicative about the probability to publish papers submitted to the EARIE conference as it is not very likely that many papers from the 2010 conference will still get published.[38] To put these numbers in perspective, we note that Baumann and Wohlrabe (2020) find that approximately 66.5% of about 28,000 NBER, CEPR, IZA, and CESifo working papers were eventually published in a journal, and about 8% were published as a book chapter. They have no record of what happened to the remaining 25.5% of the papers.[39] This publication rate is higher than the one we find, but this may reflect the fact that they look at working papers, while we look at submissions to a conference, which often represent preliminary work, which may not even turn into a working paper.

When reporting publications, one has to be careful, as some papers were submitted to the conference in more than one year. Specifically, 63 papers in our data that were eventually published were submitted to two EARIE conferences covered in our data, and 6 additional papers were submitted to three EARIE conferences covered in our data. Although papers naturally evolve over time, so later versions are typically more advanced and may have also changed title, we still wish to avoid double counting and therefore consider published papers that were submitted to the conference in more than one year as a single publication. Hence, although the 2,261 submissions to the conference include papers that were submitted in more than one year, the 1,171 published

[38] As we show below, on average, published papers are published a little more than 3 years after the conference. In fact, only 8 papers in our data were published 9 years after the conference, and only 3 were published 10 years after the conference.

[39] Baumann and Wohlrabe note that some of these papers could have been published under a different title or in journals that were not covered by their dataset.

papers in our data are unique.

We begin the analysis by reporting in Table 5 the number and percentage of published papers by paper type and acceptance to the conference. In addition, we also show the probability that a submission will be published by mid 2021.[40] Since EARIE is an IO conference, we also report in Table 5 the number and percentage of papers published in IO journals. Obviously, the *Rand Journal of Economics* (Rand), *Journal of Industrial Economics* (JINDEC), *International Journal of Industrial Organization* (IJIO), and *Review of Industrial Organization* (RIO) are all IO journals. To this list we also add the *Journal of Economics and Management Strategy* (JEMS), *Information Economics and Policy* (IEP), and *Review of Network Economics* (RNE) as these journals also publish a large number of IO papers and have many IO economists on their editorial boards. Finally, we also report in Table 5 the number and percentage of papers published in high-quality journals, which as mentioned above, includes 28 journals that are highly ranked in both the SCImago and AJG rankings (see Table A1 in the Appendix for the list of these journals). Note that one journal - Rand - appears both in the list of IO journals and in the list of high-quality journals.

Table 5: Publication of EARIE papers by paper type and acceptance decision

	T	E	T/E	X	O	Accepted	Rejected	Total
All publications, N = 1,171								
No. of Publications	547	536	50	37	1	819	352	1,171
Percent	47%	46%	4%	3%	0%	70%	30%	100%
Prob. of publishing	48%	56%	47%	62%	13%	53%	49%	52%
IO publications, N = 223								
No. of Publications	136	66	11	10	0	200	23	223
Percent	61%	30%	5%	4%	0%	90%	10%	100%
Prob. of publishing	25%	12%	22%	27%	0%	24%	7%	19%
High-quality publications, N = 177								
No. of Publications	81	78	14	4	0	147	30	177
Percent	46%	44%	8%	2%	0%	83%	17%	100%
Prob. of publishing	15%	15%	28%	11%	0%	18%	9%	15%

Few interesting observations emerge from the top panel of Table 5. First, theoretical papers and empirical papers have similar shares among all published papers (47% and 46%); the rest of the published papers include papers that combine theory and empirics (4%) and experimental

[40] The probability of publishing a paper is computed by dividing the number of published papers by the total number of submitted papers in a given category (e.g., theory papers or accepted papers). The latter also includes papers that were submitted to the conference in more than one year.

papers (3%). Only one published paper belongs to the "Other" group. To interpret these figures, recall from above that Angrist et al. (2020) document that the share of empirical papers in all publications in economics has increased from about 50% in 1980 to about 60% in 2015, and Hamermesh (2013) documents that in 2011 their share in the AER, JPE, and QJE was even larger (64%), and the share of experimental papers was 8%. To the extent that the EARIE conference is representative of research in IO, our results show that IO publications are more evenly distributed between theoretical and empirical work, but feature a smaller share of experimental work. Second, submitted experimental papers are more likely to be published than submitted empirical papers (62% vs. 56%); submitted theoretical papers and papers that combine theory and empirics have the lowest probability to get published (48% and 47%). Third, 70% of all published papers were accepted for the conference and only 30% were rejected; moreover, accepted papers are more likely to be published than rejected papers, though the difference is not very large: 53% vs. 49%.

The middle panel of Table 5 reports data on papers published in IO journals. It turns out that only 223 of the 1,171 published papers in our data (19%) were published in IO journals. The remaining 81% were published mostly in other journals in economics or in journals in adjacent fields (e.g., innovation studies, entrepreneurship, OR and management, and finance). It is interesting to note that theoretical papers and experimental papers are more likely to be published in IO journals than empirical papers (25% and 27% vs. 12% for empirical papers and 22% for papers that combine theory and empirics). A possible reason for this is that journals in Innovation Studies, Entrepreneurship, or Management which publish EARIE papers tend to publish mainly empirical papers. Unlike with all publications, the share of theoretical papers in IO publications is twice as large as that of empirical papers (61% vs. 30% or even 35% if we add papers that combine theory and empirics). This is despite the fact that the theoretical papers and empirical papers have about the same share among all EARIE submissions. Moreover, 90% of all publications in IO journals were accepted for the conference, which is not surprising given that EARIE is an IO conference. That is, only a small number of papers that were rejected from the conference (23 of 223) were eventually published in IO journals.

In the bottom panel of Table 5, we report data on publications in high-quality journals; we have 177 such publications in our data (15% of all publications). As with all publications - but in contrast with publications in IO journals - the share of theoretical and empirical publications in high-quality journals is about the same. Of the publications in high-quality journals, 83% were accepted for the conference and 17% were rejected.[41]

Next, we tabulate published papers by authorship and paper type.[42] Again, we report the

[41] The fact that some rejected papers are eventually published in high-quality journals should not come as a surprize. For example, Cherkashin et al. (2009) find that of the 80% of the submissions that were rejected from the *Journal of International Economics* (JIE) which is a high-quality journal in our data, roughly 22% were ultimately published, and of these, roughly 14% (3.1% of the rejected papers) end up in journals ranked above the JIE.

[42] The figures for papers that combine theory and empirics are similar to those for empirical papers and hence are

data for all published papers, papers published in IO journals, and papers published in high-quality journals.

Table 6: Publication of EARIE papers by authorship

	All papers		T		E		X	
	Single	Co-auth	Single	Co-auth	Single	Co-auth	Single	Co-auth
All publications, N = 1,171								
No. of Publications	301	870	170	377	111	425	7	30
Percent	26%	74%	31%	69%	21%	79%	19%	81%
Prob. of publishing	35%	62%	33%	61%	37%	65%	70%	60%
IO publications, N = 223								
No. of Publications	63	160	42	94	15	51	4	6
Percent	28%	72%	31%	69%	23%	77%	40%	60%
Prob. of publishing	21%	18%	25%	25%	14%	12%	57%	20%
High-quality publications, N = 177								
No. of Publications	40	137	22	59	16	62	1	3
Percent	23%	77%	27%	73%	21%	79%	25%	75%
Prob. of publishing	13%	16%	13%	16%	14%	15%	14%	10%

The top panel of Table 6 shows that 74% of the published papers in our data were co-authored. The middle and bottom panels of Table 6 show that in IO and in high-quality journals, the share of co-authored papers is similar. This share is also similar to that reported in Hamermesh (2013), Card and DellaVigna (2013), and Kuld and O'Hagan (2018) for the same period. Comparing the figures in Tables 6 and 3, it follows that the share of co-authored papers is higher among published papers than among submitted papers. This suggests that co-authored papers are more likely to get eventually published than single-authored papers. The share of co-authored papers is lower for theoretical papers (69%) than for empirical and experimental papers (79% and 81%).[43] This is also true by and large for papers in IO journals and high-quality journals.

Table 6 also shows the probability that a submitted paper will be eventually published: when all publications are taken into account, co-authored papers are 85% more likely to be published than single-authored papers when it comes to theory (61% vs. 33%), and 76% are more likely to be published when empirical papers are concerned (65% vs. 37%). We do not see a similar pattern for experimental papers, though this may be due to the relatively small number of experimental papers in our data. When we look only at publications in IO journals or in high-quality journals,

not shown in the table. Also not shows are papers in the "Other" category as only one of these papers was published.

[43] The figures for papers that combine theory and empirical work are similar to those for empirical papers and hence are not shown in the table.

there is no longer a difference in the probability that single authored and co-authored papers will be published. If anything, when looking at experimental papers, single-authored papers are more likely to be published than co-authored papers.

We then have:

Observation 3 (publications): *A little over half of the papers submitted to EARIE conference are eventually published though the share is naturally larger for earlier conferences.*

(i) *Empirical papers and especially experimental papers are more likely to be published than theoretical papers.*

(ii) *Only* 19% *of all publications are in IO journals; theoretical and experimental papers are more likely to be published in IO journals than empirical papers and* 90% *of the publications in IO journals were accepted for the conference.*

(iii) 15% *of all publications are in high-quality journals; papers that combine theory and empirics are almost twice more likely to be published in high-quality journals than theoretical papers or empirical papers, and* 83% *of the publications in high-quality journals were accepted for the conference.*

(iv) *Co-authored papers are almost twice as likely to be published as single-authored papers, but in IO journals or high-quality journals, co-authored and single-authored papers are almost equally likely to be published.*

5.2 Publication outlets

We now examine where the 1,171 published papers in our data were published. In all, papers were published in 306 different outlets which vary in terms of quality and discipline. The distribution of outlets has a long tail: 54% of the outlets in our data published only one paper, 13% published only two papers, and 8% published only three papers. The next table shows journals with the highest number of published EARIE papers among all papers and then separately for accepted and rejected papers. The journals titles in the table are abbreviated; the abbreviations are for the most part self explanatory.[44]

[44] In particular, IJIO is *International Journal of Industrial Organization*, JEMS is *Journal of Economics and Management Strategy*, Rand is the *RAND Journal of Economics*, RP is *Research Policy*, RIO is *Review of Industrial Organization*, ICC is *Industrial and Corporate Change*, JINDEC is *Journal of Industrial Economics*, JEBO is *Journal of Economic Behavior and Organization*, EER is *European Economic Review*, and SBEJ is *Small Business Economics,* IEP is *Information Economics and Policy*, Energy Econ is *Energy Economics*, J. of Econ is *Journal of Economics*, ECOLET is *Economics Letters*, Appl. Econ is *Applied Economics*, ERE is *Environmental and Resource Economics*, and MS is *Management Science*.

Table 7: Journals with the highest number of EARIE papers

All papers		Accepted paper		Rejected papers	
Journal	Number	Journal	Number	Journal	Number
IJIO	68	IJIO	64	ICC	13
JEMS	36	JEMS	31	J. of Econ	11
Rand	32	Rand	30	RP	10
RP	32	RIO	25	Energy Econ	10
RIO	30	JINDEC	25	SBEJ	9
EER	27	EER	25	ECOLET	8
ICC	26	RP	22	Appl. Econ	6
JINDEC	25	JEBO	20	JEMS	5
JEBO	24	IEP	17	RIO	5
SBEJ	23	MS	16	AEJ: Micro	5
J. of Econ	21	SBEJ	14	JEBO	5
IEP	20			ERE	5

Table 7 shows that IJIO is the most popular outlet for EARIE papers, followed by JEMS and Rand. Two other IO journals, RIO and JINDEC, are also popular outlets, and so is IEP, which is arguably also an IO journal. Moreover, the top-five outlets for accepted EARIE papers are all IO journals. Other popular outlets for EARIE papers include *European Economic Review* (EER), *Journal of Economic Behavior and Organization* (JEBO), *Research Policy* (RP), *Industrial and Corporate Change* (ICC), and *Small Business Economics* (SBE). Interestingly, the last three are journals in innovation studies, management, and entrepreneurship rather than economics.[45] Not surprisingly perhaps, these journals are ranked higher among submitted papers than among accepted paper, and are among the most popular outlets for rejected papers (ICC in fact is not on the list of popular outlets for accepted papers). Table 7 also shows that *Journal of Economics* (J. of Econ) is a popular outlet for submitted papers, though many of these paper were rejected; *Management Science* (MS) is a popular outlet for accepted papers; and 5 rejected papers ended up being published at AEJ: Micro, which we classify as a high-quality journal. Finally, it is interesting to note that 17 submitted papers (all were accepted) were published in one of the top-five journals in economics (4 in the AER, 2 in Econometrica, 3 in the JPE, 2 in the QJE, and 6 in REStud).

[45] The advisory editors of *Research Policy* however currently include Shane Greenstein, who is a former president of the Industrial Organization Society (which organizes IIOC), and Franco Malerba and Reinhilde Veugelers who are former presidents of EARIE.

5.3 The likelihood of publishing an EARIE paper

Having presented descriptive data about the publication of papers that were submitted to the EARIE conference, we now turn to regression analysis in order to study more systematically the determinants of publications of EARIE papers. We first use a linear probability model, where the dependent variable takes the value 1 if the paper was published by mid 2021 and 0 otherwise. Then we also use an ordered probit model, where the dependent variable takes the value 2 if the paper was published in a high-quality journal, 1 if it was published in a regular journal, and 0 if was not published by mid 2021. The explanatory variables are dummy variables for "Presented" and "Withdrawn," paper types dummies - T, T/E, X, and O - and single author dummy. Our baseline then is a rejected empirical paper that was co-authored. All specifications include year of conference dummies, and some also include Grade dummies. The grade dummies correspond to the grade combinations in Table 4. Specifically, we define five dummies, which equal 1 if the combination of grades that a paper has received is G ={(Positive, Positive), (Positive, Neutral), (Positive, Negative), Neutral, Neutral), (Neutral, Negative)} and is equal to 0 otherwise; our baseline is the combination (Negative, Negative).[46] The Grade dummies control for quality and allow us to examine whether papers of similar quality (in terms of the combination of grades they received) have a different probability of being published, depending on factors such as acceptance and presentation at the conference, paper type, and authorship.[47]

The results are reported in Table 8. Columns (1)-(3) show results for the linear probability model and Columns (4)-(6) show results for the ordered probit model. In Columns (1) and (4), the data includes all $2,157$ unique submitted papers.[48] In the other four columns, the data include all unique submitted papers for which we have two reviewers' grades (we have $1,948$ such papers).

[46] Recall that we classify the grades A and B+ ("Definite accept" and "Accept") as "Positive," the grades B and B- ("Maybe accept" and "Borderline") as "Neutral," and the grades C, D, and F ("Probable reject," "Reject," and "Definite reject") as "Negative."

[47] We have also used the absolute distance between grades as a measure of disagreement between reviewers, and replaced our five grade dummies with a full set of dummies based on combinations of original grades, but our reression results were essentially the same as the reported ones.

[48] Recall that if the $2,261$ papers that were submitted, 92 were submitted twice and 6 were submitted three times so in all there are $2,261 - 92 - 6 \times 2 = 2,157$ unique submitted papers.

Table 8: Probability of publishing an EARIE paper

	linear prob. of publishing			Ordered Probit		
	(1)	(2)	(3)	(4)	(5)	(6)
Presented	0.054**	0.042	-0.022	0.197***	0.188***	-0.013
	(0.024)	(0.026)	(0.035)	(0.055)	(0.058)	(0.086)
Withdrawn	0.043	0.050	-0.014	0.232***	0.259***	0.077
	(0.037)	(0.038)	(0.046)	(0.089)	(0.091)	(0.113)
T			-0.060**			-0.133**
			(0.023)			(0.056)
T/E			-0.117**			-0.260*
			(0.055)			(0.146)
X			0.040			0.016
			(0.072)			(0.159)
O			-0.296*			-0.868
			(0.154)			(0.622)
Single author			-0.285***			-0.661***
			(0.023)			(0.060)
Constant/Cut 1	0.560***	0.555***	0.670***	-0.037	-0.021	-0.278**
	(0.032)	(0.033)	(0.051)	(0.071)	(0.074)	(0.121)
Cut 2				1.473***	1.502***	1.330**
				(0.074)	(0.076)	(0.120)
Grade p-value			0.00			0.00
Observations	2,157	1,948	1,948	2,157	1,948	1,948
R-squared/LogL.	0.009	0.007	0.103	-1973.9	-1776.4	-1687.4

Notes: In Columns (1)-(3) the dependent variable equals 1 if the paper was published and 0 otherwise. In Columns (4)-(6) the dependent variable equals 2 if the paper was published in a high-quality journal, 1 if it was published in a regular journal, and 0 if it was not published. Presented and Withdrawn are dummies that are equal to 1 if the paper was presented or withdrawn and 0 otherwise. T, T/E, X, and O are paper type dummies; E (=empirical) is the base category. Single author is a dummy equal to 1 if the paper was single-authored and 0 otherwise. Cut 1 is the ordered probit cutoff between the dependent variable getting values 0 and 1, and Cut 2 is the corresponding cutoff between values 1 and 2. All specifications include year of conference dummies (not shown). Grade is the p-value of an F-test (linear probability model) and a Chi-squared test (ordered probit) of the joint significance of the Grade dummies (not shown). The sample in Columns (1) and (4) is all unique submitted papers and in other columns it is all unique submitted papers for which we observe two reviewers' grades. Robust standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

Column (1) shows that presenting a paper at the EARIE conference is associated with a higher probability of publishing the paper. However, when we restrict attention to papers with two grades in Column (2), the effect of presentation is no longer significant. This is not very surprising

since papers without two grades were typically strong and were accepted directly by the SC chair, so eliminating them from the sample will only weaken the effect of presentation on the probability of publication. Withdrawn papers do not differ in their probability of being published from rejected papers. Column (3) shows that, controlling for paper quality by adding Grade dummies, theoretical papers, papers that combine theory and empirics, and papers in the "Other" category are less likely to be published than empirical papers (the base category). The effects are quite large: relative to empirical papers, the probability of publication is on average 6 p.p. lower for theoretical papers, 11.7 p.p. lower for papers that combine theory and empirics, and 29.6 p.p. lower for papers in the "Other" category. By contrast, the probability of experimental papers to get published is not significantly different than that of empirical papers. Column (3) also shows that single-authored papers are 28.5 p.p. less likely to be published than co-authored papers, which are the baseline.[49]

Turning to the ordered probit results in Columns (4)-(6), which distinguishes publication in high-quality and in regular journals, we find somewhat stronger results. In particular, Columns (4)-(5) show that accepted papers (both presented papers and withdrawn papers) are more likely to be published and more likely to be published in high-quality journals than rejected papers which are the baseline. These results are consistent with Gorodnichenko, Pham, and Talavera (2021); they find that presenting a paper at general interest economic conferences (the AEA, the EEA, and the RES meetings) increases its probability to be published in a high-quality journal. Column (6) shows however that once we control for quality by including the Grade dummies, the effect of presentation is no longer significant. This suggests that the positive effect of conference presentation that Gorodnichenko, Pham, and Talavera (2021) find is driven by unobserved quality - papers that were accepted to the conference are stronger than papers that were rejected and therefore are more likely to be published in high-quality journals. Column (6) also shows that, as in Column (4), papers in the T, T/E, and O categories are less likely to be published than empirical papers, and single-authored papers are less likely to be published than co-authored papers.

An important question is whether one can interpret our results as causal. For this to be the case, it must be that conditional on the year dummies and on paper quality as captured by the Grade dummies, the explanatory variables of interest in Table 8 are uncorrelated with unobservables which affect the probability of publication. We believe that this is likely to be the case. Hence, while one should be cautious when interpreting our results, it is at least plausible that they are causal.[50]

[49] Adding interaction terms between the single-author and paper type dummies reveals that the negative effect of single-authorship is smaller for papers that combine theory and empirics (-0.1) and becomes positive for experimental papers (0.1) and papers in the "Other" category (0.2), though none of these is statistically significant. Single-authorship has the same effect on theoretical and empirical papers, and the coefficient of the single author dummy is close to that in Table 8 and equals -0.30 and its p-value is 0.00.

[50] One could try to establish causal results with a regression discontinuity type analysis, using a subsample of papers that are close to the acceptance threshold. However, the limited size of our data, especially around the threshold,

The above discussion can be summarized as follows:

Observation 4 (the probability of publication): *Controlling for quality, the probability of publication is independent of presentation at the conference, but is* $6-12$ *p.p. lower for theoretical papers and papers that combine theory and empirics than for empirical and experimental papers, and is almost* 29 *p.p. higher for co-authored papers than for single-authored paper.*

5.4 The likelihood of publishing an EARIE paper in a high-quality or an IO journal

In this subsection we restrict attention to published papers and again use a linear probability model, but now the dependent variable is equal to 1 if the paper was published in a high-quality journal and 0 if it was published in a regular journal. We then repeat this exercise, but now the dependent variable is equal to 1 if the paper was published in an IO journal and 0 if was published in a non-IO journal. The results are presented in Table 9. In Columns (1) and (4) we have the sample of all $1,170$ published papers (except for the single published paper in the "Other" category); in the other columns we eliminate from the sample published papers for which we do not observe two reviewers' grades.

Table 9: Probability of publishing in a high-quality or an IO journal

	High quality			**IO**		
	(1)	(2)	(3)	(4)	(5)	(6)
Presented	0.089***	0.105***	0.034	0.189***	0.178***	0.092***
	(0.021)	(0.022)	(0.033)	(0.022)	(0.022)	(0.031)
Withdrawn	0.152***	0.162***	0.105**	0.139***	0.131***	0.056
	(0.038)	(0.039)	(0.045)	(0.036)	(0.036)	(0.045)
T			-0.011			0.113***
			(0.022)			(0.025)
T/E			0.015			0.053
			(0.065)			(0.066)
X			-0.078			0.119
			(0.056)			(0.078)
Single author			-0.012			0.021
			(0.024)			(0.028)
Constant	0.038	0.028	0.019	0.063**	0.070**	-0.036
	(0.025)	(0.025)	(0.038)	(0.029)	(0.030)	(0.036)
Grade p-value			0.00			0.00
Observations	1,170	1,057	1,057	1,170	1,057	1,057
R-squared	0.025	0.029	0.088	0.056	0.048	0.087

does not allow us to have a meaningful analysis along these lines.

Notes: In Columns (1)-(3) the dependent variable equals 1 if the paper was published in a high-quality journal and 0 if it was published in a regular journal. In Columns (4)-(6) the dependent variable equals 1 if the paper was published in an IO journal and 0 if it was published in a non-IO journal. The explanatory variables are defined as in Table 8. All specifications include year of conference dummies (not shown). Grade is the p-value of an F-test of the joint significance of the Grade dummies (not shown). The sample in Columns (1) and (4) is all published papers, except for the single published paper in the "Other" category; in other columns, published papers for which we do not observe two reviewers' grades are eliminated from the sample. Robust standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

Columns (1) and (2) show that, conditional on being published, accepted papers (both presented and withdrawn) were more likely to be published in high-quality journals. However, once the Grade, paper type, and the single author dummies are added in Column (3), the presented dummy loses significance; the withdrawn dummy though remains significant. This suggests that in and of itself, presentation at the conference did not increase the likelihood of publication in high-quality journals. None of the other variables is significant, suggesting once again that the positive effect of conference presentation on publication in high-quality journals reported in Gorodnichenko, Pham, and Talavera (2021) may be driven by unobserved quality: once quality is controlled for (in Column (3)), presenting at the conference has no significant effect on the probability of publication in high-quality journals. This result is also supported by the ordered probit regressions in Table 8.[51]

Turning to Columns (4)-(5) where the dependent variable is publication in an IO journal, we find positive and statistically significant coefficients for both the presented and withdrawn dummies. However, once we control for quality, paper type, and authorship in Column (6), only the presented dummy remains significant. The fact that the withdrawn dummy is not significant suggests that presenting at the EARIE conference increases the probability of publishing in an IO journal; the increase is over 9 p.p. This is quite substantial given that Table 5 shows that the probability that an EARIE paper will be published in an IO journal is merely 19%. Notice that it is not the acceptance per-se that increases the probability of publication, as withdrawn papers were also accepted for the conference. We also find that theoretical papers are more likely to be published in IO journals than empirical papers (the base category). Although we have already seen

[51] Although our own impression as SC chairs is that withdrawls are often due to personal reasons which are unrelated to research, and although the grades of withdrawn papers are on average similar to those of presented papers, the fact that the coefficient of the withdrawn dummy is significant and larger than that of presented papers suggests that on average, withdrawn papers may be stronger than presented papers. As mentioned in the Introduction, it might be that some withdrawn papers were also accepted to other conferences that take place at the same time as EARIE. Unfortunately we cannot check this because programs for the joint congress of the European Economic Association and the Econometric Society European Meetings which are also held at the end of August like EARIE are not available prior to 2015.

this difference in Table 5 above, now we control for other factors that may affect publication, like presentation at the conference, authorship, and Grade combination. The effect - 11.3 p.p. - is also quite large.[52]

We can summarize the findings as follows:

Observation 5 (the probability of publication in IO and high-quality journals): *Conditional on being published and controlling for quality,*

(i) *publication in a high-quality journal is more likely for papers that were withdrawn from the conference, but is independent of paper type and authorship;*

(ii) *publication in IO journals is more likely when papers were presented at the conference, is more likely for theoretical papers than for empirical papers; and is independent of authorship.*

Taken together, Observations 4 and 5 suggest that presentation at EARIE helps when it comes to publication in IO journals, but not in other journals. Moreover, controlling for paper quality and authorship, empirical papers are more likely to get published in general than other types of papers, but theoretical papers and experimental papers are more likely to be published in IO journals than empirical papers.

5.5 Publication lags

So far we have examined the probability that papers submitted to the EARIE conference will be published, and if they are published, where were they published. In particular, we have shown that 52% of the submitted papers were published by mid 2021 (though this fraction will probably increase somewhat as time goes by), that presentation is associated with a higher probability of publishing in IO journals, and that papers were also also published outside IO (e.g., in journals like EER, JEBO, and J. of Econ), and also outside economics (e.g., in journals like RP, ICC, SBE, and MS). We now turn to a third question: how long it takes papers submitted to the conference to get published. To address this question, we examine publication lags in our data. We define publication lags as the number of years between the submission of a paper to the EARIE conference and the eventual publication of the paper.[53]

[52] We also examined the determinants of publication in Rand which is the only IO journal among the high-quality journals in our data, and in *AEJ: Micro*, which is a high-quality journal that publishes a large number of IO papers (18 papers in our data were published there). When we replace the dependent variable in Columns (4)-(6) with one that is to equal 1 if a paper was published in Rand or in *AEJ: Micro* and is equal to 0 otherwise, and use the sabsample of papers published in IO journals, we find that empirical papers are 18 p.p. less likely to be published than theory papers but 13 p.p. more likely to be published than experimental papers. Moreover, single-authored papers are 14 p.p. more likely to be published in Rand or *AEJ: Micro* than co-authored papers.

[53] Typically, publication lag refers to the time between submission to a given journal and publication in the same journal. We use the term to refer to the time between submission to the EARIE conference and publication in some

Publication lags in economics are quite long. Yohe (1980) writes that "Publication lags are quite severe in the economics literature. An author can expect to wait 15.3 months between submission and publication in a specialized journal, and 23.3 months in a major journal." Since 1980 the situation has only gotten worse: Ellison (2002) documents that in the early 1970s, papers in the top general-interest economics journals were typically accepted within $6-9$ months of submission, whereas in the late 1990s, the same process took about two years.[54] Conley et al. (2013) find evidence that the increase in publication lags in economics led to a slowdown in the productivity of young researchers: graduates of the top 30 departments in North America in the 1986-1988 cohort have 45% more AER equivalent publications than the 1989-1994 cohort, and 65% more than the 1995-2000 cohort. They refer to this slowdown as the "Ellison effect." Hadavand, Hamermesh, and Wilson (2021) find that the mean time from submission to publication in five leading journals in economics in 2012-2013 (*Review of Economics and Statistics* and four of the top-five journals in economics) was 33.15 months. This lag is almost twice as long as the mean lag in three leading journals in social science (*The American Political Science Review*, *Applied Psychology*, and *the Journal of Personality and Social Psychology*) which was 18.05 months, and more than four times longer than in two leading science journals (*Nature* and *the Proceedings of the National Academy of Sciences* (PNAS)), where the mean lag time was 7.80 months.

The above results understate the actual time it takes to publish papers because papers are often submitted to more than one journal before being accepted and revisions after rejections may also take a substantial amount of time. Our data can shed light on the time it takes to publish papers in IO, albeit one should bear in mind that some papers submitted to the EARIE conference may have been around well before the conferences (or even submitted to journals), while others may still have been at a very early stage.

Table 10 shows the distribution of publication lags in our data: how many papers submitted in a given year were published in the same year or even earlier (there are 7 such papers in our data), how many were published one year later, how many were published two years later, etc.[55] For instance, 40 papers submitted to the 2010 conference were published 3 years later (in 2013) and 38 were published 4 years later (in 2014).

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outlet (a peer-reviewed journal or a book). Notice that in our case papers may have been submitted to several outlets before being eventually published.

[54] Azar (2007) reports that the first-response time of economics journals has increased from 2 months in the 1960s to $3-6$ months in the early 2000s.

[55] For papers that were submitted to more than one EARIE conference, the publication lag reflects the lag between the first year that the paper appears in our data and the year it was published. For instance, if a paper was submitted both in 2010 and in 2012 and was published in 2015, the lag is 5 years.

Table 10: The distribution of publication lags of EARIE papers
(each cell shows the number of papers in the relevant category)

	≤ 0	1	2	3	4	5	≥ 6	Av. lag
2010	13	29	49	40	38	33	41	3.53
2012	22	42	72	64	50	24	45	3.13
2013	15	32	41	44	18	14	24	2.94
2014	17	33	42	25	24	15	17	2.74
2015	18	27	52	52	35	35	29	3.13
Total	85	163	256	225	165	121	156	3.12
Percent	7%	14%	22%	19%	14%	10%	13%	

The last column in Table 10 shows the average publication lag for each year in our data. The average lag for all $1,171$ published papers in our data is 3.12; that is, it takes a little over 3 years on average for papers submitted to the EARIE conference to get published. Not surprisingly, the publication lag is shorter for later conferences as some papers from these conferences are still under review and when published, the relevant publication lags will increase. Again, the data from the 2010 conference - a lag of just over 3.5 years - is probably the most indicative of how long it takes to publish papers that were submitted to the EARIE conference.[56]

Next, we examine how the publication lag varies across paper types, authorship (single authored vs. co-authored papers), and acceptance to the conference.

Table 11: The average publication lag of EARIE papers
by year, paper type, authorship, and acceptance

	T	E	T/E	X	Single	Co-auth	Accepted	Rejected
2010	3.72	3.20	4.44	4.50	3.70	3.48	3.64	2.86
2012	3.39	2.87	3.33	3.23	2.91	3.20	3.35	2.80
2013	3.43	2.66	3.00	2.00	3.37	2.78	3.00	2.82
2014	2.94	2.45	4.00	3.20	2.89	2.69	2.91	2.23
2015	3.23	2.92	3.64	3.00	3.16	3.12	3.21	2.98
Total	3.37	2.84	3.62	3.03	3.19	3.10	3.27	2.77

The first four columns in Table 11 show that papers that combine theory and empirics take the longest to publish: the average publication lag for these papers is 3.62 years, compared with 3.37 years for theoretical papers, a little over 3 years for experimental papers, and 2.84 for empirical

[56] It is unlikely that many more papers from the 2010 conference will still get published. In fact, only 3 papers in our data have been published 10 years after the conference and only 8 have been published 9 years after the conference.

papers.[57] The next four columns in Table 11 show that the publication lag for single-authored papers is somewhat longer than for co-authored papers, while the publication lag for papers that were accepted for the conference is longer than that for rejected papers.

To study the publication lag more systematically, we note from Table 11 that the probability that a yet unpublished paper will be published 6 or more years after the conference is low. In other words, it is not very likely that many papers that are still unpublished by mid 2021 will be eventually published. We therefore study the publication lags using the sample of published papers. The results of OLS regressions in which the dependent variable is the publication lag in years are presented in Table 12.[58]

Table 12: Publication lag regressions

	Publication lag in years		
	(1)	(2)	(3)
Presented	0.510***	0.605***	0.474**
	(0.130)	(0.136)	(0.203)
Withdrawn	0.382*	0.442**	0.318*
	(0.196)	(0.202)	(0.251)
T	0.449***	0.448***	0.440***
	(0.121)	(0.128)	(0.129)
T/E	0.691**	0.564	0.514
	(0.334)	(0.367)	(0.366)
X	0.176	0.279	0.233
	(0.362)	(0.371)	(0.375)
Single author	0.088	0.094	0.089
	(0.131)	(0.138)	(0.138)
Constant	2.831***	2.765***	2.857***
	(0.179)	(0.184)	(0.289)
Grade p-value			0.59
Observations	1,170	1,057	1,057
R-squared	0.044	0.050	0.053

Notes: The dependent variable is the publication lag in years. The explanatory variables are defined as in Table 8. All specifications include year of conference dummies. The sample in Column (1) is all published papers, except for the single published paper in the "Other" category (papers that were submitted more than once count as a single publication and the publication lag is the gap between the first year of submission and the year of publication); in Columns (2)-(3), published papers for which we do not observe two reviewers'

[57] Correcting for censoring (e.g., we observe papers submitted to the 2015 conference only for 6 years), we find that 50% of papers are unpublished after 6 years, and 44% after 11 years. The fraction of papers that get published after 6 years is thus relatively small.

[58] We also used a hazard rate analysis; the results are by and large similar to those reported here.

grades are eliminated from the sample. All regressions include year of conference dummies (not shown). Grade is the p-value of an F-test of the joint significance of the Grade dummies (not shown). Robust standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

Table 12 implies that relative to rejected papers which are our baseline, accepted papers (both presented and withdrawn) take more time to publish: on average, presented papers take $0.48 - 0.61$ years ($6 - 7$ months) longer to publish and withdrawn papers take $0.33 - 0.44$ years ($4.5 - 5.5$ months) longer to publish than rejected papers. Noting from Table 11 that the sample mean of the publication lag of rejected papers is 2.77 years (33.2 months), it follows that presented papers take 22.1% longer and withdrawn papers take 16.7% longer to publish than rejected papers. The finding that presented papers take longer to get published is consistent with Gorodnichenko, Pham, and Talavera (2021); they report a similar finding for papers presented at the AEA, EEA, and RES meetings. Moreover, theoretical papers take on average around 5.5 months longer to get published than empirical papers which are the baseline. This translates into a 15.5% longer lag for theoretical papers, given a sample mean of 2.84 years (34.1 months) for the publication lag of empirical papers reported in Table 11. Papers that combine theory and empirics also take longer to get published than empirical papers, but the difference is not significant when we restrict attention to papers with two reviewers' grades. Interestingly, authorship has no significant effect on publications lags and neither do the Grade dummies (the p-value for their joint significance is 0.59).[59]

The fact that the results in Columns (2) and (3) are similar suggests that paper quality has little effect on publication lags. However, it turns out that publication in high-quality journals takes longer than in regular journals. The difference is about 4 months and is a t-test reveals that it is statistically significant at the 2% level. This longer lag may be either because publication in high-quality journals requires more work to improve the paper's quality, or because high-quality journals demand more revisions, or because these journals are simply slower in making editorial decisions. Moreover, we find that publication in IO journals takes 7 months longer than publication in non-IO journals, and the difference is statistically significant at better than 1% level. However, compared only to other journals in economics, publication in IO journals takes only 4 months longer and a t-test reveals that the difference is statistically significant at the 4% level. Here, we are not sure why publication in IO journals takes longer than in other journals. We also compared the publication lag in economics journals vs. non-economics journals, but while publication in economics journals takes 3 months longer, the difference is not statistically significant (the p-value is 0.18).

[59] In the Appendix, we report results from similar regressions, except that the dependent variable is the log of the publication lag and the sample is restricted to papers with strictly positive publication lag. The differences are somewhat smaller: presented papers take $17\% - 20\%$ longer and withdrawn papers take $11\% - 13\%$ longer to publish than rejected papers, and theoretical papers take $11\% - 12\%$ longer to get published than empirical papers.

Observation 6 (publication lags): *Conditional on publication and controlling for paper quality, presented and withdrawn papers take* $17\% - 22\%$ *longer to publish than rejected papers, and theoretical papers take* 15.5% *longer to publish than empirical papers. Authorship or grades have no significant effect on the publications lag.*

6 Citations

In this section we turn to citations. As mentioned earlier, we collected for each published paper its Google Scholar citations as of the end of November 2021; the citations refer only to the published version of the paper.[60] Table 13 shows the average number of citations by paper type, authorship (single authored vs. co-authored papers), and acceptance to the conference.

Table 13: The average number of citations of published EARIE papers by year, paper type, authorship, and acceptance

	T	E	T/E	X	Single	Co-auth	Accepted	Rejected	Total
2010	22.5	59.9	100.4	22.5	25.7	46	41.8	39.7	41.5
2012	16.9	47.1	24.4	15.8	17	35.8	33.4	28.4	31.4
2013	14.8	43.3	22.6	32.5	19.8	35.5	31.9	29.6	31.2
2014	12	40	13.4	29	15.4	30.1	29.3	17.9	26.3
2015	13.3	21.6	20.4	7.4	14.6	17.5	17.1	15.5	16.6
Total	16.4	43.3	35.5	18.1	18.2	33.5	31.4	25.3	29.6
0 citations	53	21	1	6	35	46	49	32	81
Percent of 0 citations	9.7%	3.9%	2%	16.2%	11.6%	5.3%	6%	9.1%	6.9%

Several observations emerge from Table 13. First, published papers submitted to earlier conferences receive more citations which is not surprising given that these papers have been around for longer. Second, accepted papers receive more citations than rejected papers. Again, this is not surprising as accepted papers are likely to be of higher quality than rejected papers (albeit some papers were rejected not because of their quality, but due to poor fit with the conference). Third, empirical papers, and especially those without a theoretical part, receive substantially more citations than theoretical paper or experimental papers (164% and 140% more citations). Below we will show that this result is driven, at least in part, by the fact that publications in journals in innovation studies, entrepreneurship, OR and management, and finance, which tend to be mostly empirical, get substantially more citations than publications in economics journals, where there is

[60] One published paper in our data does not appear in Google Scholar, so we have citations only for $1,170$ published papers.

more balance between theoretical and empirical work. Fourth, co-authored papers get 84% more citations than single-authored papers. This may be either because co-authored papers benefit from the authors' collaboration and are simply better, or because they receive more attention as there are more coauthors to draw attention to the paper. Our data can shed light on this issue because we can use the reviewers' grades to control for paper quality. We return to this issue below in our regression analysis for citations.

The last two rows in the Table 13 show the number and frequency of published papers which received no citations. It turns out that papers with no citations are particularly common among theoretical and experimental papers, single-authored papers, and rejected papers. The share of papers with 0 citations though is far smaller than the 37% reported by Angrist et al (2017, 2020) for all papers in economics.

We now turn to regression analysis which allows us to examine the determinants of citations, holding paper quality constant. The results from Poisson regressions are presented in Table 14. The explanatory variables are as before. The sample in Column (1) includes all 1,169 published papers for which we have Google Scholar citations, except for the single published paper in the "Other" category; in Columns (2)-(4) we eliminate from the sample published papers for which we do not observe two reviewers' grades. All specifications include dummies for the calendar year of conference; in Columns (3) and (4) we add publication year dummies, and in Column (4) we add Grade dummies. The baseline then is a published coauthored empirical paper submitted to the EARIE conference in 2010.

Table 14: Poisson regressions of the number of citations

	(1)	(2)	(3)	(4)
Presented	0.117	0.123	0.202*	0.116
	(0.111)	(0.117)	(0.118)	(0.161)
Withdrawn	0.335**	0.372**	0.434***	0.349*
	(0.160)	(0.165)	(0.163)	(0.194)
T	-0.929***	-0.934***	-0.866***	-0.891***
	(0.090)	(0.095)	(0.092)	(0.093)
T/E	-0.143	-0.697***	-0.601***	-0.677***
	(0.410)	(0.176)	(0.170)	(0.179)
X	-0.800***	-0.820***	-0.775***	-0.805***
	(0.192)	(0.199)	(0.194)	(0.198)
Single author	-0.443***	-0.462***	-0.466***	-0.458***
	(0.095)	(0.091)	(0.096)	(0.093)
Pub. year p-value			0.00	0.00
Grade p-value				0.01
Observations	1,169	1,054	1,054	1,054
logL.	-25004.2	-21831.6	-20435.4	-19794

Notes: The dependent variable is Google Scholar citations. The explanatory variables are defined as in Table 8. All specifications include year of conference dummies. The sample in Column (1) is all published papers that have a Google Scholar citation, except for the single published paper in the "Other" category; in Columns (2)-(3), published papers for which we do not observe two reviewers' grades are eliminated from the sample. Publication year and Grade are the p-values of an Chi-squared tests of joint significance of the relevant dummies (not shown). Standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

Table 14 shows that the key observations from Table 13 survive when we control for other factors that may affect citations, although there are some differences. First, the publication year dummies included in Columns (3) and (4) (but not reported in the table) show, as may be expected, that papers published in earlier years have, other things being equal, more citations. Using 2021 as the base year, the publication year dummies are positive (except for the dummy for 2020), increase in size from 2010 to 2012 and then decline, and are statistically significant for 2010-2017. The coefficients imply that papers published in 2010-2017 receive more than twice as many citations as papers published in 2021, and papers published in 2012 (which is the peak) receive more than three times as many citations as papers published in 2021.

Second, accepted papers receive more citations than rejected papers, but the difference between the two is consistently significant only for accepted papers that were eventually withdrawn from the conference by the authors. Hence, the larger number of citations that accepted papers receive is due to acceptance to the conference rather than to presentation per se.[61]

Third, the paper type dummies are all negative and significant, implying that empirical papers (our base category) receive more citations than other types of papers. This result holds even when we control for quality in Column (4). The effects are large. To interpret them, we convert the dummy coefficients to percentage point changes relative to the base group, using the transformation $100 \times (e^{\beta} - 1)$, where β is the value of the relevant coefficient. Then, compared to empirical papers with the same characteristics in terms of acceptance and presentation at the conference, authorship, publication year, and combination of reviewers' grades, theoretical paper receive 59% fewer citations, experimental papers receive 55% fewer citations, and papers that combine theory and empirics receive 49% fewer citations. The finding that empirical papers are cited more than theoretical papers is consistent with Angrist et al (2020); they find that since around 2000, empirical papers in economics have been cited more often than theoretical papers in the same field, journal, and year, though the difference they report is not nearly as large as the one

[61] As we showed, acceptence is highly correlated with reviwers' grades, which implies that the grades are good predictors of future citations. This is consistent with Card and DellaVigna (2020) which find that referees' recommendations at four leading economics journals are strong predictors of citations, albeit they also find that conditional on the referees' recommendations and publication status, papers by highly published authors receive more citations.

that we find.[62]

Fourth, single-authored papers receive around 37% fewer citations than co-authored papers with a similar characteristics in terms of acceptance and presentation at the conference, paper type, publication year, and combination of reviewers' grades. This finding is consistent with Card and DellaVigna (2013) that find that co-authored papers published in the top-five journals in economics receive 23%−61% more citations than single-authored papers (the difference is larger for papers with more coauthors). Likewise, Kuld and O'Hagan (2018) find that co-authored papers published in the top 255 journals in economics receive $30\% - 90\%$ more citations than single-authored papers and this finding continues to hold when attention is restricted to the top 20 journals in economics.[63] The positive correlation between coauthorship and citations has been also documented in other fields. For instance, Hsu and Huang (2011) examine publications in 8 scientific journals (e.g., *Nature*, *Science*, and PNAS) and find that single-authored papers receive fewer citations than co-authored papers.[64] These papers however do not have measures of paper quality and therefore cannot tell whether co-authored papers get more citations because they are better or because more authors draw attention to the paper. Our results suggest that it is the latter, given that the difference between co-authored and single-authored papers persists even when we control for quality using the Grade dummies in Column (4).

It should be noted that in Columns (2)-(4) we restrict attention to papers with two reviewers' grades. Comparing Columns (1) and (2), it is clear that the above results are not driven by the smaller sample in Column (2). Moreover, in Column (3) we add publication year dummies to control for the time a paper was around.[65] Although the publication year dummies are jointly significant (and their coefficients decrease over time as one would expect, albeit not monotonically), the reported coefficients are by and large similar to those in Column (2). The Presented dummy is an exception, as it increases and becomes marginally significant in Column (3), but this is no longer the case in Column (4) when we control for paper quality.

[62] Figure 14 in Angrist et al. (2020) shows that as of 2015, the share of empirical papers in citations is just above 50% whereas the share of theoretical papers is around 40%.

[63] Rath and Wohlrabe (2017) study data on over $750,000$ papers listed on RePEc and published in $1'615$ journals and find significant positive correlation between the number of coauthors, the impact factors of the journals where papers were published, and the number of citations that published papers receive. Likewise, Sommer and Wohlrabe (2017) study almost one million papers listed in RePEC and published in $1,895$ journals, and find a significant positive correlation between the number of coauthors and the number of citations that published papers receive.

[64] For example, they find that on average, a single-authored paper in *Nature* receives 61 citations, compared with 197 citations for all papers in *Nature*. Moreover, they find that the relationship between citations and the number of coauthors can be approximated by $c = (N/5)^{1/3}$, where c are citations and N is the number of coauthors. implying that doubling the number of coauthors is associated with a $2^{1/3} - 1 = 26\%$ increase in citations.

[65] There is evidence of inflation of citations over time. For example, Althouse, West, and Bergstrom (2008) study a database with $4,300$ journals and find that the average number of citations in the reference sections of papers has increased by approximately 3.6% per year over the period 1994-2005.

Papers submitted to EARIE are eventually published in a wide variety of journals, some of which are outside economics. There is a difference in the citations norms across fields. For instance, Althouse, West, and Bergstrom (2008) find that over the period 1994-2005, the average number of citations in the reference sections of publications business and marketing (101 journals) was 46.86 compared with only 30.42 in economics (159 journals). Given these large differences, we now examine whether citations in our data vary across fields. To this end, we will use the subsample of publications in journals that are ranked in AJG2021, as this ranking also provides a classification of journal fields. In all, we have this information for 847 published papers, of which only 756 have two reviewers' grades. Of these papers, 81% were published in economics, 6% in innovation studies, 4% in entrepreneurship and OR/management, and 3% in finance journals. The remaining papers were published in journals classified as business history, ethics, international business, marketing, and strategy. We pool these together into one group called "Other fields" and use economics as our base group. The results are presented in Table 15.

Table 15: Poisson regressions of the number of citations

	(1)	(2)	(3)	(4)	(5)
Presented	-0.001	0.033	0.077	0.040	-0.003
	(0.140)	(0.136)	(0.132)	(0.160)	(0.148)
Withdrawn	0.269	0.290	0.329*	0.282	0.204
	(0.180)	(0.179)	(0.173)	(0.197)	(0.184)
T	-0.971***	-0.776***	-0.711***	-0.730***	-0.749***
	(0.108)	(0.115)	(0.111)	(0.110)	(0.104)
T/E	-0.639***	-0.444**	-0.363**	-0.464**	-0.535***
	(0.188)	(0.177)	(0.169)	(0.189)	(0.197)
X	-0.757***	-0.617***	-0.592**	-0.677***	-0.643***
	(0.218)	(0.226)	(0.232)	(0.254)	(0.246)
Single author	-0.405***	-0.328***	-0.364***	-0.363***	-0.342***
	(0.099)	(0.103)	(0.111)	(0.108)	(0.102)
Innovation		0.784***	0.752***	0.786***	0.289
		(0.155)	(0.151)	(0.144)	(0.178)
Entrepreneurship		0.864***	0.829***	0.941***	1.032***
		(0.162)	(0.162)	(0.153)	(0.148)
OR/Mngt		0.755***	0.710***	0.632**	0.036
		(0.227)	(0.222)	(0.239)	(0.252)
Finance		0.737**	0.688**	0.734**	0.672***
		(0.333)	(0.308)	(0.304)	(0.243)
Other fields		0.033	0.199	0.222	-0.026
		(0.233)	(0.189)	(0.191)	(0.209)
High quality					0.959***
					(0.135)
Pub. year p-value			0.00	0.00	0.00
Grade p-value				0.00	0.02
Observations	756	756	756	756	756
logL.	-17093.7	-15527.5	-14403.2	-13720.4	-11980.1

Notes: The dependent variable is the Google Scholar citations. The explanatory variables are defined as in Table 8. Innovation, Entrepreneurship, OR/Mngt, Finance, and Other fields (Business and Economic History, Ethics, International Business, Marketing, and Strategy) are journal field dummies; economics is the base category. High quality is a dummy for a high-quality journal. All specifications include calendar year of conference dummies. The sample includes all published papers that have a Google Scholar citation, were published in a journal for which we have the field, and have two reviewers' grades. Publication year

and Grade are the p-values and Chi-squared tests of joint significance of the relevant dummies (not shown). Standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

The specification in Column (1) is similar to that in Table 14, except that the sample is now smaller. The paper type and single author dummies are roughly similar to those in Table 15. Once we include the journal field dummies in Columns (2)-(4), the coefficients of the paper type and single author dummies become smaller in absolute value relative to those in Table 14 and in Column (1). More importantly, Columns (2)-(4) show that publications in innovation studies, entrepreneurship, OR and management, and finance have significantly more citations than publications in economics, which is our base category. The differences are large. Using again the transformation $100 \times (e^{\beta} - 1)$, where β is the value of the relevant coefficient, it follows that publications in entrepreneurship get $129\% - 181\%$ more citations than publications in economics with similar characteristics in terms of acceptance and presentation at the conference, authorship, publication year, and combination of reviewers' grades. For innovation studies the difference is 120%, for finance it is $96\% - 109\%$, and for OR and management it is $88\% - 113\%$. These differences point out to differences in norms across fields.

In Column (5) we also include a dummy for high-quality journals. The dummy is highly significant and implies that publications in high-quality journals get 161% more citations than publications in regular journals. However, once included, the coefficients for the innovation and for OR and management journals become insignificant. This may not be too surprising given that publications in *Research Policy* figure prominently among publications in innovation studies, and publications in *Management Science* and in *European Journal of Operations Research* figure prominently among publications in OR and management. Since these journals are in our list of high-quality journals, once we add a dummy for high-quality journals, the insignificance of the relevant journal field dummies imply that publications in the remaining journals get on average as many citations as publications in economics, which is our base category.

Bramoullé and Ductor (2018) document a strong and robust negative correlation between the length of the title of published papers in economics and the number of citations they get and the impact factor of the journals that publish them. To investigate the effect of title length, we added, for each dependent variable, the title length (measured by the number of characters, including spaces) into the richest specification used for that dependent variable. However, the coefficients of title length are small and statistically insignificant, implying that title length is not associated with worse outcomes as in Bramoullé and Ductor.[66]

We now summarize the main findings regarding citations in the following observation:

Observation 7 (citations): *Conditional on publication and controlling for paper quality,*

[66] The only exception are publications in high-quality journals, where the title length coefficient is barely significant (its p-value is 0.095) and its value is -0.007.

(i) *empirical papers receive more citations than other types of papers by a wide margin;*

(ii) *co-authored papers receive substantially more citations than single-authored papers with similar characteristics;*

(iii) *publications in innovation, entrepreneurship, OR and management, and finance receive* 63%−94% *more citations than publications in economics;*

(iv) *publications in high-quality journals receive almost twice as many citations as publications in regular journals.*

7 Conclusions

We studied the life cycle of papers from submission to conferences, to publication in journals and then to citations, using data from five EARIE conferences. Our results shed light on the role of academic conferences in disseminating research knowledge and also provide an insight into research in Industrial Organization (IO).

Starting with submissions to the conference, we find that the selection of papers for the conference is affected only by the grades given by the members of the SC who evaluated them, but not by factors such as paper type and authorship. Moreover, papers with higher grades were more likely to be accepted for the conference. These findings suggest that the selection process works well in the sense that papers that are considered by the reviewers to be better are more likely to be accepted. However, we also find that reviewers tend to disagree with one another about grades. In particular, there are substantial disagreements between reviewers about the grades in almost half of the cases (e.g., one grade is positive and the other is neutral, or one is neutral and the other is negative). However, large disagreements (one positive grade and one negative) arise in only 6% of the cases. The disagreements between reviewers suggest that luck may play a bigger role in the selection process than one would like to believe.

How does presentation at the conference affect research outcomes? Although we find no effect on the probability of publishing the paper, nor on the number of citations it gets after being published, we do find that presented papers have a higher likelihood of being published in an IO journal. This may not be surprising given that after all, EARIE is an IO conference. Curiously, we also find that papers that were accepted but then withdrawn are more likely to be published in high-quality journals (those that are ranked highly), and we also find some evidence that these papers get more citations than papers that were either rejected or presented at the conference.

Regarding publications, we find that a substantial number of submissions to the EARIE conference remain unpublished years after the conference. For instance, 11 years after the 2010 EARIE conference, 40% of the submissions to that conference are still unpublished and 8 years after the 2013 EARIE conference, 53% of the submissions remain unpublished. Moreover, when

papers are published, this happens on average more than 3 years after the conference, with almost a quarter of published papers taking 5 years or more to get published. These figures are a lower bound on the time it takes research results to get published, as some submissions to the conference may have been around well before the conference. The publication lag is especially long for papers that combine theory and empirics (3.62 years on average), but is shorter for purely empirical papers (2.84 years on average). And when papers are published, more often than not, their titles are different than those used for the EARIE submission. A change of title is particularly common for papers that combine theory and empirics (72% of them are published under a new title) and least likely for theoretical papers (though still, 55% of them are published under a new title).

Since EARIE is an IO conference, it is not surprising that the five most popular journals for papers that were submitted to the conference are IO journals. Nonetheless, only 19% of all published papers are published in IO journals. Other papers are published in close to 300 different journals, some of which are outside economics. Although we do not have a journal field classification for all journals in our data, for those that we do, we find that 19% of the published papers are published outside economics in fields like innovation studies, entrepreneurship, OR and management, and finance. In fact, three of the most popular journals for papers submitted to the EARIE conference are in innovation studies, management, and entrepreneurship. This suggests that IO may be broader than might be thought.

In terms of paper characteristics, we find that more theoretical papers are submitted to the conference than empirical papers, though the difference is not very large. Only a small fraction of the submissions are experimental. The fact that the majority of submitted papers are theoretical shows that, contrary to other fields in applied economics such as public economics or labor, theoretical work is still dominant in IO. The mix of paper types among published papers though is more balanced as empirical and experimental papers are more likely to published than theoretical papers or papers that combine theory and empirics. We also find that co-authored papers are more likely to be published than single-authored papers. However, IO journals are different than other journals as they are more likely to publish theoretical papers than empirical or experimental papers, and are equally likely to publish single-authored and co-authored papers.

Finally, when it comes to citations, we find that empirical papers get more citations than other types of papers, and co-authored papers get more citations than single-authored papers. Moreover, papers published in journals in innovation studies, entrepreneurship, OR and management, and finance, receive substantially more citations than publications in economics with similar characteristics.

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A Appendix

A.1 High quality journals

Following is the list of the 28 journals which we define as high quality based on the criteria described in the text and the number of papers published in each journal. In total, 177 papers in our data were published in high-quality journals.

Table A1: High-quality journals

Journal	Papers	Journal	Papers
AEJ: Applied	1	Journal of Marketing Research	1
AEJ: Macro	1	Journal of Monetary Economics	1
AEJ: Micro	18	Journal of Political Economy	3
American Economic Review	4	Journal of the European Economic Association	2
Econometrica	2	Management Science	18
Economic Journal	14	Marketing Science	2
European Journal of Operational Research	6	Quarterly Journal of Economics	2
Journal of Business Venturing	2	RAND Journal of Economics	32
Journal of Econometrics	1	Research Policy	32
Journal of Finance	2	Review of Economic Studies	6
Journal of Financial Economics	4	Review of Economics and Statistics	12
Journal of Financial and Quantitative Analysis	1	Review of Financial Studies	1
Journal of International Economics	3	Strategic Management Journal	2
Journal of Management Studies	1	Theoretical Economics	3

A.2 Presented papers by type

Table 2 in the text tabulates submissions to the EARIE conference by year and paper type. In Table A2 below, we show the types of the $1,262$ submissions that were presented at the conference (these submissions were obviously accepted and the authors that submitted them actively participated in the conference). The distribution of the types of presented papers is similar to that of all submissions, suggesting that the selection of papers to the conference by the SC was not biased for or against certain types of papers.

Table A2: Presented papers by paper type

	T	E	T/E	X	O	Total
2010	151	117	13	6	0	287
2012	140	98	11	7	1	257
2013	89	100	14	6	0	209
2014	102	81	11	4	0	198
2015	165	118	19	9	0	311
Total	647	514	68	32	1	1,262
Percent	51%	41%	5%	2%	0%	100%

A.3 Reviewers' grades and the acceptance of papers for the conference

In Table 1 in the text we tabulate the 2,261 submissions by acceptance, presentation, and year. In Table A3 below we further tabulate submissions by paper type and authorship.

Table A3: Submissions to EARIE by acceptance and presentation, type, and authorship

	T	E	T/E	X	O	Single	Co-auth	Total
Presented	647	514	68	32	1	445	807	1,262
Withdrawn	136	114	11	13	0	107	167	274
Rejected	349	326	28	15	7	306	419	725
Total	1,132	954	107	60	8	868	1,393	2,261
Share rejected	30.8%	34.2%	26.2%	25%	87.5%	35.2%	30.1%	32.1%

As the table shows, empirical papers were more likely to be rejected than theoretical papers or papers that combine theory and empirics or experimental papers (7 of the 8 papers in the "Other" category were rejected). The table also shows that single-authored papers were more likely to be rejected than co-authored papers.

Of the 2,261 submissions in our data, we have two reviewers' grades only for 2,042 submissions. For 187 submissions (8.3% of the total) we only have one grade, and for 32 (1.4% of the total) we have no grades.[67] In the next table we tabulate the frequency of the different combinations of grades for the 2,042 submissions that have two grades. Since each of these submissions got two grades, the table covers 4,084 individual grades. The last column in Table A4 shows the frequency of the different grades.

[67] Missing grades typically arise when the SC Chair selected papers for the program directly.

Table A4: The frequency of combinations of grades
for submissions with two grades, $N = 2,042$

	A	B+	B	B-	C	D	F	Total	Grade freq.
A	6%	11%	5%	3%	1%	0%	0%	27%	16%
B+		12%	12%	9%	4%	0%	1%	39%	31%
B			6%	6%	5%	0%	1%	19%	21%
B-				3%	4%	0%	1%	9%	15%
C					4%	0%	2%	7%	13%
D						0%	0%	0%	1%
F							1%	1%	3%
Total	6%	23%	24%	21%	19%	1%	6%	100%	100%

The diagonal terms in Table A4 correspond to submissions that received the exact same grade from the two reviewers. Overall, this was the case for 32% of the submissions that received two grades. For another 34%, the grades were only one letter grade apart (e.g., grade was A and the other was B+). Hence, for two thirds of all submissions, the reviewers either perfectly agreed with one another or only had a small disagreement. For additional 22% of the submissions, the grades were two letters apart (e.g., A and B), which arguably reflect a moderate degree of disagreement. Larger disagreements between reviewers (of three letters or more apart) occurred in only 12% of the submissions, of which 8% were three letters apart, 3% were four letters apart, and only 1% were five or six letters apart.

We now turn to regression analysis to study how the acceptance decisions were affected by the reviewers' grades, as well as the type and authorship of papers. The dependent variable is a dummy that is equal to 1 if a submission was accepted and 0 otherwise. Explanatory variables include dummies for paper type, authorship, conference year, and grade combinations. Specifically, Grade22 refers to the combination (Positive, Positive), Grade21 to (Positive, Neutral), Grade20 to (Positive, Negative), Grade11 to (Neutral, Neutral), and Grade10 to (Neutral, Negative). The combination (Negative, Negative) is the baseline. In Column (1) we include all submissions (including papers that were submitted more than once), whereas in Columns (2)-(3) we restrict attention to submissions for which we have two reviewers' grades. We use linear probability models as we are interested in the marginal effects of the explanatory variables.

Table A5: Regression analysis of acceptance decision

	(1)	(2)	(3)
T	0.040*	0.042*	0.004
	(0.020)	(0.021)	(0.014)
T/E	0.082*	0.088*	-0.031
	(0.043)	(0.045)	(0.036)
X	0.112**	0.110*	-0.026
	(0.056)	(0.058)	(0.044)
O	-0.462***	-0.445***	0.090
	(0.129)	(0.147)	(0.140)
Single author	-0.048**	-0.051**	-0.059***
	(0.020)	(0.021)	(0.017)
Grade22			0.901***
			(0.017)
Grade21			0.885***
			(0.018)
Grade20			0.362***
			(0.046)
Grade11			0.504***
			(0.034)
Grade10			-0.006
			(0.024)
Constant	0.846***	0.839***	0.093***
	(0.022)	(0.023)	(0.020)
Year	0.000	0.000	0.000
Paper type	0.000	0.000	0.072
Grade			0.000
Observations	2,261	2,042	2,042
R-squared	0.051	0.053	0.590

Notes: The dependent variable is a dummy taking value 1 if the paper was accepted and 0 otherwise. T, T/E, X, O and single author are defined as in Table 8. 2012-2015 are year of conference dummies; 2010 is the base year. Grade22, Grade21, Grade20, Grade11, and Grade10 are dummies for the grade combinations (2 is positive, 1 is neutral, and 0 is negative); Grade00 (two negative grades) is the baseline. The sample in Column (1) is all submitted papers; in Columns (2)-(3) it is all papers for which we have two grades. Year, Paper type, and Grade report the p-value of an F-test of joint significance of the relevant dummies. Robust standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

Columns (1) and (2) in Table A5 show that, as in Table A3, theoretical papers, papers that combine theory and empirics, and experimental papers are more likely to be accepted than empirical papers, which is the baseline, while papers in the "Other" category are least likely to be

accepted. However, once we control for paper quality by including the Grade dummies in Column (3), these results disappear. This implies that the acceptance decisions were independent of the paper's type. Moreover, the huge increase in R-squared in Column (3), suggests that paper quality accounts for the bulk of the variation in the acceptance decision. The fact that there are only minor differences between Columns (1) and (2) suggests that the sub-sample of papers with two reviewers' grades is not very different from the full sample.

The single-author coefficient is negative and significant in all columns. Its value in Column (3) implies that a single-authored paper was almost 6% less likely to be accepted than a co-authored paper with a similar grade combination. The constant term in Columns (1)-(2) implies that an empirical co-authored paper submitted to the 2010 conference had a probability of around 84% to be accepted, while the constant term in Column (3) implies that an empirical co-authored paper submitted to the 2010 conference and had two negative grades still had a probability of 9.3% to be accepted.

The Grade dummies in Column (3) imply that relative to papers with two negative grades submitted in the same year and having similar authorship, papers with two positive grades, or one positive grade and one neutral grade were around 90% more likely to be accepted, papers with one positive and one negative grades were 36% more likely to be accepted, and papers with two neutral grades were 50% more likely to be accepted. Papers with one neutral and one negative grades did not have a significantly different probability of being accepted relative to papers with two negative grades. These results show that the acceptance decision was highly related to the reviewers' grades.[68]

A.4 Logarithmic estimation of the publication lags

In Table 13 in the text we present OLS regressions on the publication lag in years. Here we present estimates where the dependent variable is the log of the publication lag. To this end, we eliminate from the sample the 85 unique published papers for which the publication lag is not strictly positive.[69] In Columns (2)-(3) we further eliminate from the sample papers for which we do not have two reviewers' grades. The explanatory variables are as before.

[68] Welch (2014) and Card and DellaVigna (2020) show similarly that editorial decisions are heavily influenced by the referees' recommendations.

[69] Alternatively, we could have added a constant to the publication lag before taking logs. We chose not to do so, as adding a constant affects smaller values more than larger ones, and may therefore bias the results, see e.g., Campbell and Mau (2021). We do not believe that removing papers that do not have strictly positive publication lags from the sample is problematic, as these papers were arguably ready for publication even before the conference, so presentation at the EARIE conference did not affect their probability of publication.

Table A6: Publication lag regressions

	ln(Publication lag)		
	(1)	(2)	(3)
Presented	0.167***	0.196***	0.153**
	(0.042)	(0.044)	(0.065)
Withdrawn	0.115*	0.134**	0.093
	(0.064)	(0.067)	(0.083)
T	0.118***	0.114***	0.114***
	(0.038)	(0.040)	(0.040)
T/E	0.168*	0.133	0.123
	(0.097)	(0.104)	(0.104)
X	0.030	0.082	0.060
	(0.112)	(0.109)	(0.110)
Single author	0.015	-0.004	-0.007
	(0.041)	(0.043)	(0.043)
Constant	0.939***	0.919***	0.976***
	(0.055)	(0.057)	(0.090)
Grade			0.73
Observations	1,085	979	979
R-squared	0.041	0.046	0.050

Notes: The dependent variable is the logarithm of the publication lag in years. The explanatory variable are defined as in Table 8. All specifications include year of conference dummies. The sample in Column (1) is all published papers with a strictly positive publication lag (papers that were submitted more than once count as a single publication and the publication lag is the gap between the first year of submission and the year of publication), except for the single published paper in the "Other" category; in Columns (2)-(3) we eliminate published papers for which we do not observe two reviewers' grades. All regressions include year of conference dummies. Grade is the p-value of an F-test of the joint significance of the Grade dummies. Robust standard errors in parentheses. *** significant at 1%; ** 5%; * 10% level.

A.5 Descriptive statistics of citations

The following table shows descriptive statics for citations. The top panel shows statistics for citations across different fields; "Other fields" refers to journals in business history, ethics, international business, marketing, and strategy. The middle panel shows citations for high-quality and regular journals, and the bottom panel shows data for IO, economics journals outside IO, and non-economics journals.

Table A7: Descriptive statistics on citations

	mean	sd	p25	p50	p75	p90	N
Field of journal							
Economics	26.12	45.23	5	13	29	61	611
Entrepreneurship	90.04	70.85	37	59	137	222	27
Finance	68.88	121.89	5	22.5	41	249	26
Innovation	80.43	78.75	18	57	118	205	46
OR/Mngt	49.93	45.95	13	34	70	123	27
Other fields	33.84	31.48	9	30	52	83	19
Regular and high-quality journals							
High quality	64.67	89.68	15	33	78	157	156
Regular	26.31	39.47	5	13	30	61.5	600
IO, economics non-IO, non-economics							
IO	23.99	34.52	5	14	29	52	160
Economics, non-IO	26.88	48.48	5	13	29	64	451
Non-economics	68.37	79.27	14	40	96	181	145
Total	34.22	55.93	6	16	37.5	84	756