Retraction Statements and Research Malpractice in Economics

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Abstract

We draw on rational crime theory to help analyse 55 articles that have been retracted from 734 peer-reviewed journals in the field of economics. We highlight and discuss what these findings indicate regarding the nature and pattern of research malpractice in that discipline. Particular attention is given to exploring "no reason" retractions and the policy guidelines of publishers regarding retracted papers. We conclude that the frequent vagueness of retraction statements, and a reluctance to signal research malpractice, generally results in little damage to the reputation of caught, and known, offenders. Thus, a key deterrent to engaging in research malpractice is lacking. To reduce the incidence of research malpractice, we offer several recommendations for publishers and journal editors.

Keywords

Economics, Fraud, Journal, Malpractice, Research, Retractions

JEL Codes

D01, K10, K11, K42, Z0

1. Introduction

Growing concern about the substantial scale of research misconduct (Martin, 2013) has pointed to the need for additional empirical evidence regarding questionable research practices (henceforth, QRPs) in all disciplines. Biagioli and Kenney (2016, p.1944), for example, have called for more information regarding forms of "traditional misconduct – fabrication, falsification, and plagiarism …[and]… new misconduct … fake peer reviews and citation rings."

There is clear evidence that academic economists engage in QRPs (Necker, 2014; Wible, 2016). Studies by Karabag and Berggren (2012; 2016) have analysed QRPs in 6 and 43 retracted papers in economics, respectively. However, knowledge of the frequency, nature and pattern of research malpractice within the discipline remains rudimentary. To address this, we analyse 55 articles that have been retracted from 734 peer-reviewed journals in economics. This is the largest evidential base of retractions analysed to date in peer-reviewed studies in the field of economics. Nonetheless, the results should be regarded as indicative, rather than exhaustive. They draw attention to problems of poor research practice in the field.

As Fanelli (2013, p.1) has argued, it is likely that the statistics obtained in studies of the type we conduct "are proportional not to the prevalence of misconduct but to the efficiency of the system that detects it." Given the secretive and often shameful nature of research malpractice, a complete picture of its prevalence seems unlikely to be obtained. Therefore, we do not suggest that an increasing level of retractions can be equated with an actual rise in research malpractice. Rather, increased retractions seem likely to be caused by increased vigilance on the part of editors, publishers, reviewers and readers. Mindful of these caveats, we contend that the data analysed here offer valuable insight to the forms of malpractice that occur, even if its full extent is not fully documented. Our analysis also raises important issues about the high incidence of "no reason" retractions in economics journals.

We make three important contributions. First, we highlight the forms of malpractice that drive retractions in peer-reviewed journals in economics. In doing so, indicative data regarding the frequency and nature of research malpractice in the discipline are provided. We also explore the incentives that prompt (allegedly) "rational" researchers to use QRPs. This leads us to suggest ways of eliminating

those incentives in order to improve the integrity of research. Second, we recommend some actions that publishers and journal editors should take to deal more effectively with research malpractice. The associated discussion highlights the incidence of "no reason" retractions, reviews publisher guidelines on retraction, and proposes ways of reducing the frequency with which journals retract papers without stating a clear reason. Third, we propose a global protocol for dealing with retracted papers.

We illuminate the incentives for research malpractice with a view to identifying possible remedies. We conclude that the vagueness of retraction statements, and a general reluctance to signal research malpractice, often results in little damage to the reputation of known offenders. Thus, a key deterrent to partaking in research malpractice is lacking. Moreover, deterrents are constrained by the limited resources applied to detection. For example, it is not sufficient to rely on the goodwill and discretionary time of editors and reviewers to assess academic research content. The incentive structures that influence journal editors are generally unhelpful. Editors are likely to be concerned that any signalling of research malpractice will damage the reputation of their journals. Thus, some editors may be less likely to offer clear signals regarding the prospect that QRPs appear in papers they publish.

The present exploration of research malpractice in economics analyses articles retracted from economics journals ranked in journal lists issued by the U.K.'s Chartered Association of Business Schools (ABS) and the Australian Business Deans' Council (ABDC). Both of these lists are used widely beyond the UK and Australia, particularly in countries where formal assessments of research quality occur. Despite much criticism that ranking lists distort research by prioritising the status of individual journals above the content of the articles they publish (e.g. Tourish and Willmott, 2015), these lists are much favoured by university

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managements because of their convenience and auditability.

We begin by reviewing existing evidence of research malpractice in economics, before describing the research methods we employ. Then we present findings, discuss how retracted papers are dealt with by journals, and highlight the need to examine the corpus of publications of authors who have had papers retracted. To improve current practices in respect of retracted papers, we conclude by offering some recommendations to editors and publishers.

2. Literature Review

Here we review studies of cost/benefit incentives in the context of research malpractice, before clarifying the meaning of "research malpractice" and then reviewing prior studies of research malpractice in economics.

Our analysis of researcher engagement in QRPs is informed by traditional economic behaviour theory. This assumes that individuals will seek to maximise their private gain whenever they can. In particular, we follow an "economics of rational crime" framework, drawn from Becker (1968) and Ehrlich (1974, 1996). Becker (1968) theorized that there were parallels between how people respond to opportunities for criminal activity and how they behave in a normal commodity market. Thus, in invoking an "economics of rational crime" framework, we consider the behavioural relations that exist between perpetrators of crime, victims of crime, and those attempting to stop crime.

Becker (1968) and Ehrlich (1974, 1996) have contended that the decisions of a potential criminal follow a rational economic choice: that is, a rational individual will weigh the perceived benefits of a decision to commit a crime against the perceived costs of doing so. The cost to an individual of committing a crime includes the resources used evading apprehension, the punishment if convicted, the probability of being apprehended, the foregone wages, and the taste (or

distaste) for crime (which includes the impact on an individual's moral values, predisposition towards crime, and risk preferences) (Ehrlich, 1996). The costs are greater when the punishment and the chances of apprehension are higher, when the costs of avoiding detection are higher, when an individual has a higher moral objection to crime, and when an individual is more risk adverse. Becker (1993, p. 5) enters the caveat that although "many people (are) constrained by moral and ethical considerations... police and jails would be unnecessary if such attitudes always prevailed." Calculation, he argues, is built into criminally-oriented decisions.

Consistent with this theoretical lens, obvious *benefits* are obtainable from research malpractice, including relief from the time and costs involved in data collection and analysis. Beyond that, Craig et al. (2014) highlight how a culture of routinely subjecting research outputs to performance audit has taken hold in universities, especially those which are determined to improve ranking positions in (inter)national league tables. One consequence of this is that academics are under more pressure than ever to publish in reputable journals. They are rewarded by universities through career progression and salary increases if they do so, but are often penalised if they do not (e.g., by being moved to teaching only contracts) (McNay, 2016).

Offsetting the benefits of engaging in malpractice are the *costs* of doing so. These can be imputed as a combination of the probability of detection, the likely severity of punishment, and the perceived reputational damage to the perpetrator. Such theorising leads to a conclusion that the likelihood of a researcher engaging in QRP's is reduced by any increase in the probability of detection, and in the penalty (including reputational damage) if detected (Wible, 2003; Collins et al., 2007). In line with this, a recent review of rational choice perspectives on crime by Pogarsky et al. (2017, pp. 85-86) concluded that:

The results of longitudinal studies of panel data have revealed that offending is negatively related to the perceived certainty of punishment… and perceptions of sanction certainly are responsive to whether an actor has been punished for past offending experiences… Moreover, the results of randomized experiments have shown that *rule breaking is reducible by clearly communicating an elevated risk of punishment to potential offenders* (italics applied).

In addition, we should be mindful of research findings revealing that ethical dispositions can be overwhelmed by the situations and opportunities people face, to the point that they also sometimes overcome the fear of detection and sanction (Clarke and Cornish, 1985).

If rational academic economists consider that the benefits accruing from engaging in research malpractice outweigh the likely costs, at least some of them are likely to be tempted to engage in research malpractice (Rose-Ackerman, 1978). Lacetera and Zirulia (2011) have argued that the chances of being detected are small because of the unobserved nature of some of the practices involved (e.g., fabrication of data or the gifting of authorship). They contend also that research malpractice is likely to be widespread and hard to detect in research fields (such as economics) where incremental advances are provided, and, where there is low or non-existent scrutiny of the authenticity of research data. Thus, there is ample encouragement for a rational researcher in economics to engage in research malpractice (Misangyi et al., 2008; Pillay and Kluvers, 2014).

In many fields (including economics) the cost of engaging in research fraud is lowered by the reluctance of social science journals to publish replication studies.[1] Replications hold strong prospect of confirming the strength of a field or illustrating problems within it. Yet, many researchers report grave difficulty in publishing replications, particularly in journals where the replicated studies

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[1] For example, in psychology, Martin and Clarke (2017) report that only 3 per cent of journals accept replication studies and that one third actively discourage them.

originally appeared (French, 2012). The infrequency of replication allows poorly supported or errant findings to remain undetected (Madden et al., 1995; Eden 2002; Stroebe et al., 2012; Ioannidis, 2012; Bakker et al., 2012; Denison et al., 2014). This encourages those who are contemplating engaging in research malpractice to actually do so.

In accord with such a view, Hoover (2006) argued that it is rational for an author to engage in malpractice, given current incentives and problems of detection. For example, a plagiarist might be emboldened by knowing that the sole responsibility for exposing a plagiarist falls to an original author or whistle-blower, rather than an impartial sanctioning body. There are likely to be high financial and emotional costs borne by an individual in exposing a plagiarist. This paper promotes discussion of how the processes of detection, deterrence and retraction can be improved.

What Constitutes Research Malpractice?

Research malpractice includes fabrication (invention of data); falsification (inaccurate presentation of research, including omission of inconvenient results); plagiarism (inaccurate or unattributed use of someone else's work) (Banks et al. 2016; Lewis et al., 2011); self-plagiarism (recycling portions of an author's own previous work without acknowledgment) (Bruton, 2014); and financial misconduct (non-disclosure of financial interests in research and misuse of research funds) (Hiney, 2015). These are well-known practices. However, two further less well-known practices are *p*-hacking and HARKing (*Hypothesizing After the Results are Known*).

P-hacking involves such actions as reporting only studies that deliver the desired *p*-value; terminating a study when a desired *p*-value has been reached; and dropping items from survey instruments that prevent attainment of 'desirable' *p*-

values (Simmons et al., 2011; John et al., 2012; Academy of Medical Sciences, 2015). *P*-hacking also includes simply changing reported *p*-levels so that they suddenly become "significant" (Burns and Ioannidis. 2016). A study of approximately 250 retractions in psychology found errors with *p*-values in 10% of papers, of which 90% favoured the authors' interpretations (Bakker and Wicherts, 2011). This supports the view that many retractions attributed to errors in data analysis are likely to have their origins in *p*-hacking or the outright invention of data.

Chambers (2017) describes *p*-hacking as "the sin of hidden flexibility" because how researchers actually analyse their data is deliberately reported selectively or kept secret from editors, reviewers and ultimately readers. This conduct often involves a form of "data torture" in which the data are interrogated mercilessly until they support a given hypothesis. Such an approach risks saturating the literature with false positives, known as Type 1 errors (Starbuck, 2016), and "undead theories" that are used widely, but which are nevertheless unsound (Ferguson and Heene, 2012).

HARKing involves presenting hypotheses as if they were developed *a priori* rather than *ex-post.* (For an example in economics, see http://www.sciencedirect.com/science/article/pii/S030440760100077X). HARKing is claimed to exaggerate the predictive power of theories under study, improve researchers' prospects of obtaining statistically significant results, lead to "the adoption of theories and practices that are assumed erroneously to have obtained solid scientific support," and make "the methods sections of many papers works of creative fiction rather than rigorous accounts of how (and in what sequence) research was conducted" (Authors, 20XX. See also Schwab and Starbuck, 2016; Garud, 2015).

Studies of Research Malpractice in Economics

Table 1 summarises eight studies published between 1986 and 2016 that have

explored the incidence of QRPs in economics. The table reveals high levels of self-admitted QRPs by academic economists: for example, Necker's (2014) survey of 631 European economists found that 24% reported self-plagiarising and 32% reported presenting empirical findings selectively to confirm an argument. These data suggest that the existing level of retractions in economics understate the actual level of malpractice.

Table 1
Studies of Questionable Research Practices in Economics

QRP	Authors	Data Source	Results
QRPs generally	Enders & Hoover 2004	127 editors of economics journals	70% are unlikely to report a case of plagiarism
	Karabag & Berggren 2012	EBSCO Business Source Premier, Emerald, JSTOR, Science Direct journals	6 articles retracted between 2008-2012 in economics journals that lacked a QRP policy or failed to screen for QRPs
	Karabag & Berggren 2016	EBSCO Business Source Premier, Emerald, JSTOR, Science Direct journals	43 articles retracted in economics journals between 2005 and 2015
	Necker 2014	631 European economists	94% had engaged in at least one QRP
	Yalcintas & Selcuk 2015	107 US and European economics departments	69% did not offer research ethics training to junior researchers
Data Fraud	List et al. 2001	134 US economists	4% had falsified research data
	Necker 2014	631 European economists	3% had fabricated some data
Plagiarism	Enders & Hoover 2004	127 editors of economics journals	24% had experienced plagiarism. An average of 42 plagiarism cases were reported per year
	Enders & Hoover 2006	1208 US economists	24% reported having been plagiarised
	Necker 2014	631 European economists	2% had copied from others without citing
Self-plagiarism	List et al. 2001	134 US economists	7–10% self-plagiarised or were guest/ghost authors
	Necker 2014	631 European economists	24% self-reported they had self-plagiarised
P-hacking	Necker 2014	631 European economists	32% had presented empirical findings selectively to confirm an argument
HARKing*	Necker 2014	631 European economists	79% reported engaging in HARKing
Guest authors	Necker 2014	631 European economists	3% had accepted or offered gifts for authorship
	List et al. 2001	134 US economists	7-10% self-plagiarised or were guest/ghost authors
Poor research records	Dewald et al. 1986	154 US authors of economics articles	15% of data sets were accurately recorded and properly documented

* HARKing = Hypothesising After the Results are Known

QRPs in economics arise despite many leading journals in the discipline stating explicitly that they adopt the guidelines of the Committee on Publication Ethics (COPE).[2] Other leading journals in economics comply with COPE guidelines (although this is unstated) in a form of implicit adoption. The "Retraction Guidelines" published by COPE are quite clear. They advise that retraction notices should state "who is retracting the article"; "the reason(s) for retraction (to distinguish misconduct from honest error)"; and should avoid "potentially defamatory or libellous" statements.[3] COPE also advises that "the main purpose of retractions is to correct the literature and ensure its integrity rather than punish authors who misbehave" (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2802086/).

Nevertheless, editors seem to be wary of making retractions. The *Retraction Watch* website (http://retractionwatch.com/) has documented many cases of authors taking legal action to prevent retraction of their papers.[4] The prospect of a disgruntled author suing a journal editor or publisher seems to partly explain the high incidence, reported below, of "no reason" retractions and the general lack of transparency in other retraction notices. The vulnerability of editors to litigation diminishes the prospect of exposing all erring authors.

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[2] Those making such a statement include *The RAND Journal of Economics* and *The Quarterly Journal of Economics.*

[3] The International Committee of Medical Journal Editors (ICMJE) has similar policies. The ICMJE states that "The text of the retraction should explain why the article is being retracted and include a complete citation reference to that article." See http://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/scientific misconduct-expressions-of-concern-and-retraction.html.

[4] For a current case (not in economics) see http://retractionwatch.com/2017/05/03/researcher-sued-prevent-retractions-now-12/

3. Method

Our research questions are:

1. What is the current level of retractions in the field of economics?

2. What are the main reasons given for retractions?

3. How clear are retraction statements and how useful are they for the field?

To address these issues, we analysed 55 articles that have been retracted from 734 peer-reviewed journals in economics. These 734 journals comprised the 316 economics journals listed in the field "ECON" [that is, "Economics, Econometrics and Statistics"] in the ABS academic journal guide (hereafter, *ABS Guide*) published in 2015 (accessible at https://charteredabs.org/academic-journal-guide-2015/); and 418 additional journals classified as "Economics" in the ABDC's journal list published in 2016 (http://www.abdc.edu.au/master-journal-list.php). The *ABS Guide* rates journals according to quality from 4* (highest) to 1. Combining both sources (converting ABDC rankings to the ABS ranking system)[5] yields a journal list comprising 26 journals ranked 4* or 4; 94 ranked 3; 226 ranked 2; and 388 ranked 1. We do not explore hundreds of other non-listed journals, such as "pay for publication" journals and/or "predatory" journals with weak or non-existent review processes.[6] Nor do we explore other modes of research dissemination in economics (such as book chapters, conference proceedings, and working papers).

Using *Google Scholar,* we searched serially for the terms "retraction", "retracted", "withdrawn", and "withdrawal" in each of the 734 economics journals of

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[5] An ADBC quality rating of A*, A, B, C is converted to an ABS quality rating of 4,3,2,1 respectively.

[6] We do not include journals whose publisher has "economic(s)" in their title and which appeared in Beall's List of Predatory Publishers (updated to 23 January, 2017). These publishers include the Asian Economic and Social Society, The Economics and Social Development Organization, International Academy of Business and Economics, and the International Economics Development and Research Center.

interest. This yielded 74 retracted (or withdrawn) journal articles. We excised 19 of these articles because they had not been retracted for engaging in QRPs (five were retracted for unspecified reasons but were subsequently re-published; eleven were retracted because of "accidental duplication" of the article in the same journal; and three were retracted because of an "administrative error," such as publishing a rejected article by mistake. Thus, we were left with 55 articles that had been retracted from economics journals for engaging in QRPs.

To cross-validate this database, we repeated our *Google Scholar* search for retractions using three other sources: the *Web of Science* database from Thomson (https://apps.webofknowledge.com); a database of retractions made available by *Retraction Watch* (http://retractiondatabase.org/RetractionSearch.aspx); and the list of articles identified on the Research Papers in Economics (RePEc) plagiarism and research fraud website (https://plagiarism.repec.org/offenders.html). No additional retracted papers in the 734 economics journals of interest were identified.

We examined statements announcing a retraction to identify the reason for retraction. We identified the journals associated with "no reason" retractions and reviewed the retraction policy guidance provided by their publishers.

Appendix A contains a compendium of key details of the 55 retracted papers identified. This compendium should be a valuable resource in exposing flawed research and avoiding its propagation. The data provided for each retracted paper include year retracted, year published, author(s), abridged title, journal, ranking, citations, and reason for retraction. The quality of the retracting journal is expressed in terms of Journal Impact Factor (JIF), quartile position in the Scimago Journal Rankings List, and (equivalent) ranking in the *ABS Guide*.

There are two ways in which our database under-reports the level of research malpractice. First, some articles known to contain malpractice have been retracted

or otherwise compromised, but have not necessarily been watermarked as such on the journal's webpage, and are difficult to identify. To our knowledge, there is no single exhaustive database from which to identify an article (including those in economics) as being compromised. This problem arises because of the failure of some journals to disclose the fact of retraction clearly. Second, the incidence of retraction contains an inherent bias. Search methods using *Google Scholar* depend on the Internet searchability of journal databases. This searchability was neither reliable nor extensive until about 2007, when the database of journals published on *Science Direct* became searchable using G*oogle Scholar.* This seems to account for why the preponderance of identified retractions occurred during or after 2007. However, by 2010, *Google Scholar* covered 98-100% of academic journals from eight key databases (ACS, Emerald, ERIC, JSTOR, Oxford University, Project MUSE, SpringerLink, and University of Chicago) (Chen, 2010).

4. Results

Profile of Retracted Papers

Table 2 summarises the 55 retracted articles in terms of time taken to retract, number of citations, and journal quality.

Table 2
Profile of Retracted Papers in Economics

Time to Retract		Citations		ABS/AJG Ranking		Scimago Quartile		Journal Impact Factor	
Years	n	Range	n	Rank	n	Quartile	n	Factor	n
< 1	35	0 - 10	42	4*	1	Q1	11	0 - 0.99	39
2	6	11 - 20	9	4	1	Q2	41	1 – 1.99	8
3	11	21 - 30	2	3	12	Q3	1	2 – 2.99	2
4	0	31 - 40	0	2	38	Q4	1	3 – 3.99	1
5	2	41 - 50	0	1	3	Not known	1	4 – 4.99	0
6 to 9	1	51 - 100	2					> 5	0
≥10	0	> 100	0					Not Known	5
Total	**55**		**55**		**55**		**55**		**55**

With one exception, all articles were retracted between 2001 and 2016. The majority (64%) were retracted within a year of publication. In terms of influence, 26 retracted articles had informed further research, as evidenced by a collective 377 citations (according to *Google Scholar*). The remaining 29 retracted papers had no citations. However, this does not necessarily mean they had no effect on scholarly thinking: academics will have spent time studying them, even if they eventually concluded that they did not merit citation. Fourteen retracted articles were published by journals ranked as 3 or above in the *ABS Guide*. Most retractions appeared in journals ranked as 2 (n=38). The article with the most citations (81) was retracted in 2014 for plagiarism from *Economic Modelling,* seven years after publication.

The highest ranked journal to retract a paper was the *American Economic Review* [AER] (rated 4* in the *ABS Guide*). An article by Kunce et al. (2002) in AER was retracted in 2007 by the second and third authors, Gerking and Morgan (see AER, 97(3), p. 1032). These authors apologised because their data did not support the main premise of their article (https://www.aeaweb.org/articles?id=10.1257/aer.97.3.1032). The original article remains accessible in the AER (https://www.aeaweb.org/articles?id=10.1257/000282802762024656) and is not identified as retracted on the AER webpage or anywhere in the document.

Disconcertingly, seven articles involving research malpractice (plagiarism) documented by RePEc have not been retracted and remain available for scholars to access. The websites of the journals involved indicate no concern about the malpractice.[7] This is surprising given the prominence of these journals in their field, shown here in parentheses as (ABS/ABDC/Scimago) indicates: *Applied Economics* (2/B/Q2)*, Economic Modelling* (2/A/Q2)*, Energy Economics* (3/A*/Q1)*, Journal of Air Transport Management* (-/-/Q2)*, Journal of Applied Statistics* (-/-/Q3)*,* and *Kyklos* (3/A/Q2).

Two questions arise. What was the rate of retraction in economics? How does that rate compare with the rate experienced in other disciplines? Based on the calculation method described in footnote 8, we estimate the *approximate* rate of retractions from journals in the field of economics as 1 per 10,000 articles published (that is, a rate of about 0.01%).[8] This rate does not include articles that have been retracted for administrative reasons. Rather, it represents retractions for research malpractice (or "unknown reasons"). Precise calculation of retraction rates and comparisons of them across, and within, disciplines is an exercise fraught with difficulty. Caution should be exercised in reading purported retraction rates to ensure "comparing like for like". Quite often the calculation of individual retraction rates is based on differing methods and underlying assumptions, and is affected by

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[7] These articles are Barros (2008), Barros and Peypoch (2008), Barros et al. (2011), Bassem (2014), Ramos (2001), Fernando and Ramos (1999), and Gottinger (1996).

[8] Thomson Reuters *InCite* lists the number of citable articles published each year. Data are available from this source for 46% of our 734 journals. Over the period 2001 to 2016, the number of established journals increased from 540 in 2001 to 734 journals in 2016. We calculate the average citable articles per journal per year from the *InCite* data and then estimate the total citable articles each year for the all of the journals for which *InCite* does not provide data. Based on this approach, we estimate there were 529,278 articles published between 2001 and 2016. During this period we identify 54 articles retracted from these journals. This represents a retraction rate of of about 0.01% (54/529,278) or 1 in 10,000.

double counting, omissions and other errors.

With these caveats in mind, we report that in science generally, "over the past decade, retraction notices for published papers have increased from 0.001% [that is, 1 in 100,000] of the total to only about 0.02% [2 in 10,000]" (Van Noorden, 2011). Günther (2016), drawing on Sanders (2016), reported that the retraction rate in journals available on the PubMed database has increased steadily in recent decades, and that the rate was about 3.9 per 10,000 articles published in 2007. With respect to PsycINFO database journals, Günther (2016) reported a retraction rate of about 3.6 per 10,000 articles in 2011. Collectively, these data are disturbing. However, the most pressing concern should not be for the relativity of published retraction rates, but with focusing remediation efforts on reducing the incidence of questionable research practices.

In accord with rational crime theory, the deterrent effect of reputational damage to researchers for committing research malpractice is weakened by the inability to reliably identify retracted papers and to disclose reasons for retraction. Furthermore, failure to clearly watermark a retracted paper as having been retracted, or to remove it from a journal's website, may lead other researchers to inadvertently continue to be influenced by its content, and continue to cite it. For example, an article published in *Economic Modelling* (https://plagiarism.repec.org/bassem.html) is cited at least 10 times in peer reviewed journals (found using *Google Scholar*). Despite concerns over plagiarism, and an apology for such from the author (see the preceding website link), the article continues to be available.[9]

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[9] The article is cited in the following journals: *Social Indicators Research* (2016), *Quality & Quantity* twice 2016), *Journal of Water Resources Planning and Management* (2016), *Economic Analysis and Policy* (2016), *South African Journal of Science* (2016), *International Journal of Business and Management* (2015), *Journal of Retailing and Consumer Services* (2015), *Management* (2015), *Iranian Journal of Economic Studies* (2013).

Disclosure of Reasons for Retraction

Table 3 presents a summary of the reasons for retraction. Fake peer review was the major reason for retraction. This occurred in 12 cases, all associated with Khalid Zaman.[10] He co-authored 12 retracted articles in economics (all in *Economic Modelling*). These articles had 19 co-authors and 105 citations. Each retraction notice states that:

> … the Editor was misled into accepting this article based upon the positive advice of at least one faked reviewer report … submitted from a fictitious email account which was provided to the Editor by the corresponding author during the submission … (for an example, see *Economic Modelling* 45, 2015, p. 288).

The retraction statements identify Zaman as the culprit but exonerate his co-authors.

By early February 2017, Zaman had co-authored at least 213 published articles, 19 of which had been retracted. This unusually high rate of publication for an assistant professor should have signalled that questionable short cuts had been taken in the research process. To date, the retractions of papers co-authored by Zaman represent only about 9% of his voluminous output. The extent to which the problems that prompted the existing retractions continue to be present in Zaman's other published papers is open to speculation. There is no reason to assume that all his remaining papers are free of similar blemishes. Without a full investigation of Zaman's output, it is likely that defective work by him will continue to be cited, and inappropriately influence other research.

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[10] Zaman was dismissed from his post as assistant professor in the Department of Management Sciences, CONSATS Institute of Information Technology, Abbottabad, Pakistan on January 23, 2015 "on account of his involvement in fraudulent publications."
(http://ww3.comsats.edu.pk/ciitblogs/BlogsDetailsOuter.aspx?ArticleId=41879).

The ICMJE is quite clear on what to do with the corpus of published work of retracted authors:

The validity of previous work by the author of a fraudulent paper cannot be assumed. Editors may ask the author's institution to assure them of the validity of other work published in their journals, or they may retract it. If this is not done, editors may choose to publish an announcement expressing concern that the validity of previously published work is uncertain. (http://www.icmje.org/recommendations/browse/publishing-and-editorial-issues/scientific- misconduct-expressions-of-concern-and-retraction.html)

In terms of rational crime theory, Zaman's actions suggest that the deterrents in place to curb QRPs (such as the reputational damage arising from published retraction notifications combined with the probability of being apprehended) were considered sufficiently low compared to the benefits of committing research fraud.

Table 3

Reasons for Article Retraction

Reason	n	%
No reason	28	51
No reason, at editor's request	*3*	
No reason, at author's request	*2*	
No reason, "author and/or editor"	*23*	
Fake peer review	12	22
Plagiarism	7	13
Self-plagiarism	4	7
Flawed reasoning/analysis/conclusions	2	4
Multiple submission	2	4
Total	**55**	**100**

Disturbingly, 28 of the 55 retraction notices (in 18 separate journals) did not provide a reason for retraction. Of these, the highest frequency of "no reason" retraction occurred in *Statistics and Probability Letters* (n = 8) and the *International Review of Law and Economics* (n = 3), both published by Elsevier. In respect of 23 of these 28 retracted papers, it is unclear who instigated the retraction (editor alone, author alone, editor and author in concert). There is no further explanation

provided, as the following example demonstrates:

> This article has been withdrawn at the request of the author(s) and/or editor. The Publisher apologizes for any inconvenience this may cause. (*Journal of Economics and Business.* http://www.sciencedirect.com/science/article/pii/S014861951500051X).

In business and management, *p*-hacking and other QRPs are strongly implicated in retractions, although these are often ascribed to problems with data analysis (Author, 20XX). Thus, many such retractions make it clear that *p*-values have been reported incorrectly or inappropriate statistical tests have been used. However, allegations of malpractice are generally avoided, since (conveniently) the original raw data are usually reported by the authors to be unavailable for further analysis. It is unlikely that the field of economics would be completely free of problems arising from *p*-hacking. The extent of the problem is masked by the large number of retractions that offer no reason.

Providing an ambiguous or vague retraction notice diminishes the deterrence of research malpractice by lowering the cost to the researcher of engaging in QRPs. Although some people might infer malpractice by the author, s/he has the option of plausible denial. It means that those who are guilty of research fraud may be able to continue academic work, retain papers in circulation that should justly be investigated, and continue to publish (possibly) fraudulent or defective work in peer reviewed journals.

The 28 "no reason" retractions within a year of publication had generated 46 citations on *Google Scholar*. With one exception, all "no reason" retractions were from a journal published by Elsevier. In general, the level of observed "no reason" retractions (51%) is high in comparison to the level reported in business and management. In the latter discipline area, 10% of retraction notices gave "no reason" or "vague reasons" – such as simply stating there were "errors" in data

analysis, but without explaining what these were (Author 20XX). The much higher rate of "no reason" retraction in economics may be due to the editors of economics journals being "more rational" and less willing to risk legal action from aggrieved authors.

The high volume of retractions from journals published by Elsevier is not reflected in the size of Elsevier's market share – at least as that share is proxied by the proportion of total economics journals it publishes that are represented in the *ABS Guide* and ABDC list (see Table 4). Whilst Elsevier's market share is only 9.5%, it was responsible for 84% of the 55 retracted papers.[11] Elsevier's strong presence in our database of retracted articles may be attributable to its high level of proficiency in detecting QRPs; to it having more conscientious readers; and/or to the economics journals published by Elsevier being more prestigious, and thereby, attracting a high volume of papers containing QRPs.

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[11] The overrepresentation of Elsevier contrasts with the situation reported by Author (20XX) for Business and Management. There, Elsevier published only about 20% of all retracted papers,with a more pronounced spread among other academic publishers (e.g., Taylor and Francis, SAGE, Springer). The leading publisher of retracted papers was a scholarly academy, the American Accounting Association. This was largely because a particularly prolific fraudster, James Hunton, an accounting professor, has had 37 papers retracted (http://retractionwatch.com/category/by-author/james-hunton/).

Table 4
Economics Journals by Publisher

Publisher	n	%
Springer	93	12.7
Wiley	85	11.6
Elsevier	70	9.5
Tayor & Francis	60	8.2
De Gruyter	20	2.7
Oxford University Press	20	2.7
Sage	19	2.6
Cambridge University Press	18	2.4
Emerald	14	1.9
InderScience	13	1.8
Others: < 1% share each	322	43.9
Total	**734**	**100**

We explored whether the publishers named in Table 4 committed themselves to stating clear reasons for retracting an article. Clear policies on retraction, and rigorous enforcement of those policies, would increase the penalties for research malpractice. This would thereby reduce the incentive to engage in such conduct. Table 5 reports the results of this further exploration.

Table 5
Publisher Policies on Stating Reasons for Retraction

Publisher	Source	Policy on reasons for retraction	Best Practice Guidelines Cited with Approbation
Springer	http://resource-cms.springer.com/springer-cms/rest/v1/content/19862/data/v1/Pubslishing+Ethics+Guide+for+Editors	States clearly the need to comply with COPE "Retraction Guidelines." These advise that retractions should "state the reason(s) for retraction (to distinguish misconduct from honest error)."	COPE
Wiley	https://authorservices.wiley.com/asset/photos/Best-Practice-Guidelines-on-Publishing-Ethics-2ed.pdf	The retraction notice "should enable the reader to identify and understand why the article is being retracted, or should explain the editor's concerns about the contents of the article."	COPE and ICMJE
Elsevier	https://www.elsevier.com/about/our-business/policies/article-withdrawal	No clear statement.	ICMJE and National Library of Medicine. The latter states it "does not differentiate between articles that are retracted because of honest error and those that are retracted because of scientific misconduct or plagiarism."
Taylor and Francis	http://authorservices.taylorandfrancis.com/custom/uploads/2016/01/Author-services-correction-policy.pdf	"The rationale for a retraction will be given in a Statement of Retraction."	
De Gruyter	http://degruyteropen.com/you/journal-author/editorial-policies/other-stm/	"A Retraction Note detailing the reason for retraction will be linked to the original article."	COPE
OUP	https://academic.oup.com/journals/pages/authors/ethics	No clear statement.	COPE and ICMJE
Sage	https://au.sagepub.com/en-gb/oce/manuscript-submission-guidelines%20#PublicationEthics	No clear statement.	COPE and ICMJE
CUP	https://www.cambridge.org/core/about/ethical-standards	No clear statement.	COPE and ICMJE
Emerald	http://www.emeraldgrouppublishing.com/authors/writing/withdrawal.htm and https://www.ifla.org/publications/iflaipa-joint-statement-on-retraction-or-removal-of-journal-articles-from-the-web	Adheres to the principles outlined in the International Federation of Library Associations/International Publishers' Association, A Joint Statement on "Retraction or Removal of Journal articles from the Web".	U.S. National Library of Medicine guidelines at https://www.nlm.nih.gov/pubs/factsheets/errata.html
Inder science	http://www.inderscience.com/papers/policies.php	No accessible statement	

Most publishers stated no clear commitment to identifying explicit reasons for retraction. This means that no reasons, vague reasons, or euphemisms are provided — if any are provided at all. Yet several publishers refer with approbation to the COPE and ICMJE guidelines. These require a statement of the reasons for retraction. But our analysis points to this rarely occurring. For example, Wiley cites the COPE and ICMJE guidelines and states that a retraction notice "should enable the reader to identify and understand why the article is being retracted, or should explain the editor's concerns about the contents of the article." Nonetheless, it includes a diluting rider that "The COPE guidelines have no legal force and it is generally prudent to avoid 'naming and shaming' authors and simply to confirm a retraction, when necessary, in neutral and concise terms." This stance seems inconsistent with the COPE (and ICMJE) guidelines, both of which advise that clear reasons should be given for retraction.

The lack of clarity regarding reason for retraction opens the possibility that some retractions arising from fabrication and falsification are attributed instead to "errors." Such an outcome will spare the feelings of the authors involved, but reduce the disincentives to engage in malpractice by ensuring that perpetrators can continue with their research careers. Note that the National Library of Medicine (NLM) policy (cited approvingly by Elsevier) allows the practice of not differentiating "between articles that are retracted because of honest error and those that are retracted because of scientific misconduct or plagiarism." Overall, the publishers' policy statements are insufficiently rigorous, often ambiguous, and frequently unclear about what actions to take in response to serious research-related offences.

Remedies

Endeavours to reduce the level of research malpractice in published research

should seek to reduce the benefits obtained from doing so, and increase the likely costs involved, consistent with rational crime theory. This could include the ambitious task of persuading universities to be less preoccupied with their ranking in various national and international league tables; to be less intense in their hyper-drives to "improve" research performance; and to commit to support a moratorium on awarding bonuses to academics for publishing in (what are perceived to be) top journals (Chapman and Lindner, 2016). We contend that while current priorities prevail, the problems discussed will intensify. In terms of costs, increasing the certainty of enforcement and the associated fine (or punishment) will at least help deter some offenders. It would also ensure that fewer offenders are able to continue publishing problematic research in peer reviewed journals.

Publishers' own commercial interests and their publicly stated commitments to "ethicality in publishing" should prompt stronger action on their part. The growing awareness of malpractice diminishes public confidence in the integrity of research. Publishers share in the problems this causes, since if the view that something is seriously awry gains momentum, more questions will be asked about how publishers contribute positively to the publication process. At present, publishers can claim to be safeguarding quality by providing robust editorial support, and by eliminating poor work from journals. If that claim erodes, so does much of their unique selling point. People may become more insistent in asking whether the traditional model of journal publication has outlived its usefulness. On the other hand, if publishers are seen to take robust action against malpractice then they will put themselves in a stronger position to show that they add value. Below, with a view to improving the current situation, we make four specific proposals that are directed mainly at publishing houses and journal editors.

Proposal 1

The publishing house responsible for the journal from which a paper is retracted for

research malpractice (henceforth the "retracting publishing house") should be required to collate an inventory of all journal articles and other scholarly works published by the retracted author. The retracting publishing house should then formally advise other publishing houses responsible for publishing the works identified in this inventory (henceforth the "affected publishing houses") of the retraction. The affected publishing houses will have a duty to inform their relevant journal editors of the details of the retraction. They should require their editors to audit any paper they have approved for publication by the retracted author, with a view to identifying any research impropriety. Pending the completion of such an audit, the paper(s) under scrutiny should be flagged on the title page, within the bounds of legal etiquette, with a clear warning to readers of the possibility of impropriety. Affected publishing houses should also be required to inform the corresponding author of all papers which cite the retracted paper, of the paper's retraction.

Proposal 2

All journals should be required to issue clear statements of the reasons for retraction, in accord with recommendations of COPE and ICMJE (referred to earlier). If this is not done, then journal home pages should remove any explicit statement or implicit suggestion of compliance with COPE and ICMJE (or similar) guidelines regarding ethical publishing. Simply stating who instigated a request for retraction is not helpful to the wider scholarly community. Such statements obscure the extent of malpractice and limit the possibility of others learning from errors that have occurred.

Proposal 3

The text of a retracted paper should be clearly watermarkled as retracted. Otherwise, defective work will continue to be cited and influence scholarly

thinking.[12] All retracting publishing houses should ensure they remove the text of all retracted papers from journal web sites and other databases and search engines.

Proposal 4

Publishing houses should require authors to supply de-identified raw data with all submissions. We understand the proprietary attitude of many academics to "their" data. However, we believe that researchers have a greater obligation to demonstrate ethical research practices by lodging data in a way that facilitates inspection, re-analysis and replication. This would act as a bulwark against the perpetration of data fraud, or poor analysis, and enable journals to give clearer justifications for retractions. It means that poor statistical analysis or unjustifiable forms of *p*-hacking would be identified and dealt with more easily. The burden of proof regarding data authenticity and data analysis needs to shift from those with questions, to those who produce the results (Clark, 2017). Some journals now do what we suggest. We argue that it should become common practice.

5. Discussion and Conclusion

We have highlighted the paucity of information provided about the reasons for retracting articles from peer-reviewed journals in economics. The work of *Retraction Watch*, RePEc, and the authors cited in Table 1, go some way to redressing the balance. Our results strongly suggest the need for economics journals to be much more explicit about the reasons for retraction. Two benefits would flow from this. First, there would be a much clearer indication of the level of retraction for unacceptable research practices, including data fraud, plagiarism

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[12] For example, Bar-Ilan and Halevi (2017) studied fifteen papers retracted in 2014 that had been cited 267 times between January 2015 and March 2016. They found that 83% of these citations were positive.

and self-plagiarism. Second, it would be much clearer to researchers in economics that engaging in research malpractice will harm their careers. This would increase the threat of reputational damage (a key attribute to deterring research malpractice in a rational crime framework) and reduce the influence of such articles in further research.

The issues raised above are of fundamental importance. There is growing concern whether State funding for universities is money spent wisely and ethically (Goodstein, 2010). Each instance of unethical behaviour damages public trust in academic research at a time when such trust is vitally important. Yet, the reward and incentive systems within academia seem perversely designed to encourage poor practice (Harris, 2017). This points to the likelihood that the problems discussed will remain, and possibly intensify. Nonetheless, there needs to be greater awareness of QRPs and their harmful effects. Action by multiple stakeholders is required to increase the costs and reduce the benefits of these practices.

The proposals made here are intended to stimulate debate and to prompt the academic community to move forward on these crucial issues. One way this could occur would be to investigate, and to model, the incentives that influence journal editors to *not* publish specific reasons for retraction.[13]

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[13] We are indebted to a reviewer for this suggestion.

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Appendix
Retracted Articles from Economics Journals
(arranged by year of retraction with some contractions to shorten "reason for retraction")
[Key: AJG = CABS Academic Journal Guide ranking; Anal. = Analysis; Econ. = Economic(s); Fin. = Finance; Int. = International; JIF = Journal Impact Factor; J. = Journal of; Prob. = Probability; SQ = Scimago Quartile; Stats. = Statistics; Rev. = Review; N = the journal does not have an impact factor, or is not listed by Scimago]

	Year retracted / Year published	Author(s)	Abridged title	Journal	AJG/JIF/SQ / Citations	Reason for retraction
1	2016/15	Goorha	Sequencing ideas into innovations through pure thought	Econ. Letters	3/0.5/Q2/1	**Plagiarism:** "This article has been retracted at the request of the author following disclosure that data and text in the article had been copied from: Ivashchenko and Novikov (2006) Model of the Hierarchy of Needs, Automation and Remote Control, 67(9), 1512–1517"
2	2016/15	Rosenbaum	Sensitivity analysis for average treatment effects in matched observational studies	Biometrika	4/1.4/Q1/0	**No Reason:** "This article has been retracted on the request of the author."
3	2016/16	Meinzer	Social mobility in the early middle ages	Explorations in Econ. History	3/N/Q1/0	**No Reason:** "The publisher regrets that this article has been temporarily removed. A replacement will appear as soon as possible in which the reason for removal … will be specified, or the article will be reinstated."
4	2015/15	Page, Scott-Clayton	Improving college access in the United States	Econ. of Education Rev.	2/0.97/Q1/0	**No Reason:** Cites the regret notice immediately above. The article was not reinstated but published under a similar title in 2016. No reason for removal has been found.
5	2015/15	Hagendorff	Governance & risk in banking	J. Econ. & Business	1/N/Q2/0	**No Reason:** "This article has been withdrawn at the request of the author(s) and/or editor."
6	2015/15	Benoit	Virtue of impatience when trading split orders	Quarterly Rev. Econ. & Fin.	2/N/Q2/0	As immediately above.
7	2015/15	Zientara, Kujawski	Polish employees' intentions to migrate	Int. Econ. & Econ. Policy	2/N/Q4/0	**Self-plagiarism:** "Upon request of the authors, this article is retracted because of substantial overlap with content published in [the title and authors of a journal article in the Polish language is provided].
8	2015/15	Ortmann	Experimental turn in Econ.	J. Econ. Psychology	3/1.23/Q1/0	**No reason:** "This article has been withdrawn at the request of the author(s) and/or editor."
9	2015/13	Wang	How ICT penetration influences Productivity Growth	Econ. Dev. Quarterly	2/0.83/Q2/0	**Self-plagiarism:** "The author requested the article be withdrawn after publication on Online First but prior to publication in the February 2015 issue, informing the journal that the paper included the original dataset and excerpts from an earlier draft of the paper co-written by the author and colleagues."
10	2015/13	Zaman, Khilji	Relationship between growth & poverty in forecasting framework	Econ. Modelling	2/0.83/Q2/4	**Fake peer review:** "… the Editor was misled into accepting this article based upon the positive advice of at least one faked reviewer report … submitted from a fictitious email account … provided to the Editor by the corresponding author … Dr Zaman wishes to admit sole responsibility and to state that his co-authors were not aware of his actions."

	2015/13	Bashir, Xu, Zaman, Akhmat, Ikram	Impact of foreign political instability on Chinese exports	Econ. Modelling	2/0.83/Q2/3	As immediately above.
11						
12	2015/13	Zaman, Khilji	The growth–inequality–poverty triangle	Econ. Modelling	2/0.83/Q2/9	As immediately above.
13	2015/13	Salar, Zaman, Khilji	Consequences of revenue gap	Econ. Modelling	2/0.83/Q2/1	As immediately above.
14	2015/13	Mudakkar, Uppal, Zaman, Naseem, Shah	Foreign exchange risk in a managed float regime	Econ. Modelling	2/0.83/Q2/0	As immediately above.
15	2015/13	Rustam, Rashid, Zaman	Audit committees, compensation incentives & corporate audit fees	Econ. Modelling	2/0.83/Q2/10	As immediately above.
16	2015/12	Zaman, Khan, Ahmad	Foreign direct investment & pro-poor growth policies	Econ. Modelling	2/0.83/Q2/17	As immediately above.
17	2015/12	Hassan, Zaman	Effect of oil prices on trade balance	Econ. Modelling	2/0.83/Q2/17	As immediately above.
18	2015/12	Zaman, Izhar, Khan, Ahmad	Financial indicators & human development	Econ. Modelling	2/0.827/Q2/15	As immediately above.
19	2015/12	Zaman, Khan, Ahmad, Khilji	Agricultural technologies & carbon emissions	Econ. Modelling	2/0.83/Q2/13	As immediately above.
20	2015/12	Naz, Mohsin, Zaman	Exchange rate pass-through in to inflation	Econ. Modelling	2/0.83/Q2/12	As immediately above.
21	2015/12	Moshin, Zaman	Distributional effects of rising food prices	Econ. Modelling	2/0.83/Q2/4	As immediately above.
22	2014/14	Li, Shi	Multidimensional BSDEs with uniformly continuous coefficients	Stats & Prob. Letters	2/0.59/Q2/0	**No Reason:** "This article has been withdrawn at the request of the author(s) and/or editor."
23	2014/13	Gerasimou	Equivalence of continuity & hemicontinuity for preference preorders	J. Mathematical Econ.	3/0.74/Q2/0	As immediately above.
24	2014/09	Maniar, Bhatt, Maniyar	Expiration hour effect of futures & options markets	Int. Rev. Econ. & Fin.	2/1.70/Q1/12	**Plagiarism:** "This article has been retracted at the request of the Editor. The authors have plagiarized part of a paper that had already appeared."
25	2014/07	Zhang, Da,	Nonlinear duopoly	Econ.	2/0.83/Q2/81	**Plagiarism:** "This paper has been removed on the grounds of plagiarism. This

		Wang	game with heterogeneous players	Modelling		case was investigated by the RePEc plagiarism committee and plagiarism was confirmed."
26	2013/13	Barczyk	Kolodko, truth, errors, & lies	Econ. Systems	2/0.65/Q2/0	As immediately above.
27	2013/11	Shin, Hwang	Examining the factors affecting the rate of IPTV diffusion	J. Media Econ.	1/0.42/Q2/7	**Self-plagiarism:** "… data reported in this article was reproduced identically from data published in the following articles authored or co-authored by Prof. Shin of Sungkyun kwan University, South Korea …"
28	2013/10	Baek, Park	Convergence of weighted sums for arrays of negatively dependent random variables	J. Stat. Planning & Inference	2/0.67/Q2/11	**Multiple submissions**: "The article is a duplicate of a paper … already … published in the J. Theoretical Prob. (2010), 23: 362-377. One of the conditions of submission … is that authors declare explicitly that the paper is not under consideration for publication elsewhere … this was not detected during the submission process. As a sanction, J. Theoretical Probability will not allow the authors … to participate in the journal in any way until Jan. 1, 2018."
29	2012/12	Rosoi	Financial integration & international transmission of business cycles	Applied Econ. Letters	1/0.30/Q3/0	**Plagiarism:** "This article substantially reproduced the content of … Fidrmuc, Iwatsubo and Ikeda, Financial integration and international transmission of business cycles … Discussion Papers 1007, Graduate School of Economics, Kobe University, 2010."
30	2012/12	Fei, Liu	Stochastic set differential equations	Stats & Prob. Letters	2/0.59/Q2/0	As immediately above.
31	2012/12	Batabyal, Nijkamp	A Schumpeterian model of entrepreneurship, innovation, & regional economic growth	Int. Regional Science Rev.	2/1.18/N/18	**No Reason**
32	2012/11	Zulkhibri	Corporate financing choices & monetary policy	Econ. Systems	2/0.65/Q2/0	**No Reason:** "This article has been withdrawn at the request of the editor."
33	2011/11	Cheng, Zhang	Pricing American options analytically	J. Econ. Dynamics & Control	3/1.02/Q2/2	As immediately above.
34	2011/10	Lau	More powerful non-linear panel unit root test & its application	Econ. Modelling	2/0.83/Q2/0	**No Reason:** "This article has been withdrawn at the request of the author(s) and/or editor."
35	2010/10	Gervini	Functional singular value decomposition for bivariate stochastic processes	Computational Stats & Data Anal.	3/1.4/Q1/0	**Multiple submissions**: "This article was submitted on Jan 26, 2009 to Computational Stats & Data Anal. (CSDA) and … was submitted on Jan 27, 2009 to J. Multivariate Anal. (JMVA). The paper was rejected by JMVA and after two revisions it was accepted by CSDA in July 2009. On November 17, 2009, the Editor-in-Chief was notified … that … the paper was submitted to two journals around the same time … the author indicated that he [did so] to ensure prompt publication. One of the conditions of submission … is that authors declare explicitly that the paper is not under consideration for publication elsewhere … this article represents a severe abuse of the scientific publishing system."
36	2010/09	Mehrara	Effects of oil price shocks on industrial production	Energy Econ.	3/2.71/Q1/0	**No reason:** "This article has been withdrawn at the request of the author."

	Date	Authors	Title	Journal	Metrics	Reason
37	2010/09	Chong, Guillen, Lopez-de-Silanes	Corporate governance reform & firm value in Mexico	J. Econ. Policy Reform	2/0.86/Q2/22	**Self-plagiarism:** "This article substantially reproduced the content of a book chapter edited by Chong and Lopez-de-Silanes. Corporate Governance and Firm Value in Mexico ... published in ... a co-publication of Stanford University Press, the World Bank and the Inter-American Development Bank ... in 2007."
38	2010/08	Hahn	Convergence of fictitious play in games with strategic complementarities	Econ. Letters	3/0.51/Q2/5	**Flawed reasoning/analysis:** "Because of an error discovered by Berger, Hahn is retracting his letter. The paper claims to prove that a strategy-adjustment process called 'fictitious play' converges to an equilibrium in games with strategic complementarities. However, as shown by Berger, the proof of convergence is flawed."
39	2009/09	Wei, Li	Ecological value at risk	Ecological Econ.	3/2.72/Q1/4	**No reason**: "This article has been withdrawn at the request of the author(s) and/or editor."
40	2009/09	Noailly, Nahuis	Entry & competition in the Dutch notary profession	Int. Rev. Law & Econ.	2/0.34/Q2/0	**No reason:** "This article has been withdrawn at the request of the editor."
41	2009/09	Wagner	Legal uncertainty	Int. Rev. Law & Econ.	2/0.34/Q2/0	**No reason:** "This article has been withdrawn consistent with Elsevier Policy on Article Withdrawal (http://www.elsevier.com/locate/withdrawalpolicy)."
42	2009/07	Nofsinger	Social mood	J. Behavioral & Experimental Econ. (formerly J. Socio-Econ.)	2/0.34/Q2/14	**Plagiarism:** "Dr. Nofsinger's version derived its thesis and substantially its content from a pre-existing discussion paper by Prechter, Goel and Parker that he reviewed prior to producing his iteration. Contrary to the publisher's policy on originality and plagiarism, Dr. Nofsinger's submission failed to cite the earlier work. Dr. Nofsinger has agreed to retract his paper."
43	2008/08	Djankov	A response to "Is doing business damaging business?"	J. Comparative Econ.	3/1.17/Q2/22	**No reason:** "This article has been withdrawn consistent with Elsevier Policy on Article Withdrawal"
44	2008/08	Fukuyama, Neupane	Convergence of weighted averages of pairwise independent random variables	Stats & Prob. Letters	2/0.59/Q2/0	As immediately above.
45	2008/07	Said, Wegman, Sharabati, Rigsby	Social networks of author–co-author relationships	Computational Stats & Data Anal.	3/1.4/Q1/62	**Plagiarism:** "This article ... contain[s] portions of other authors' writings on the same topic in other publications, without sufficient attribution ... The principal authors ... acknowledged that text from background sources was mistakenly used in the Introduction without proper reference to the original source."
46	2007/02	Kunce, Gerking, Morgan	Effects of environmental & land use regulation in the oil & gas industry	American Econ. Rev.	4*/3.67/Q1/5	**Incorrect conclusion**: "Findings presented in the original paper cannot be substantiated because the data furnished by IHS Energy Group cannot be used to identify differences between drilling costs on lands under different ownership."
47	2007/07	Ullrich	Inflation expectations of experts & ECB communication	North American J. Econ. & Fin.	2/N/Q2/0	**No reason:** "This article has been withdrawn consistent with Elsevier Policy on Article Withdrawal."
48	2007/07	Meintanis	Exponentiality against non-parametric family of life distributions	Stats & Prob. Letters	2/0.595/Q2/0	As immediately above.
49	2007/07	Lanconelli	Mehler's formula & Jensen's inequality	Stats & Prob. Letters	2/0.59/Q2/0	As immediately above.

50	2005/05	Cooter, Raja, Schäfer	Intro to workshop on law & econ. devp.	Int. Rev. Law & Econ.	2/0.34/Q2/0	As immediately above.
51	2005/05	Meerschaert	Norming operators for generalized domains of attraction	Stats & Prob. Letters	2/0.59/Q2/0	**No reason:** "This article has been withdrawn at the request of the author(s) and/or editor."
52	2005/04	Pingyan, Shixin	Complete convergence for arrays	Stats & Prob. Letters	2/0.59/Q2/0	As immediately above.
53	2004/04	Sheena	On unbiasedness of invariant tests of sphericity	J. Multivariate Anal.	3/0.93/Q1/0	As immediately above.
54	2001/01	Furstenberg, Kaga	Linear regression & second moments	Stats & Prob. Letters	2/0.59/Q2/0	As immediately above.
55	1982/81	Nath, Enns	Optimal service rates in the multiserver loss system	J. Applied Prob.	2/0.59/Q2/6	**Plagiarism:** "... This paper is almost identical in form and content to that published by Tahara and Nishida ... in the J. of the Operations Research Society of Japan, 18, 1975, 90-96."