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Invited Viewpoint: How well does the Information Systems discipline fare in the Financial Times' top 50 Journal list?

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Invited Viewpoint: How well does the Information Systems discipline fare in the Financial Times' top 50 Journal list?[1]

Abstract

This paper investigates the performance of the Information Systems (IS) discipline as reflected in the scholarly impact of the three IS journals that are included in the Financial Times' top 50 journals (FT50), the four IS journals in the top tiers of the Chartered Association of Business Schools' Academic Journal Guide (CABS AJG), and the eight journals that comprise the Association for Information Systems (AIS) Senior Scholars' Basket of Journals (AIS Basket). Journal lists, when framed as a form of 'strategic signaling', are used to by institutions to communicate values and priorities to scholars. Through strategic signaling, journal lists are performative and have the potential to shape and constrain research activity. Given the strategic and performative role of journal lists, it is important that the journals that constitute those lists have substantial impact. To measure the scholarly impact of journals we propose a new measure, the HMJ index, which comprises an equally-weighted combination of journal H-index, median citations per article, and Journal Impact Factor (JIF). Using the HMJ index, the results show that all eight AIS Basket journals are performing at a level that is commensurate with the other journals that make up the FT50. The results further show substantial differences between the FT50 journals, such as the number of articles published per annum. Implications for IS scholars, IS groups, and the IS discipline are identified, together with recommendations for action.

Keywords: Journal lists; Journal rankings; FT50; AIS Basket; Journal Impact Factor; CABS Academic Journal Guide

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[1] All Viewpoint articles are by invitation only. Viewpoints may or may not involve empirical evidence and are often provocative or introduce an interesting new line of enquiry. Regardless, Viewpoint articles must be well-referenced and rigorous in their logic and arguments, and are subject to careful review, over multiple rounds by an appointed panel, including at least one member of the editorial team.

1   INTRODUCTION

There are many rankings of journals used in business schools, but a widely used and influential list is that of the Financial Times newspaper. As a broad-based list, the FT50 (an abbreviation for 'the Financial Times' top 50 journals') seeks to identify the 'top' 50 journals in the disciplines generally researched by business schools. This journal list and other listings, such as the Chartered Association of Business Schools' Academic Journal Guide (CABS AJG), have significant implications for business schools, for academic disciplines, and for individual researchers (Walker et al., 2019). For example, the count of the number of faculty member publications in the FT50 list is used to calculate the FT's research score for business schools. This research score then accounts for 10% of the Global MBA, Executive MBA and Online MBA rankings produced by the Financial Times. Such rankings impact on business schools, affecting their ability to attract students and to set tuition fees, to attract high quality staff, to win research grants, and to engage in partnerships. For individual researchers, publishing in FT50 journals conveys considerable prestige, impacting on their ability to secure a post, to advance their career, and to increase their earnings power. Indeed, many institutions pay 'bonuses' in the form of research funds to academic members of staff for each publication in a highly-ranked journal (with FT50 articles often attracting a premium). At an institutional level, the cumulative sum of the reputations of their staff, strongly impact an institution's ability to attract high performing staff and students, as well as external research funding. Ghobadi and Robey (2017) frame the role of best publication awards as a form of 'strategic signaling' (Skaggs and Snow, 2004) and argue that they can be used to shape and develop a research field. Journal lists are a yet stronger and more potent form of strategic signaling in research. Organizations, such as the Financial Times, signal which journals matter, for example, through the FT50, and business schools, in turn, draw on these lists in order to communicate values and priorities to their academic staff.

However, journal lists are not without controversy. Davidson (2019) raises concern about the performativity of journal lists in which the '*rich get richer*', limiting the diversity of journals and potentially diminishing the quality of research. Others have warned of the dangers of using the ranking of a journal as a proxy for the quality of an article, and by

extension as an assessment of the performance of individual scholars (e.g., Cuellar et al., 2016; 2019). Despite these concerns, journal lists play an important role for scholars, departments, higher education institutions, and governments in making assessments of research outputs and in allocating resources. In short, journal lists are likely to remain a feature of the academic landscape (George, 2019).

The Information Systems discipline, the scholars of which are often affiliated to business schools, has three IS journals in the FT50: *MIS Quarterly* (MISQ), *Information Systems Research* (ISR) and, after the most recent revamp of the list, the *Journal of Management Information Systems* (JMIS). The CABS AJG adds the *Journal of the Association for Information Systems* (JAIS) into the top tier of its journal list. Additionally, the Information Systems discipline has its own journal list, the Association for Information Systems (AIS) Senior Scholars' Basket of Journals, which contains eight journals (three of which are also included in the FT50). Together, these journal lists – the FT50, the CBS AJG, and the AIS Basket – when used as part of a strategic signaling process - play a significant role in the life of IS scholars, IS groups, and the IS discipline.

In this paper we investigate the *characteristics* and *scholarly impact* (based on citation counts and related metrics) of the journals that comprise the FT50 and the AIS Basket. Given the strategic role of journal lists, IS scholars, in managing their research careers, need to be aware of metrics such as how many articles each journal publishes a year and its Journal Impact Factor (JIF) (InCites, 2018) when considering where to submit their research. IS groups should understand the profile and impact of the journals that constitute the FT50, CABS AJG, and AIS Basket lists when recruiting and considering reward and recognition. Given the signaling of such rankings, the IS discipline needs to gain a deeper insight into the impact of the journals in these lists in order to assess whether the appropriate journals are included, how well the IS discipline performs relative to other business disciplines, and whether there is sufficient and appropriate coverage of IS in lists such as the FT50. By overlapping the FT50 and AIS Basket lists we can further see how well the five AIS journals that are not in the FT50 compare against the three that are in the FT50, the four in the CABS AJG, and against the FT50 as a whole.

2   BACKGROUND

We start by introducing the object of our investigation – the FT50 and AIS Basket journal lists. As noted, the FT50 is an important source of reputational value for business schools while the AIS Basket is a source of reputational value for those scholars who identify as part of the IS community. These two lists intersect, with three IS journals being included in both lists. We then consider the impact of journal lists and their role as strategic signaling devices. Finally, we propose a method for measuring the scholarly impact of the journals that comprise those lists.

The FT50 and AIS Basket journal lists

In calculating its annual ranking of business schools and MBA programs the Financial Times uses a number of indicators, one of which is a research ranking. The FT research rank for its 2016 ranking was calculated '*according to the number of articles published by current full-time faculty members in 45 selected academic and practitioner journals between January 2013 and October 2015. The FT45 rank combines the absolute number of publications with the number weighted relative to the faculty's size*.' (Ortmans, 2016a). The research ranking constitutes 10% of the overall ranking of a business school.

In May 2016 the Financial Times conducted a review of the journals used to calculate the research ranking of business schools: '*Over 200 schools were invited to submit up to five new journals to include and five journals to exclude from the previous list. A total of 140 schools submitted their votes, a response rate of 67 per cent*' (Ortmans, 2016b). The outcome of this review is that the FT45 has become the FT50. Four journals have been dropped: *Academy of Management Perspectives*, *California Management Review*, *Journal of the American Statistical Association*, and *RAND Journal of Economics*. Nine new journals were added: *Human Relations*, *Journal of Management*, *Journal of Management Information Systems*, *Journal of the Academy of Marketing Science*, *Manufacturing and Service Operations Management*, *Research Policy*, *Review of Economic Studies*, *Review of Finance*, and the *Strategic Entrepreneurship Journal*.

Other journal lists and rankings for business management exist, such as the Australian Business Deans Council (ABDC, https://abdc.edu.au/research/abdc-journal-

list/), in addition to the UK-based Chartered Association of Business Schools (CABS) *Academic Journal Guide* ranking (Chartered Association of Business Schools, 2018). The CABS and ABDC rankings are more comprehensive and contain the FT50 journals as a subset. Yet, the FT50, with its relatively small and select set of journals and the backing of a global financial newspaper, has achieved high academic kudos.

Additionally, and as noted, the Information Systems discipline further has its own journal list, the Association for Information Systems (AIS) Senior Scholars' Basket of Journals (https://aisnet.org/page/SeniorScholarBasket), which contains eight journals. In addition to the three included in the FT50 (i.e., *Information Systems Research* (ISR), *MIS Quarterly* (MISQ), and the *Journal of MIS* (JMIS) the remaining, non-FT50, journals are: *European Journal of Information Systems* (EJIS), *Information Systems Journal* (ISJ), *Journal of AIS* (JAIS), *Journal of Information Technology* (JIT), and *The Journal of Strategic Information Systems* (JSIS). The declared intent of the IS Basket Journals is noted as:

> *'The College of Senior Scholars encourages colleagues, as well as deans and department chairs, to treat a "basket" of eight journals as top journals in our field. Such a list is intended to provide more consistency and meaningfulness to tenure and promotion cases'. (*https://aisnet.org/page/SeniorScholarBasket)

While the IS Senior Scholars Basket '*emphasizes that this list should not be construed as a replacement for assessments based on objective measures such as citation indices or author affiliation indices*' it is all too easy for recruitment, tenure and promotion committees to focus on the number of papers published in a list such as the FT50 or the AIS Basket (a practice that Cuellar et al., (2019) label CARV – counting articles in ranked venues) and to pay too little attention to impact, content, and affiliation when evaluating applicants.

We assess the impact of the FT50 journals and see how the eight AIS Basket Journals perform in this company. Analysis of the FT50 journals, supplemented by the AIS Basket journals, helps us understand the impact these journals have and to see how the AIS Basket journals are performing in the broader management context. We also examine how the IS discipline is performing in the context of management disciplines using the Chartered Association of Business Schools (CABS) subject areas to categorize journals into fields of study (Table 1).

Journal	CABS subject area	Journal	CABS subject area
Accounting Review	Accounting	Journal of Management Studies	General management
Accounting, Organizations and Society	Accounting	MIT Sloan Management Review	General management
Contemporary Accounting Research	Accounting	Human Resource Management	Human resource management
Journal of Accounting and Economics	Accounting	Information Systems Research	Information management
Journal of Accounting Research	Accounting	Journal of Management Information Systems	Information management
Review of Accounting Studies	Accounting	MIS Quarterly: Management Information Systems	Information management
American Economic Review	Economics	Research Policy	Innovation
Econometrica	Economics	Journal of International Business Studies	International business
Journal of Political Economy	Economics	Journal of Consumer Psychology	Marketing
Quarterly Journal of Economics	Economics	Journal of Consumer Research	Marketing
Review of Economic Studies	Economics	Journal of Marketing	Marketing
Entrepreneurship: Theory and Practice	Entrepreneurship	Journal of Marketing Research	Marketing
Journal of Business Venturing	Entrepreneurship	Journal of the Academy of Marketing Science	Marketing
Strategic Entrepreneurship Journal	Entrepreneurship	Marketing Science	Marketing
Journal of Finance	Finance	Journal of Operations Management	Operations management
Journal of Financial and Quantitative Analysi	Finance	Manufacturing and Service Operations Management	Operations management
Journal of Financial Economics	Finance	Production and Operations Management	Operations management
Review of Finance	Finance	Management Science	Operations research
Review of Financial Studies	Finance	Operations Research	Operations research
Academy of Management Journal	General management	Human Relations	Organization studies
Academy of Management Review	General management	Organization Science	Organization studies
Administrative Science Quarterly	General management	Organization Studies	Organization studies
Harvard Business Review	General management	Journal of Applied Psychology	Psychology
Journal of Business Ethics	General management	Organizational Behavior and Human Decision Process	Psychology
Journal of Management	General management	Strategic Management Journal	Strategy

Table 1: FT50 journals organized by Chartered Association of Business Schools (CABS) subject area

Journal lists

The approach of using journal lists and rankings to evaluate business schools and individual researchers seems logical:

> *'Journal rankings ultimately reflect preferences of the members of a scientific community who collectively assess the quality of outlets in terms of published research (implicitly by citation behavior, explicitly by expert judgements, or both). As with any preferences or attitudes, those towards journals are affected by deeply rooted values and norms. If the members of the scholarly community still adhere to traditional norms of science, such as theoretical diversity, interdisciplinarity and innovativeness, it is likely that these norms surface in the preferences aggregated by journal rankings.'* (Vogel et al., 2017, p.1721)

And journal rankings are a convenient way of making assessments of scholars:

> '*Thus, many institutions refer to informed and composite journal rankings. Relying on such journal rankings saves evaluation committees from having to examine and judge individual scholars' merits in detail themselves (i.e., journal ranking lists provide them with a ready evaluative shorthand).*' (Cuellar et al., 2016, p.2).

However, the reduction of business schools' and individual academic's research records to a simple counting of articles in well-ranked journals is open to criticism. Vogel et al. (2017) note that there may be bias as some research methods are under-represented (e.g., interpretive research), isomorphic pressure as lower-ranked journals imitate the editorial policies of the high ranked journals, and a performative impact as editors pursue policies that will improve their ranking. Thus, whilst the publishing system has the promise to represent a virtuous circle there is also a danger that it becomes a vicious circle resulting in a homogenization of the research landscape in which the '*rich-get-richer*' (Davidson, 2019).

Cuellar et al. (2016) also identify issues with using journal lists and rankings. First, journal rankings are typically determined through surveys of researchers and/or relying on the opinions of expert panels (see, for example the CABS AJG (2018) methodology, which, while drawing on citation metrics, relies on the recommendations of a panel of subject experts who propose journal ratings based on consultations with '*learned societies, professional associations and/or leading academics in their area*', p.6). In other words, they are largely subjective in nature – both in terms of which journals are included and the ranking that they receive. It has been argued that these journal lists are schemes that preserve power regimes already in place (Chua, Cao, Cousins, & Straub, 2002; Gallivan, 2009; Hardgrave & Walstrom, 1997; Singh et al., 2007), while devaluing research published elsewhere, irrespective of its content and contribution (Mingers and Willmott, 2013). For the expert panel, who are recognized as such most commonly because of their publication record in the journals they are then asked to judge, demoting these journals in favor of '*new*' additions to such lists could be considered as '*turkeys voting for Christmas*'. Second, Cuellar et al. (ibid.) argue that the concept of journal quality is one that has not been theorized (Dean, Lowry, & Humpherys, 2011; Locke & Lowe, 2002; Straub & Anderson, 2010). This has led to an ad hoc collection of metrics being used to rank journals, such as rejection rates, citation counts, impact factors, and other bibliometrics - all of which have biases (Chua et al., 2002; Hardgrave & Walstrom, 1997). Third, the designated top journals are not particularly effective at identifying the most influential papers in their respective

field. Influential papers also get published in low-ranked journals and many papers published in top-ranked journals have remarkably little impact (Singh et al., 2007). Despite this issue, the assessment of an article is all too often conflated with the ranking of the journal in which it is published.

In response to the shortcomings of journal lists, Cuellar et al. (ibid.) identify three dimensions of scholarly capital: ideational influence (who uses a scholar's work?); connectedness (with whom does a scholar work?); and, venue representation (where does a scholar publish their work?). Each of the dimensions is supported by metrics. The first is assessed using citation data, the second through social network analysis of co-author relationships, and the third through publication venue affiliation analysis. Following Cuellar et al., we argue that a metric-based approach to the assessment of scholarly impact is preferable to counting articles in ranked journals.

However, while journal lists have been critiqued, they undoubtedly affect behavior in academic institutions. Walker et al., (2019) conducted a study into academics' use of the CABS AJG and conclude *'[o]nly academics within elite UK universities can partly insulate themselves from the auditing effects of national journal lists, although they may be subject to pressure from international lists or metrics*.' (p.743). Walker et al. argue that journal lists are part of a shift in research assessment towards more formal and measurement-based methods, driven by governments wishing '*to make research systems more 'accountable' in various ways to the publics that fund them.*' (p.743). While there are strong feelings both for and against the use of journal lists, the impact of these artefacts on business schools, on scholars, and on the discipline cannot be denied.

Journal lists and strategic signaling

Following Ghobadi & Robey (2017) we frame journal lists and rankings as a form of strategic signaling. Media organizations, such as the Financial Times, and academic bodies, such as the CABS and AIS, create journal lists to signal to academic institutions and researchers which journals count. These lists are drawn on by academic institutions, such as business schools, as part of their internal strategic signaling process as they seek to influence the values and priorities of their academic staff. In Figure 1 the strategic signaling

process is represented as an influence diagram. The influence diagram shows that journal list creators, such as the Financial Times and the AIS, create and maintain journal lists, in this case the FT50 and the AIS Basket respectively. These journal lists influence business schools in prioritising their research outputs. Those journals that are included in these lists will tend to have their position reinforced as they become sought-after publication destinations for scholars. Walker et al. (2019) illustrate this pattern of reinforcement: *'[w]ithin less than 10 years since its development, the AJG/ABS list has become embedded and institutionalized, creating a self-reinforcing cycle of use and attention by faculty, research managers and external actors.'*(p.743).
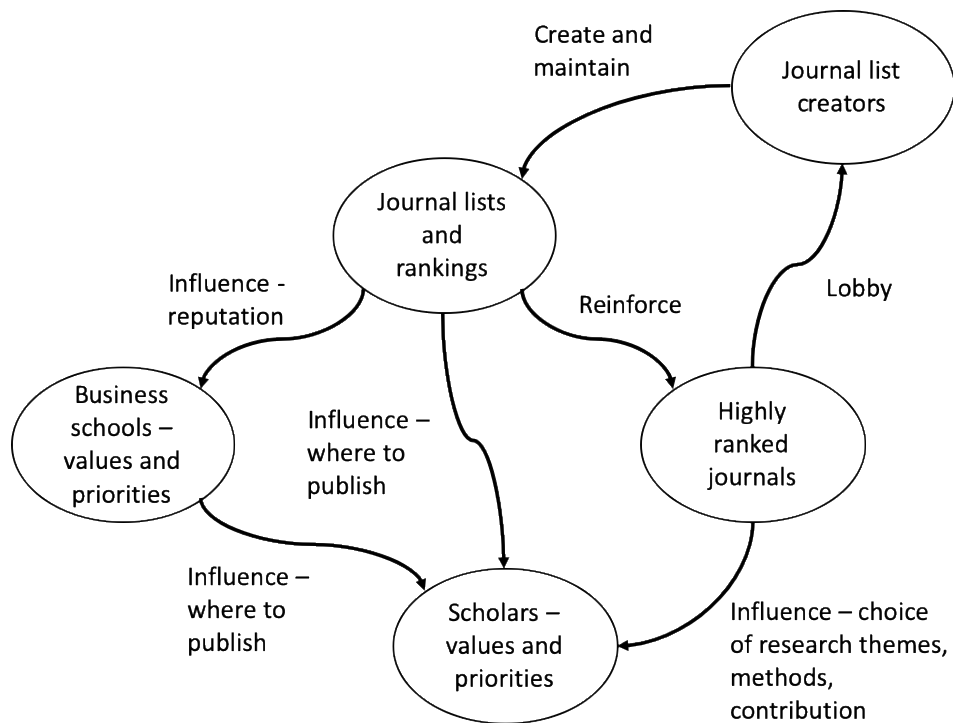
Figure 1: Journal lists - strategic signaling and pattern formation (inspired by Ghobadi and Robey, 2017)

Business schools, in turn, use the journal lists to communicate values and priorities to their academic staff (and may align this with researcher performance targets and rewards). The motivation for business schools is that their reputation will increase as a result of publishing in highly rated journals as their performance in these lists can be used as one of the metrics used to calculate global business school rankings. Scholars are also directly

influenced by journal lists, particularly those that are discipline specific, when making decision about where to submit their work. This dual influence on the researcher means it is possible for journal list influence to be misaligned if scholars disagree with the lists prioritised by their business school (for example, a business school might only value FT50 publications).

Scholars wishing to publish in highly rated journals will take account of the research themes, research methods, and types of contribution welcomed by those journals and will tend to react accordingly in order to increase their chances of publication. Journals will lobby – and seek to influence – journal list creators in order that they retain (or improve) their position. However, there is a danger that this cycle of influence will lead to a situation where, to paraphrase Ghobadi and Robey, researchers' energies may be diverted from '*research on deep, intractable problems and toward a limited range of more tractable problems*' (p.362) whose solutions will satisfy the demands of business school hiring, tenure, and promotion committees.

Journals and academic bodies may need to take positive action to break these patterns (e.g., by publishing work on novel research themes or welcoming articles using new or unfamiliar research methods). However, highly-ranked journals have a line to walk – they want to develop their respective fields, but they also need to maintain their place as a highly-ranked journal. Further loops (not shown) are identifiable – journal list creators who seek the opinions of scholars through surveys and scholars will exert a degree of influence on the journals to which they submit their work. However, compared with the strength of the connections in Figure 1, these are likely to be rather weaker connections. Thus, journal lists and rankings have a significant and tangible impact on academic life and research and we would expect the journals in lists such as the FT50 and the AIS Basket of 8 to all be performing strongly with regard to research impact – at least in academic circles.

Measuring journal impact

Research is accumulative. In order for current research to build upon prior research that prior research needs to be disseminated. Academic journals are a prime mechanism whereby scholars inform each other of their research. There are many

possible ways of measuring journal impact, but as Fitzgerald et al. (2019) argue: '*researchers have commonly measured it via citations. Indeed, the fact that someone cited a paper almost always clearly and unmistakably signifies that they found it useful in their own research.*' (p. 111). By using citation data we are, strictly speaking, looking at scholarly impact rather than a broader definition that might include impact on practice and policy (e.g., see Cuellar et al., 2016, Figure 2 for a broader view of impact).

When a research article references another research article the recipient article acquires a citation. The impact of a research article can be assessed in terms of the number of citations it receives. One way to evaluate the impact of journals would be to look at the total number of citations that the articles published have attracted. However, simple citation counts are not without issues. The H index (Hirsch, 2005) is commonly used to assess a researcher's impact in a standardized form. A researcher with an index of 10 has published 10 papers each of which has been cited at least 10 times. While not without problems (e.g., '*one-hit wonders*' who produce one paper with a large number of citations are under-estimated; established researchers with articles that have been in print for a longer period of time have more time to acquire citations; and newer articles, which might be indicative of a new trend in a research area, will have fewer citations and, thus, may be overlooked) the H index is generally accepted as a useful measure of impact for both authors and journals. However, the H index typically favors journals with higher numbers of published articles.

This is not the case for another commonly used measure of journal impact, average citations per article. Two commonly used measures of central tendency (average) are the mean and the median. For data that are not normally distributed the mean can be misleading, for example, when looking at '*average*' salary in firms where senior managers in the US can be paid 300 times more than their workforce (Rushe, 2018). With such heavily skewed datasets the median provides a more meaningful measure of central tendency. We follow Fitzgerald et al. (2019) in using the median in preference to the mean in the context of citation counts, which are indeed severely right skewed. Using the metric of median citations thus gives an appropriate indication of the '*average*' impact of the articles published by a journal.

A further metric of journal impact is the journal impact factor (JIF). The JIF is '*defined as all citations to the journal in the current JCR year to items published in the previous two years, divided by the total number of scholarly items (these comprise articles, reviews, and proceedings papers) published in the journal in the previous two years*.' (InCites, 2018). For example, to calculate the 2018 impact factor we first need to know the number of times articles published in 2016 and 2017 were cited by indexed journals during 2018. We then divide this figure by the total number of citable items published in 2016 and 2017 to derive the JIF. For journal ranking purposes we use the 2018 JIF scores, as reported in 2019, retrieved from InCites' Journal Citation Reports (JCR). The JIF has come in for considerable criticism and, rather than being viewed as an impact factor, is better seen as a measure of mean citations per article (e.g., see Diamandis, 2017; Fitzgerald et al., 2019). Despite criticism of the JIF - and widespread consensus that it should not be used to evaluate individual articles – Sauer and Willcocks (2019) argue that the JIF '*may be helpful to librarians in their purchase decisions*' and that JIFs '*play a part in institutional politics*' (p.147).

We, therefore, consider that all three measures have value in assessing the impact of journals, albeit they are measuring differing aspects of journal impact. To calculate the H index and the median it is necessary to pick a census period, which in our case is 2000 through to 2018 (the reasons for this choice are discussed later). In summary, we propose a composite measure of journal impact that comprises:

- *H index*: the maximum value of h such that the journal has published h papers that have each been cited at least h times. This is a measure of the overall impact of a journal over the census period;
- *Median number of citations*: a measure of the average (median) impact of the articles published by a journal over the census period;
- *Journal impact factor (JIF)*: a measure of the average (mean) impact of the articles published by a journal for the previous two years as referenced in the following year.

Together, these three measures provide a rounded view of journal impact. Rather than give one precedence over another we propose the use of all three (with equal weighting) to construct a composite ranking labelled the '*HMJ index'*.

3   METHOD

To conduct the analysis of the impact of the FT50 journals this research employs the computational literature review (CLR) approach developed by Mortenson and Vidgen (2016). The CLR is a package developed in the R programming language and can be downloaded from GitHub (https://github.com/rvidgen/clr). The CLR produces three principal analyses: impact, structure, and content. Impact is concerned with identifying the sources of high impact with regard to citations (individual research articles, authors, publication venues) of the research corpus. Structure is represented by the co-authorship network of the corpus (Wasserman and Faust, 1994). Content looks for the underlying (latent) topics in a corpus of research articles and is addressed through topic modelling of abstracts, which '*enables us to organize and summarize electronic archives at a scale that would be impossible by human notation*' (Blei, 2012, p.78). This paper focuses on analysis of the *impact* of journals only. While author analysis can be conducted, the results are less clear-cut since there is no unique author identification available and the disambiguation of authors' names is a noisy process. There are estimated to be between 6.2-7.8m academic faculty members/professional researchers worldwide with perhaps 1m teaching or researching in the disciplines represented by the FT50 journals (https://en.unesco.org/node/252273, https://www.quora.com/How-many-researchers-are-there-in-the-world). Within the 1m researchers, there are around 40,000 individuals who have authored or co-authored a paper in the FT50 journals over all the journals' entire lifespans. Very few authors have published two or more FT50 papers, with the most published author producing 85 FT50 papers. While an analysis of the content of the FT50 articles would be insightful, again this has to be left to a separate analysis. The focus here is on assessing the impact of the journals that comprise the FT50 and the AIS Basket.

Data collection

The computational literature review (CLR) is used to analyze bibliometric information from Scopus, which claims to be '*the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings*.' (www.elsevier.com/solutions/scopus). While Scopus is recognized as a high-quality source of data for systematic reviews, it is not a complete resource and other databases, such as Thomson Reuters Web of Science, have different coverage. Google's Scholar gives the widest coverage but at the expense of quality. Scopus allows citation and abstract data to be downloaded in csv (comma separated variable) format, making it a convenient source of data. Breadth of coverage, quality of data, and ease of extraction make Scopus an ideal choice for analyzing the FT50 journals and IS basket journals.

To collect the data for analysis, all of the FT50 and IS basket journals were searched in Scopus using the relevant ISSN. Where there were more than 2,000 articles (the maximum number of articles that can be downloaded from a single search) returned then multiple searches were performed subdivided by publication year. Citation data was collected in June 2019 for articles published in the time period 2000 through 2018. The period 2000-2018 was chosen as it is long enough and recent enough to give a good account of which journals, which articles, and which disciplines count. A census date of June 2018 was chosen as, firstly, it gives sufficient time for 2018 articles to have settled (articles relating to a previous year often appear in the early months of the following year), and, secondly, the 2019 JIF scores (relating to 2017 and 2018) are available.

The starting year is chosen to provide a sufficiently wide range of years to make overall impact measures such as the H index meaningful. Grover (2019) argues that the five-year period used by Fitzgerald et al. (2019) is too short a period since the half-life of *MIS Quarterly* papers is more than 10 years (as of 2018 citation reports the half-life for *MIS Quarterly* is 13.3 years and the half-life for the *Academy of Management Review* is 19.8 years). Journal half-life is the median article publication date and can be thought of as a measure of the '*shelf-life*' of the articles published in a journal (see http://help.prod-incites.com/inCites2Live/indicatorsGroup/aboutHandbook/usingCitationIndicatorsWisely/citedHalfLife.html for further details). Given these long half-lives, a period longer than ten

years is warranted, and we select the year 2000 as an appropriate start point as with a time span of 19 years it takes into account the long half-lives of FT50 journals.

The CLR software calculates the citations per article and H index, based on the articles presented to it in a particular corpus. For instance, if the period is 2000-2018 then the impact metrics will relate specifically to this time period and, therefore, if articles for all years are presented to the CLR software then a different set of impact metrics will be produced. In other words, these metrics can be considered as local rather than global. Where the corpus is the same as that used in Scopus then identical results are produced in both the CLR and Scopus. For example, if we present a corpus that contains all the articles for a given author then the author H index calculated by the CLR is the same as that calculated by Scopus. The 2018 JIFs are taken from the InCites 2019 Journal Citation Reports (JCR).

4   RESULTS

Publications were extracted filtering the Scopus document type by selecting '*Article*', '*Review*', '*Note*' and '*Editorial*' (removing articles in press, letters and erratum gives a more consistent picture of research outputs). For this nineteen-year period there are 63,475 documents. In Figure 2 the number of articles per year is shown. Despite a steady increase in outputs from 2000 to 2008, from 2009 there appears to be something of a plateau in the number of papers published in the FT50 journals. It is also worth noting that the change from 45 to 50 journals in 2016 seemingly did not have a material impact on the number of articles published.
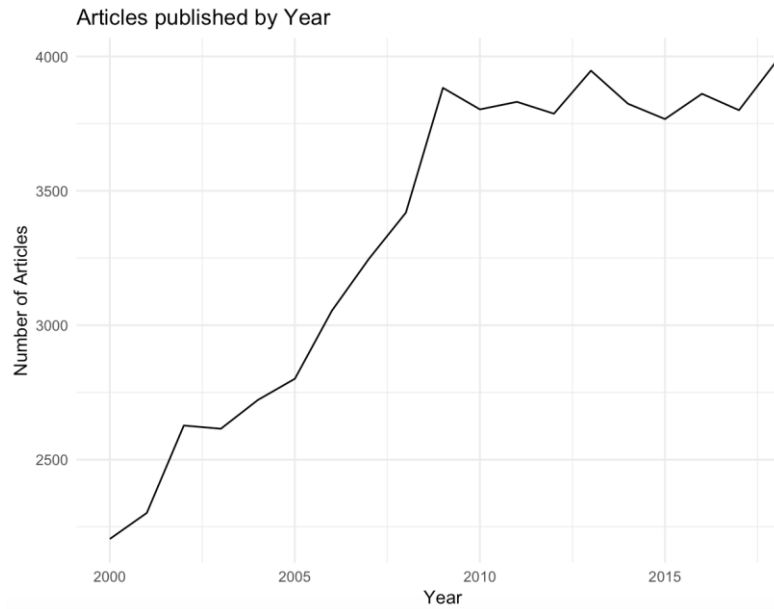
Figure 2: FT50 articles per year (63,475 articles for 2000 through 2018)

The number of citations ranges from 0 to 16,500 and the distribution is severely skewed, as noted by Fitzgerald et al., (2019). The mean number of citations for an article is 58.07 while the median is 19. This difference is illustrated in the histogram in Figure 3, which shows the data from 0 to 500 citations with bins of 10 and demonstrates right skew and a strong long-tail effect (more than 25,000 articles having 0 to 10 citations and there is a tail that extends from 501 to 16,500 citations that is not shown).
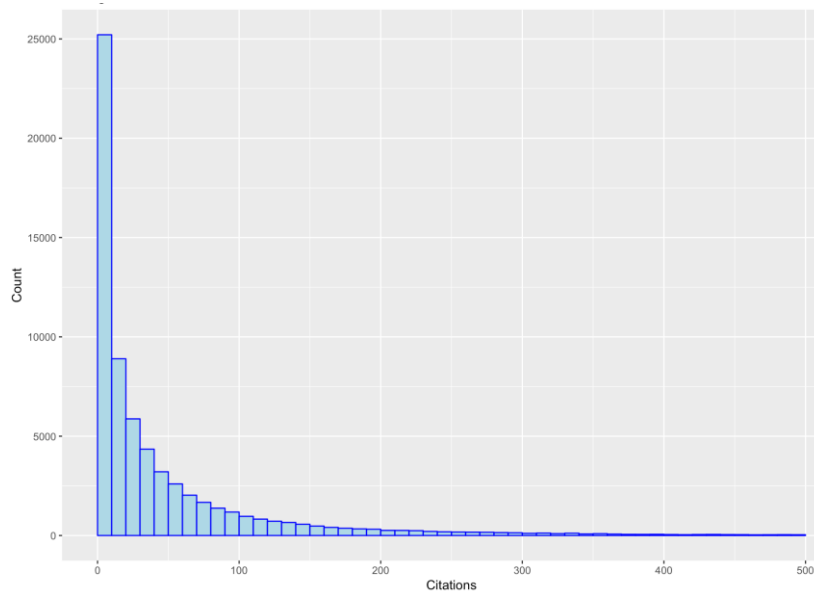
Figure 3: Histogram of number of citations (articles with 0 to 500 citations)

Journal impact analysis

The individual FT50 journals are presented in Table 2. To see how the AIS Basket journals fare, we supplement the FT50 with the remaining five IS journals that are not part of the FT50. Including all of the IS Basket journals increases the total number of articles analyzed from 63,475 to 66,134. In this dataset all 55 journals have an end year of 2018 and, while the majority of journals have a start year of 2000, five have a later start year. *MIT Sloan Management Review* and *Review of Finance* both have a start year of 2001, which is the earliest year available in Scopus. The website for *Entrepreneurship: Theory and Practice* shows publication started in 2002, while 2004 is the earliest year available in Scopus. The *Strategic Entrepreneurship Journal* website shows publication started in 2007, with Scopus providing data from 2011. The *Journal of the AIS* began publication in 2000, with Scopus providing data from 2007. This difference in start year will likely have an impact on the H index and median citations since articles that have been published for longer will have had more time to accrue citations. The JIF will not be affected as this is calculated using citations for articles published in 2016 and 2017.

The H index is a value calculated based on the corpus, i.e., for the 66,134 articles published in the period 2000-2018. While we use median citations in the journal impact score we also show the mean number of citations for each journal. Articles per year is calculated by dividing the number of articles by the number of years for which data is present (in all but five instances this is 19 years). The number of articles published in 2018 is shown to give a current view of journal output as well as an averaged one. The JIF is the 2018 value as reported in 2019.

To arrive at an overall ranking we give each of the three measures in the HMJ index (H index, median citations, JIF) equal weighting and construct a composite ranking by simply adding the three individual ranks together and then sorting the results in order of lowest to highest overall score. On this basis, the top performing journals are clear – the highest ranked journals have total scores of 11, 11, and 13 (the sums of columns 2, 3, and 4) reflecting significant impact across all three measures. *MIS Quarterly* performs strongly with a score of 41, placing it thirteenth overall (and top in terms of mean citations per article). *JMIS* and *JSIS* rank equal 34th followed by *ISR* in 37th place. *EJIS* and *ISJ* are tightly

grouped (40th and 41st, respectively), followed by *JAIS* and *JIT* (43rd and 45th, respectively). All eight AIS Basket journals can be argued to hold their own amongst the other FT50 journals, therefore.

Having said that, *MIS Quarterly* appears to be in a different class from the other seven AIS Basket journals (supporting the findings of Fitzgerald et al., 2019). The performance of *ISR* is, it must be said, surprising by comparison. Given that *JMIS* joined the expanded FT journal listing in late 2016 and that data are presented up to 2018 then *JMIS* is likely to be in a good position to benefit from an '*FT50 effect'* and might be expected to rise up the ranking as it becomes a preferred destination for business and management scholars. While *JAIS* is 43rd it must be noted that data for *JAIS* are only available for 2007 onward; including all years would likely increase the H index. Although *MISQ* and *JSIS* score best in terms of the JIF, ranking 25th and 30th respectively, the IS basket journal JIFs are rather disappointing relatively speaking (e.g., ISR is ranked 49th).

Another interesting factor to note is the variation in the number of articles published by each of the journals. The *Journal of Business Ethics* published an average of 292.1 articles per year (419 articles in 2018) followed by the *American Economic Review* with an average of 208.8 (113 articles in 2018). While *the Journal of Business Ethics* is number one for volume, it is ranked 36th overall (Table 2). At the other end of the spectrum, *Administrative Science Quarterly* published an average of 20.7 articles (27 in 2018), and the *Strategic Entrepreneurship Journal* published an average of 20.8 (23 articles in 2018). The three journals comprising information management are reasonably consistent, ranging from 22.2 articles per annum for *The Journal of Strategic Information Systems* to 45 articles per annum for the *Journal of Management Information Systems* (although *MIS Quarterly* appears to have increased production recently with 61 articles in 2018).

Overall rank	Rank (H index)	Rank (median citations)	Rank (JIF 2018)	Journal title	Start year	Number of articles	Total citations	Mean number citations	Median number citations	Articles per year	Articles in 2018	JIF 2018	H index
=1	7	2	2	Academy of Management Review	2000	779	121392	155.83	63.0	41.0	45	10.632	180
=1	9	1	1	Quarterly Journal of Economics	2000	783	106385	135.87	65.0	41.2	40	11.775	178
3	1	3	9	Academy of Management Journal	2000	1402	178055	127.00	59.5	73.8	93	7.191	228
4	3	4	12	Journal of Finance	2000	1485	156695	105.52	54.0	78.2	67	6.201	209
5	11	5	6	Journal of Marketing	2000	843	101260	120.12	52.0	44.4	51	7.821	173
6	2	7	18	Journal of Applied Psychology	2000	1891	197329	104.35	46.0	99.5	77	5.067	213
7	15	8	7	Journal of Operations Management	2000	800	70567	88.21	44.0	42.1	34	7.776	146
8	5	13	16	Strategic Management Journal	2000	1697	159168	93.79	32.0	89.3	136	5.572	195
9	14	17	4	Journal of Management	2000	1162	94871	81.64	29.5	61.2	122	9.056	160
10	16	12	8	Journal of International Business Studies	2000	1111	77049	69.35	35.0	58.5	59	7.724	141
=11	26	9	5	Administrative Science Quarterly	2000	393	48412	123.19	41.0	20.7	27	8.024	120
=11	20	9	11	Journal of Business Venturing	2000	740	59535	80.45	41.0	38.9	44	6.333	130
13	11	5	25	MIS Quarterly: Management Information Systems	2000	787	129653	164.74	52.0	41.4	61	4.373	173
14	17	11	14	Journal of Management Studies	2000	1138	75670	66.49	36.0	59.9	51	5.839	139
15	20	14	10	Journal of Political Economy	2000	756	56529	74.77	31.0	39.8	59	6.342	130
16	9	19	17	Research Policy	2000	2239	138784	61.98	25.0	117.8	155	5.425	178
17	6	18	23	Journal of Financial Economics	2000	1869	133915	71.65	29.0	98.4	113	4.693	183
18	27	23	3	Journal of the Academy of Marketing Science	2000	802	58105	72.45	24.0	42.2	51	9.360	119
19	22	15	22	Journal of Consumer Research	2000	1227	77066	62.81	30.0	64.6	46	4.701	129
=20	17	19	26	Econometrica	2000	1193	78147	65.50	25.0	62.8	69	4.281	139
=20	19	24	19	Review of Financial Studies	2000	1495	77198	51.64	23.0	78.7	119	4.975	136
=22	32	19	13	Entrepreneurship: Theory and Practice	2004	773	42320	54.75	25.0	51.5	37	6.193	109
=22	13	15	36	Organization Science	2000	1253	110961	88.56	30.0	65.9	51	3.257	169
24	4	35	29	American Economic Review	2000	3967	212855	53.66	18.0	208.8	113	4.097	206
25	7	37	27	Management Science	2000	2955	152459	51.59	17.0	155.5	288	4.219	180
26	27	24	28	Journal of Marketing Research	2000	1091	61892	56.73	23.0	57.4	50	4.200	119
27	36	28	21	Review of Economic Studies	2000	852	39300	46.13	21.5	44.8	66	4.767	100
28	38	28	20	Journal of Accounting Research	2000	680	35663	52.45	21.5	35.8	34	4.891	96
29	29	35	24	Accounting Review	2000	1125	50961	45.30	18.0	59.2	87	4.562	115
30	34	19	37	Accounting, Organizations and Society	2000	717	36130	50.39	25.0	37.7	43	3.147	101
31	24	55	15	Harvard Business Review	2000	3285	80421	24.48	3.0	172.9	113	5.691	128
32	33	30	32	Journal of Accounting and Economics	2000	667	46067	69.07	21.0	35.1	42	3.753	107
33	22	45	31	Journal of Business Ethics	2000	5549	128488	23.16	11.0	292.1	419	3.796	129
=34	30	31	40	Journal of Management Information Systems	2000	855	51941	60.75	20.0	45.0	46	3.013	114
=34	45	26	30	Journal of Strategic Information Systems	2000	421	22373	53.14	22.0	22.2	25	4.000	75
=34	31	37	33	Organization Studies	2000	1382	54242	39.25	17.0	72.7	74	3.543	110
37	25	31	49	Information Systems Research	2000	759	59206	78.01	20.0	39.9	52	2.457	122
38	34	31	43	Organizational Behavior and Human Decision Proces	2000	981	42660	43.49	20.0	51.6	52	2.908	101
39	39	37	34	Human Relations	2000	1313	45777	34.86	17.0	69.1	66	3.367	95
40	40	26	46	European Journal of Information Systems	2000	805	36010	44.73	22.0	42.4	38	2.603	94
41	47	31	35	Information Systems Journal	2000	495	20604	41.62	20.0	26.1	51	3.286	74
42	36	43	45	Operations Research	2000	1831	51907	28.35	13.0	96.4	90	2.604	100
43	49	37	39	Journal of the Association of Information Systems	2007	409	17191	42.03	17.0	34.1	47	3.103	68
44	41	41	47	Marketing Science	2000	1042	37342	35.84	15.0	54.8	52	2.490	92
45	51	41	38	Journal of Information Technology	2000	529	18412	34.81	15.0	27.8	20	3.125	67
46	48	45	42	Human Resource Management	2000	855	19857	23.22	11.0	45.0	92	2.934	69
47	43	45	48	Journal of Consumer Psychology	2000	920	27839	30.26	11.0	48.4	48	2.466	81
=48	42	48	50	Journal of Financial and Quantitative Analysis	2000	943	26890	28.52	10.0	49.6	80	2.266	82
=48	52	44	44	Manufacturing and Service Operations Management	2000	675	19111	28.31	12.0	35.5	48	2.667	66
50	43	49	53	Production and Operations Management	2000	1311	32489	24.78	8.0	69.0	131	2.171	81
51	55	51	41	Strategic Entrepreneurship Journal	2011	166	1900	11.45	6.0	20.8	23	2.956	24
52	49	49	51	Contemporary Accounting Research	2000	858	18937	22.07	8.0	45.2	78	2.261	68
53	45	53	52	MIT Sloan Management Review	2001	900	22608	25.12	4.0	50.0	82	2.196	75
54	53	51	54	Review of Accounting Studies	2000	593	12089	20.39	6.0	31.2	53	2.108	53
55	54	53	55	Review of Finance	2001	585	7596	12.98	4.0	32.5	51	1.942	43

Table 2: Journal HMJ index ranking for 2000-2018 (n = 66,134)

Discipline impact analysis

By rolling the journals up to the CABS subject area we can see the relative impact of the management disciplines (Table 3). As with journals, we use the H index to assess the impact of the journal and median citations per article to assess the average impact of the disciplines. The JIF for each discipline is calculated as the average of the JIFs that comprise that discipline. Giving each of the three measures an equal weighting, we find that the top three most impactful disciplines are Economics, International business, and Strategy. At the bottom of the table are Operations management, Operations research, and Human resource management. Information management is in the lower half of the table in ninth place.

The H index metric tends to favor those disciplines which publish more articles and unsurprisingly General management, with eight journals and 14,608 articles, has the largest H index (356). On the basis of H index, Information management (229) ranks fifth. On the basis of median article impact, International business is represented by a single journal and comes out top (35.0), while Information management is fourth (27.0) but comes top in terms of mean citations per article (100.3). Human resource management ranks fifteenth for H index, citations per article, and JIF. With regard to the discipline JIF, International business and Economics score most highly with Information management and Human resource management at the bottom of the table.

Overall rank	Ranking (H index)	Ranking (median citations)	Rank (average JIF 2018)	CABS subject area	No of FT50 journals	Articles	Citations	Mean number citations	Median number citations	Articles per year	Average JIF 2018	H index
1	2	7	3	Economics	5	7,551	493,216	65.3	23.0	397.4	6.252	298
=2	14	1	1	International business	1	1,111	77,049	69.4	35.0	58.5	7.724	141
=2	9	3	4	Strategy	1	1,697	159,168	93.8	32.0	89.3	5.572	195
4	1	14	2	General management	8	14,608	749,917	51.3	13.0	768.8	6.553	356
5	6	2	10	Psychology	2	2,872	239,989	83.6	34.0	151.2	3.988	220
=6	3	7	9	Finance	5	6,377	402,294	63.1	23.0	335.6	4.015	274
=6	4	9	6	Marketing	6	5,925	363,504	61.4	23.0	311.8	5.173	261
8	11	6	5	Innovation	1	2,239	138,784	62.0	25.0	117.8	5.425	178
9	5	4	14	Information management	3	2,401	240,800	100.3	27.0	126.4	3.281	229
10	13	4	7	Entrepreneurship	3	1,679	103,755	61.8	27.0	88.4	5.161	160
=11	7	12	11	Accounting	6	4,640	199,847	43.1	15.0	244.2	3.454	199
=11	7	10	13	Organization studies	3	3,948	210,980	53.4	20.0	207.8	3.389	199
13	12	13	8	Operations management	3	2,786	122,167	43.9	14.0	146.6	4.205	171
14	10	12	12	Operations research	2	4,786	204,366	42.7	15.0	251.9	3.412	192
15	15	15	15	Human resource management	1	855	19,857	23.2	11.0	45.0	2.934	69

Table 3: Discipline impact analysis for 2000-2018 (n = 63,475)

Thus, while Information management scores well for H index and median citations per article it is not performing as well on JIF (fourteenth) and is particularly affected by the low JIF score for *ISR*. Given that Accounting has six journals in the FT50 then, with a ranking of eleventh equal it might be argued that Accounting is punching below its weight.

Article impact analysis

In Table 4 the top 20 articles from a total of 66,134 (i.e., the FT50 plus the AIS Basket), as ranked by raw citation count, are shown. The most highly cited paper is a methods paper addressing common method bias. Articles ranked 2, 3, 15, and 20 are concerned with technology acceptance. Information management has six papers in the top 20 – more than any other discipline, including General management, which has 5 articles. This suggests that the information management discipline has influence, and impact outside of its field, with notable areas being the technology acceptance model and knowledge management. Looking at citations from the other end, it is worth noting that of the 66,134 articles analyzed 6,169 (9.3%) have zero citations. Removing articles published in 2018 (as of June 2019, these have had little time to be cited) from the dataset shows 5,068 articles with zero citations (8.2%). It seems that, even in the most prestigious management journals, a not insubstantial proportion of published research has no discernible scholarly impact.

Rank	Journal	Authors	Title	Year	Citations	CABS group
1	Journal of Applied Psychology	Podsakoff P.M., MacKenzie S.B., Lee J.-Y., Podsakoff N.P.	Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies	2003	16,700	Psychology
2	MIS Quarterly: Management Information Systems	Venkatesh V., Morris M.G., Davis G.B., Davis F.D.	User acceptance of information technology: Toward a unified view	2003	9,158	Information Management
3	Management Science	Venkatesh V., Davis F.D.	Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies	2000	5,884	Operations Research
4	Strategic Management Journal	Eisenhardt K.M., Martin J.A.	Dynamic capabilities: What are they?	2000	4,934	Strategy
5	MIS Quarterly: Management Information Systems	Hevner A.R., March S.T., Park J., Ram S.	Design science in information systems research	2004	4,899	Information Management
6	Journal of Marketing	Vargo S.L., Lusch R.F.	Evolving to a New Dominant Logic for Marketing	2004	4,612	Marketing
7	MIS Quarterly: Management Information Systems	Alavi M., Leidner D.E.	Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues	2001	4,458	Information Management
8	Journal of Management Information Systems	DeLone W.H., McLean E.R.	The DeLone and McLean model of information systems success: A ten-year update	2003	3,975	Information Management
9	Academy of Management Journal	Eisenhardt K.M., Graebner M.E.	Theory building from cases: Opportunities and challenges	2007	3,947	General Management
10	Academy of Management Review	Shane S., Venkataraman S.	The promise of entrepreneurship as a field of research	2000	3,850	General Management
11	Academy of Management Review	Zahra S.A., George G.	Absorptive capacity: A review, reconceptualization, and extension	2002	3,464	General Management
12	Academy of Management Review	Adler P.S., Kwon S.-W.	Social capital: Prospects for a new concept	2002	3,374	General Management
13	American Economic Review	Acemoglu D., Johnson S., Robinson J.A.	The colonial origins of comparative development: An empirical investigation	2001	3,183	Economics
14	Econometrica	Melitz M.J.	The impact of trade on intra-industry reallocations and aggregate industry productivity	2003	2,927	Economics
15	MIS Quarterly: Management Information Systems	Gefen D., Karahanna E., Straub D.W.	Trust and tam in online shopping: AN integrated model	2003	2,838	Information Management
16	Review of Financial Studies	Petersen M.A.	Estimating standard errors in finance panel data sets: Comparing approaches	2009	2,666	Finance
17	Strategic Management Journal	Teece D.J.	Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance	2007	2,477	Strategy
18	Harvard Business Review	Porter M.E., Kramer M.R.	Strategy & society: The link between competitive advantage and corporate social responsibility	2006	2,426	General Management
19	Quarterly Journal of Economics	Gompers P., Ishii J., Metrick A.	Corporate governance and equity prices	2003	2,371	Economics
20	Information Systems Research	Venkatesh V.	Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model	2000	2,336	Information Management

Table 4: Top 20 most highly cited papers in the FT50 for 2000-2018 (n = 66,134)

With reference to the IS Basket journals, Table 5 shows the most highly cited paper for each of the eight journals. The FT50 IS journals (ranked 1, 2, and 3) have had greater success in having a '*hit*' paper than have the other five members of the AIS Basket.

Rank	Journal	Authors	Title	Year	Citations
1	MIS Quarterly: Management Information Systems	Venkatesh V., Morris M.G., Davis G.B., Davis F.D.	User acceptance of information technology: Toward a unified view	2003	9,158
2	Journal of Management Information Systems	DeLone W.H., McLean E.R.	The DeLone and McLean model of information systems success: A ten-year update	2003	3,975
3	Information Systems Research	Venkatesh V.	Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model	2000	2,336
4	Journal of Strategic Information Systems	McLure Wasko M., Faraj S.	"It is what one does": Why people participate and help others in electronic communities of practice	2000	1,125
5	Information Systems Journal	Carter L., Belanger F.	The utilization of e-government services: Citizen trust, innovation and acceptance factors	2005	1,011
6	European Journal of Information Systems	Walsham G.	Doing interpretive research	2006	862
7	Journal of the Association of Information Systems	Gregor S., Jones D.	The anatomy of a design theory	2007	819
8	Journal of Information Technology	Chan Y.E., Reich B.H.	IT alignment: What have we learned?	2007	566

Table 5: The most highly cited paper (2000-2018) for each of the AIS Basket journals

DISCUSSION

Journal rankings and lists, such as the FT50, the CABS AJG, and the AIS Basket, do matter and have real consequences for individual academics, their academic groupings, and for the IS discipline as a whole. In some senses journal lists represent a game that has to be played and, as with all games, understanding the rules is essential. As Loebbecke et al. (2019) argue, '*we voluntarily and happily joined the academic game knowing it had certain rules, so we feel that we ought to play by the rules whether we like them or not.*'

Implications for practice

A number of practical implications arise from the analysis of the FT50 and the AIS Basket of 8 for IS scholars, IS groups, and the IS discipline.

(1) *For IS scholars.* Scholars need to publish if they are to get (and retain) a job, get tenure, and get promoted. In thinking about where to publish their research, scholars might consider the probability of success by taking into account factors such as the number of articles a journal publishes each year. Having a paper accepted in a General management journal that only publishes around 20 papers a year (e.g., *Administrative Science Quarterly*, which ranks 11th overall in the FT50) is likely a qualitatively different experience from

publishing in a journal that publishes more than 400 articles a year (e.g., *Journal of Business Ethics*). It also seems likely that the editorial process for selecting, reviewing, and publishing more than 400 papers a year may be rather different from publishing twenty papers a year. Given that much of IS research is interdisciplinary, IS scholars targeting the FT50 might consider going outside of the three FT50 IS journals and target journals in other disciplines, such as marketing, accounting, and operations management, as well as more general management venues (such as the *Journal of Business Ethics* and *MIT Sloan Management Review*).

In presenting their research records to prospective employers and for tenure and promotion cases, scholars might consider including journal metrics (alongside citation counts for their individual articles) such as JIF and the number of articles published per year. When reporting FT50 publications they might also reference Table 2 from this paper to show the ranking of the journal within the FT50 journal list.

(2) *For IS groups*. Academic units need to hire staff and then incentivise and reward them if they are to be retained. When making and hiring, tenure, and promotion decisions business schools are advised to consider the impact of the articles an applicant has published and the extent of their social network (Cuellar et al., 2016) rather than simply counting the number of FT50 and IS Basket of 8 papers an applicant has to their name. It should be common practice to include the latest citation figures for the articles listed on an applicant's curriculum vitae (CV). As is the case for individual scholars presenting their CVs, a hiring department should also be aware that not all journals are equal in terms of impact and the number of articles published each year. If applicants and groups move more toward a metric-based approach (individual article citation counts and journal impact measures) the practice of counting articles in ranked journals can be mitigated – in part at least.

IS groups also need to play a political game within their institution in order to gain resources, such as the number of full-time equivalent research staff who can be employed and the funds to provide research incentives and conference participation. This involves supporting academic staff and presenting the group's performance in the best possible light to the wider institution. Rather than focus staff on three journals from the FT50 (or four

from the CAB AJG, or eight from the AIS Basket) a group might encourage its academic staff members to cast the net wider - particularly if the institution values FT50 publications over and above all others due to its impact on business school rankings. IS groups need to understand institutional politics and the rules of the game if they are to thrive in a competitive business school environment.

Business schools need to compare people within disciplines and across disciplines when hiring, rewarding and promoting. This may impact scholars in disciplines in which the academic groupings tend to be small (such as IS) more than in those where there are often substantial groups (such as accounting).

(3) *For the IS discipline.* The IS discipline needs its research, and hence its journals, to be valued by institutions, libraries, grant-awarding bodies, and government (who, in many countries, conduct assessments of research performance and allocate funding accordingly). While measures such as the JIF have been criticised and journal lists disparaged, individual researchers, their academic units, and the IS discipline as a community will be disadvantaged should it unilaterally decide to ignore these performative artefacts. The IS discipline can use metrics to consider questions such as: are the most appropriate IS journals included in the journal lists and rankings (for example, *ISR* ranks below *JMIS* and *JSIS* in terms of impact)? Is a sufficient number of IS journals included in the influential journal lists (for example, Accounting and Marketing each have six journals in the FT50)? Do the IS journals publish a suitable number of articles to represent the IS discipline (for example, the AIS Basket journals published a total of 340 articles in 2018).

We might further wish to promote the use of metrics over the use of researcher sentiment in deciding which journals are included in prestigious journal lists such as the FT50 and in ranked lists such as the Chartered Association of Business Schools (CABS) and the Australian Business Deans Council (ABDC). While Davidson (2019) argues that the better review processes of the top-ranked journals help to ensure article quality, Fitzgerald and Dennis (2019) dispute this and point to evidence that the review process has been demonstrated to not be valid or reliable. Moving toward a greater use of journal metrics will help counterbalance subjectivity in assessing journal 'quality'.

This raises the issue of the composition and stability of the journal lists. Clearly, there need to be mechanisms by which journals are added, or removed, from lists. The way in which this change is decided is problematic, but so too is the consequence of change. For example, how are papers published in journals that were constituents of the FT50 list at the time they are published, but the journal has subsequently been removed from the list, to be compared to papers that were published in a journal before it joined the list? And how are those papers compared to ones in journals that have remained in the lists? Instability in the lists risks scholars' publications records becoming dynamic through no fault on their part.

In some disciplines, such as computer science, where the field moves quickly, some conferences are regarded as superior to most journals. In others, such as history, books are a better recognised scholarly outlet. Focussing on journal publications may unwarrantedly privilege this type of research output.

Limitations and future work

The work has limitations. While impact is assessed using three measures, HMJ index (H index, median citations, JIF), all three are rooted in citation counts. While these give an indication that research outputs are being noticed and drawn on this does not necessarily mean the mention is either positive or substantive. While the combination of three measures with equal weightings might be questioned, the three measures do, collectively, give a more nuanced view of journal impact than would be the case when relying on a single measure (all of which have documented strengths and weaknesses). We note that the CABS AJG (2018) method standardizes citation measures by subject area. We prefer to retain unstandardized measures in order to report absolute impact and to highlight differences between journals and subject areas. We further recognize that impact in the broader sense is not addressed by the HMJ index, e.g., on industry, practice, and policy.

Future work will investigate whether a wider range of metrics might be incorporated, such as social media presence, reporting in the media, and altmetrics. Caution should be exercised in expanding the range of metrics used; for example, Sauer and Willcocks (2019) see a risk in altmetrics in that they are easily manipulated (more dramatically and more easily than journal self-citations). We plan to repeat this analysis on a regular basis to see

how the impact of FT50 and IS basket journals change over time and to monitor whether the IS discipline has an appropriate level of presentation in the FT50. For example, in determining how many journals that a discipline has in the FT50 it would be useful to compare the number of articles published in FT50 journals for a discipline to the number of researchers active in that discipline. Researchers may wish to investigate the extent to which journal impact, as measured through citation data, is related to the ranking a journal receives in tiered lists such as the CABS AJG and the ABDC Journal Quality List. And, from a broader perspective, researchers are encouraged to investigate journal lists as a strategic phenomenon, for example through ideas such as strategic signaling.

CONCLUSIONS

We have proposed a measure of journal impact, the HMJ index, that comprises three elements: H index, median citations, and JIF. Using this metric, we find that the Information Systems discipline is in reasonably good health when placed in the context of the FT50. Of the three journals that represent the IS discipline in the FT50, *MISQ* performs most strongly (in thirteenth place overall, and fifth for median citations per article). The remaining two journals, *ISR* and *JMIS*, are clearly of a different order of impact compared to MISQ. Indeed, *ISR*'s performance in terms of impact is, relatively speaking, lacklustre (i.e., below that of *JMIS* and *JSIS*), largely as a result of a JIF score that places it 49th out of the 55 journals analyzed in Table 2. Apart from *MISQ*, all the AIS Basket journals fall into the second half of the combined FT50/AIS Basket table. Importantly, none is outside these 50 journals, however. With regard to *JMIS*, it will be interesting to see if this journal benefits from an '*FT50* effect' over the next few years. When journals are grouped into CABS categories the IS discipline ranks well for median citations (4th overall) and H index (fifth overall) but is let down by low JIF scores (fourteenth of fifteen). In terms of big hitting articles, the IS discipline performs very well with six out of the top 20 most highly cited FT50 articles.

We have acknowledged the deeply performative nature of journal lists, for example when they are drawn on as part of the strategic signaling processes concerning the communication of values and priorities. This performative aspect can lead to reinforcing patterns that shape – and constrain - research fields. Whether we like it or not, journal lists really do matter. For many academics the discussion of journal rankings and the associated

games that accompany them may be uncomfortable and possibly even distasteful; after all, we are first and foremost researchers and it is the research that should count above all. While we believe this to be true, as researchers, we need resource to do our research, such as time freed from teaching, funds to attend conferences, and the financial and political support of the educational institutions of which we are part. Recognition of IS amongst our peers across the business and management spectrum - through representation in artefacts such as the FT50 and the CABS AJG – is key.

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