

Journal of Property Investment & F

THE SIGNIFICANCE OF IMPACT IN REAL ESTATE RESEARCH PUBLICATIONS

Journal:	Journal of Property Investment & Finance
Manuscript ID	JPIF-04-2020-0034.R1
Manuscript Type:	Academic Paper
Keywords:	Research impact, Real estate journals, h-index, Total citations, i10, Leading players



THE SIGNIFICANCE OF IMPACT IN REAL ESTATE RESEARCH PUBLICATIONS

Purpose- Research impact has taken on increased importance at both a micro and macro level and is a key factor today in shaping the careers of real estate researchers. This has seen a range of research impact metrics become global benchmarks when assessing research impact at the individual academic level and journal level. Whilst recognising the limitations of research impact metrics, this paper uses these research impact metrics to identify the leading research impact researchers in real estate, as well as the leading real estate journals in the real estate impact space. The nexus between research quality and research impact is also articulated. As well as focusing on research quality, strategies are identified for the effective incorporation of research impact into a real estate researcher's agenda to assist their research careers; particularly for Early Career Researchers in real estate.

Design/methodology/approach- The research impact profile of over 150 real estate researchers and 22 real estate journals was assessed using *Google Scholar* and *Publish or Perish*. Using the research impact metrics of the h-index, total citations and i10, the leading high impact real estate researchers as well as the high impact real estate journals are identified.

Findings-Based in these research impact metrics, the leading real estate researchers in impactful real estate research are identified. Whilst being US-focused, there is clear evidence of increasing roles by ERES, AsRES and PRRES players. The leading real estate journals in the impact space are identified; including both real estate-specific journals and the broader planning/urban policy journals, as well as being beyond just the standard US real estate journals. Researcher career strategies are also identified to see both research quality and research impact included as balanced elements in a real estate researcher's career strategy.

Practical implications- With research impact playing an increased role in all real estate researchers' careers, the insights from this paper provide strong empirical evidence for effective strategies to expand the focus on the impact of their real estate research agendas. This sees a balanced strategy around both research quality and research impact as the most effective strategy for real estate researchers to achieve their research career goals.

Originality/value- Research impact has taken on increased importance globally and is an important factor in shaping real estate researchers' careers. Using research impact metrics, this is the first paper to rigorously and empirically identify the leading research impact players and journals in real estate, as well as identifying strategies for the more effective inclusion of impact in real estate researchers' agendas.

<text> Keywords- Research impact; real estate journals; h-index; total citations; i10; leading real

INTRODUCTION

The role of real estate research sees researchers focused on a desire to research interesting topics, with results that transform lives by having a real impact on industry, processes, places and policies, leading to the solution of difficult and important problems. This results in macro-outputs for various audiences including industry, government and community, as well as micro-outputs for academic peers in expanding the body of knowledge. This includes industry reports, policy papers, books, guidance notes and academic papers. Both these macro and micro levels of impact are important for an academic's career.

Research has taken on an increasingly important role for all real estate academics in recent years. This sees research as having critical importance at all levels of appointment, tenure and promotion; particularly for Early Career Researchers (ECRs) in real estate. As such, real estate academics need a clear strategy going forward in developing their research plan and research deliverables; including research publications, industry reports and research grants. This has significant personal career implications in an increasingly competitive university environment. Key elements in this strategy are conducting high quality and high impact research.

Much of the focus over the last 30 years in this area has been on the quality of the real estate journals; and identifying key individuals and universities publishing in these top ranked real estate journals. This includes Azasu and Simons (2018), Beard and Allen (2019), Dombrow and Turnbull (2000, 2002), Gibler et al (2009), Gibler and Ziobrowski (2002), Hardin et al (2006, 2007), Jin and Yu (2011), Newell et al (2002), Ong et al (2001), Redman et al (1998, 1999), Saginor (2015, 2016, 2017, 2018, 2019), Tu and Worzala (2010), Urbancic (2004), Winson-Geideman and Evangelopoulos (2013 a, b) and Worzala and Tu (2010). Often this assessment of quality was only considered across a narrow focus of the top three US real estate journals of *Real Estate Economics, Journal of Real Estate Finance and Economics* and *Journal of Real Estate Research*. Journal ranking schemes across the broader business/finance journals have also been developed in many countries (see Table I); often being university benchmarks for staff research performance. This generally sees real estate journals positioned within the business/finance journals when journal quality is assessed. This has been further supported by the growth of the various regional real estate societies (eg: ERES), which now sees quality research as a key part of European real estate researchers' career agendas (Hoesli, 2016).

While journal quality is very important, recent years have seen increased importance given to research impact; both in an academic and industry/practice/policy context. This has been via

such systems as AACSB accreditation for Business Schools, Research Excellence Framework (REF) and the former Research Assessment Exercise (RAE) in the UK and Excellence in Research Australia (ERA) in Australia. Often this research impact has been clearly recognised at a national government level, with significant government funds allocated to those universities demonstrating high impact in their research. This funding from demonstrating research impact has become a key element of university budgets in many countries; eg: UK. To date, the only paper that has considered research impact in real estate research is Boshoff and Parker (2017); within the narrow micro context of the impact of specific real estate journals.

There is a clear research gap in articulating the research impact of specific real estate researchers as they have contributed to the real estate body of knowledge. To address this key issue, this paper uses *Google Scholar* to assess research impact via the metrics of the h-index, level of total citations and i10 index for a wide range of real estate researchers, as well as for various real estate journals. It also explores the full dimensions of real estate research impact, beyond just impact metrics which focus on journal output. The role of real estate researchers in the regional real estate societies is highlighted. Performance and research impact in real estate is benchmarked against other disciplines; as well as the nexus between real estate research quality and research impact. This paper highlights the importance of incorporating impact in real estate researchers' profiles and identifies publication strategies for this to be effectively achieved; with this being particularly relevant to ECRs in real estate as they establish their real estate research careers. It also highlights the issue of doing quality research in an impactful manner.

ASSESSING RESEARCH IMPACT

What is research impact?

Research impact can be assessed at different levels; firstly, at the broadest "macro" level, this involves the impact of research on the economy, society, environment, industry and government policy. While this is difficult to quantify explicitly, it is critically important and forms the basis for significant government funding allocations to universities in a number of countries. This includes in the UK via REF.

One of the longest established government research assessments is that in the UK, undertaken approximately every five years from 1986, known from 1992 as the Research Assessment Exercise (RAE) and then retitled as the Research Excellence Framework (REF) from 2014, with the specific purpose of allocating research funding to UK universities. The next REF is scheduled for 2021.

One aspect of the REF is assessing journal article quality by expert peer review committees. The second aspect concerning impact in the UK REF is focused on the broader user community and not on the academic users. It is about the real impact of research on the wider society and how it has changed behaviours through policy and practice rather than a micro measure of the impact on the academic community as evidenced in research impact metrics for individual researchers or journals.

Previous REFs and RAEs clearly focused on expert panel reviews, not on journal metrics in assessing publication quality. In measuring the quality of research outputs, the UK 2021 REF exercise has also largely rejected journal impact factors and citations and all other metrics in its assessment of real estate research, and has opted for an expert peer review of all publications. For the REF 2021 assessment, 11 of the 34 sub-panels have indicated that they will use citation data provided by Clarivate Analytics (Web of Science). Further details regarding the 2021 UK REF processes can be obtained at www.ref.ac.uk .

One of the sub-panels using bibliometrics and citation data is Economics and Econometrics, but not the Architecture, Built Environment and Planning sub-panel. In the UK, most real estate (RE) academics submit to the latter sub-panel (historically RE in the UK was aligned to these disciplines) and within the REF process is assessed by a panel of expert peers both domestic and international from these disciplines to assess the quality of the research.

The second level of research impact relates to academic research impact at the individual academic level by contributing to the body of knowledge in the discipline; this being at a more "micro" level of impact. Whilst this is much narrower in assessing impact, it is a key dimension to many academic careers today and will be the focus of this paper. Importantly, academic research impact has taken on increased importance in all universities, being part of the tenure/promotion process and annual performance reviews.

The following sections will highlight and utilise a number of research impact metrics that have been developed to "capture" research impact at the individual researcher or journal level. It should be noted that these metrics do not specifically relate to journal impact factors.

As such, this paper focuses at the "micro" impact level for the individual researcher and journal, rather than at the broader "macro" level of the wider community, industry and social impact.

Metrics for assessing research impact

The international benchmark for academic research impact is the h-index developed by Hirsch (2005), with a focus on the science/medical disciplines. The h-index links your papers and their level of citations. For example, a h-index of 1 sees a researcher having one paper cited at least once; a h-index of 2 sees two papers cited at least twice each. This builds up progressively; for example, a h-index of 20 means having 20 papers cited at least 20 times each. Whilst having limitations (see the next section), the h-index has strong international acceptance and is seen as the "Swiss army knife" of research performance. It is generally seen as acceptable for both journal-level and scholar-level analysis as done in this paper (Kumar, 2009). It is also widely used in many universities in considering the research performance of academics. Other popular research impact metrics used in this paper are total citations and the i10 index. The i10 index is a measure of the number of papers you have which have each been cited at least ten times. This can be assessed both at the individual researcher level and specific journal level. The impact metrics of h-index, total citations and i10 are used extensively in later sections of this paper to assess individual real estate researcher and specific real estate journal impacts.

Limitations of research impact metrics

Whilst the h-index is simple and popular, it has obvious limitations. These limitations relate to a range of issues; these include how can research impact which is multi-dimensional and complex be captured by "one number", how do you account for a small number of papers with a high level of citations, how do you account for the impact of teams, how do you account for the stage of your career (eg: ECR), how do you capture research "momentum" in recent years versus long-term career performance, does the h-index vary across disciplines. This also raises the key issue of what is a good h-index, as this can vary across disciplines.

The limitations of these research impact metrics go beyond just the metric formulation issues discussed above. The concerns apply at both the individual researcher level and specific journal level. They raise the fundamental issue of whether some academics are publishing for scholarly interest and importance versus publishing for citations; resulting in the "gaming" of their

research impact metrics. This has seen issues such as excessive self-citing, self-plagiarism, coercive citation practices within journals, collusive citations and citation cartels discussed, which question the objective nature of these research impact metrics (Bormann and David, 2007; Costar and Bordons, 2007; Haley, 2017; Martin 2013; Waltman and Jan Van Eck, 2012; Wilhite and Fong, 2012). Specific aspects such as "kinship" citations and multiple authors from the same team/university can also see "gaming" of these research impact metrics and not seeing an objective measure of research impact.

The process (or channels) of how citations are done in real estate research also impacts these impact metrics. Most real estate research is economics/finance-based and largely ignores the social sciences. This sees academic silos which largely focus on "within" silo citations rather than "across" silo citations; seeing critical multi-disciplinary references in the real estate space often omitted and seeing negligible impact outside the respective academic silo. It should be noted that this is not unique to just real estate research.

Other research impact metrics

Given the limitations of the h-index (and other citation metrics), a wide range of other research impact metrics/indices (over 100 metrics) have been developed to attempt to overcome these h-index limitations; see Table II. For example, the perfectionism index assesses high impact versus a large number of papers to identify whether a researcher is an "influencer" versus a "mass producer". Similarly, the g-index gives increased weight to the more cited papers, the c³-index accounts for start of career issues for ECRs, the average annual increase in h-index accounts for research momentum and the d-index factors in the level of downloads. Similarly, the e-index accounts for surplus citations, the individual h-index accounts for the impact of teams, the hIc index accounts for discipline and career length differences and the Hi index accounts for the quality of cited papers. See Blagus et al (2015), Bornmann and Leydesdorff (2018), Chi and Glänzel (2018), Harzing et al (2014); Sidiropolous et al (2015), Wildgaard et al (2014) and Yan et al (2016) for details of these specific impact metrics.

These indices are extensively covered in the various bibliometric, scientometric, informetric and webometric journals such as *Scientometrics, Journal of Informetrics*, and *Information Processing and Management*. This has also seen a research impact "language" developed; eg: sleeping beauties, hot papers, citation classics, yesterday's giants, citation superstars and dancing with the academic elite.

Research impact databases

A range of databases are available to deliver these research impact metrics, with results differing due to these different databases. *Web of Science* is the most restrictive, accessing 14,000 journals, while *Scopus* accesses 20,000 journals. *Google Scholar* is more

comprehensive and is the standard database used; the only requirement being that researchers have to be registered previously. Impact metrics are presented over the researcher's full career and for the last five years to reflect both long-term and short-term performance. Other databases include *Microsoft Academic*. A comparison of the various databases used to assess the consistency of the research impact metrics has been an active area of research in recent years (eg: Bar-Ilan, 2018: Haley, 2014; Harzig and Alakangas, 2016; Mingers and Lipitakis, 2010; Mongeon and Paul-Hus, 2016). For this paper, all researchers' impact metrics were accessed using *Google Scholar*, unless the researcher was not registered, then impact metrics from *Publish or Perish* were used; this non-registration issue via *Google Scholar* only occurred in a small number of cases. Figure 1 provides an example of this *Google Scholar* analysis (for Michel Foucault; a French philosopher who is a leader across all disciplines for impact metrics).

Research impact software

Publish or Perish is downloadable software for research impact analysis, using *Google Scholar* as the database platform. Twelve impact metrics are calculated, including the h-index, total citations, g-index, e-index and average annual increase in the h-index. This software enables impact metrics to be done at both the individual researcher and specific journal level. The integrity and consistency of Publish or Perish concerning the rank variability of its impact metrics has also been assessed (Haley, 2013), as well as consistency with Google Scholar. Figures 2-4 provide examples of this *Publish or Perish* impact analysis at the individual researcher level (for CF Sirmans and Martin Hoesli) and at the journal level (for *Journal of Property Investment and Finance*).

Scimago also does a broad journal impact analysis; with detailed metrics including a quartile analysis for journal quality; reflecting the focus on journals wanting to be in Q1 and Q2 to reflect their quality compared to their discipline peers.

METHODOLOGY

Using *Google Scholar* (and *Publish or Perish* if needed), the research impact profile was determined for over 150 leading real estate researchers globally. This included leading researchers in American Real Estate Society (ARES), American Real Estate and Urban Economics Association (AREUEA), European Real Estate Society (ERES), Pacific Rim Real Estate Society (PRRES) and Asian Real Estate Society (AsRES). These real estate researchers were determined by a review of the major real estate journal editorial boards (over 20 journals), as well as the authors of journal articles over the last ten years; thus ensuring a comprehensive coverage of the real estate researcher community. This saw coverage of a wide range of real estate research areas, including real estate investment, valuation, real estate development, housing, mortgage markets, brokerage, urban studies and real estate management. The research impact metrics were also determined for 22 real estate journals; journal name changes were incorporated for full journal life coverage. This included the leading journals in real estate (eg: REE, JREFE, JRER, JPR, JPIF), housing (JHR, HS), and urban studies (Cities, HI, US).

Whilst some authors had impressive research impact metrics, many of their publications were in non-real estate areas (eg: finance, economics, law). To avoid this non-real estate bias in this research output and to achieve a "purer" real estate impact analysis, the selection criteria used in this paper was that at least 50% of an author's publications in Google Scholar had to be in an area of real estate. This saw approximately ten researchers deleted from the top research impact list (eg: Titman, Goetzmann, Gyourko, Shiller, Rosenthal, Brooks). This selection criteria ensured the final list only included researchers whose majority of research outputs were in the real estate area.

Details of the relevant research impact metrics were obtained; namely the h-index, total citations and i10. These real estate research metrics were compared with all other disciplines to see real estate in a global research discipline context.

The authors would like to stress that the purpose of this real estate researcher impact analysis goes beyond just setting up league tables, but is at a broader level to clearly identify the importance of these impact metrics for real estate researcher careers (eg: ECRs), as well as putting real estate in the fuller disciplinary context.

RESEARCH IMPACT: GENERAL

It is important to firstly establish the global leaders for research impact across the major metrics for all disciplines. This enables real estate to be embedded in a broader research impact context across the fuller research community, as well as highlighting the significant differences across disciplines.

Table III provides details of the leading research impact players across all disciplines (at June 2019). This includes Panel A (h-index) and Panel B (total citations). Panel C provides the h-indices for the leading journals across all of the journals.

In terms of the h-index, to be in the top 100 researchers across all disciplines, you need a h-index exceeding 180. Over 3,160 researchers have a h-index of at least 100. Many researchers see the Nobel Prize in Economics as the premier research impact recognition in the economics discipline. Interestingly, there is considerable variation in the h-indices for the winners of the Nobel Prize in Economics; this includes Tirole (2014 winner; #3 in h-index for economists), Deaton (2015; #27), Hart (2016; #147), Thaler (2017; #36), Nordhaus (2018; #208) and Bannerjee (2019; #69), with Andrei Shleifer (#1; based at Harvard) yet to win the Nobel Prize in Economics.

For total citations across the disciplines, to be in the top 100 researchers, you need total citations of over 191,450, with 41 researchers having in excess of 250,000 citations. While there is not a 1-to-1 match of the h-index and total citations, there is a strong link between both of these impact metrics. The superstar across all disciplines is the French philosopher Michel Foucault; having over 1 million citations, a h-index of 295 and i10 index of 1,646 as of January 2020.

Several journals have h-indices in excess of 1,000 (see Table III Panel C). For the h-indices for the leading finance/economics journals, these include *Journal of Finance* (621), *American Economic Review* (498), *Journal of Financial Economics* (298) and *Applied Financial Economics* (110).

The next section of this paper considers the leading real estate researchers and real estate journals in detail in determining their research impact metrics.

RESEARCH IMPACT: REAL ESTATE RESEARCHERS

h-index analysis

Based on the calculation and assessment of the research impact metrics for over 150 real estate researchers globally, Table IV identifies the leading real estate researchers for research impact using the h-index. The names in Table IV often see authors with long and distinguished careers in real estate research, with incisive research contributions to the real estate body of knowledge. Their h-index also reflects the longevity of their ongoing research outputs. The top 10 h-index performers are strongly US-focused. This sees CF Sirmans (#1) as the top ranked real estate impact player. The only non-US players in the top 10 are Martin Hoesli (#3) and Michael Ball (#7) from ERES.

Outside the top 10, Table IV also clearly shows a diversity of real estate researchers across not just ARES and AREUEA, but including researchers from ERES (eg: McGreal, Eichholtz), AsRES (eg: Chau, Zheng, Hui) and PRRES (eg: Newell). Often, these non-US real estate researchers have published extensively in the non-US real estate journals. This reflects the diversity of high quality and high impact research publications in the European and Asian real estate research spaces. Figures 5-7 present the *Google Scholar* profiles for CF Sirmans, Martin Hoesli and Stan McGreal, with the h-index being a key metric in their research impact profiles. Compared to Table III across all disciplines, with no real estate researchers having a h-index above 100, this sees no real estate researchers figuring in the top echelons of h-index players across all disciplines. This partly reflects the limited number of real estate journals and the silo mindset of many real estate researchers.

Total citations analysis

Using total citations as the research impact metric, Table V identifies the leading real estate researchers. In the top 10, some marginal order differences are evident compared to the h-index leaders shown in Table IV, with nine of the top 10 in total citations also being in the top 10 for the h-index leaders. Again, CF Sirmans (#1) was the leader amongst the real estate impact players. However, clear differences emerged for those in the next tier just outside the top 10 in Table V; particularly with a stronger representation from ERES (eg: Kok, Brounen, McGreal, Englund), as well as AsRES (eg: Zheng, Chau, Hui). Figures 5-7 also highlight the total citations analysis using *Google Scholar* for Sirmans, Hoesli and McGreal. As with the h-index

results, this highlights the impact benefits of publishing outside the top 3 US real estate journals.

i10 analysis

Table VI presents the leading real estate researchers using i10 as the research impact metric. Importantly, the i10 presents a less exacting research impact metric, only requiring at least ten citations per paper. Of the top 10 real estate researchers in this i10 analysis, no more than 50% figured in both the top 10 h-index (5) and total citations (4) leaders shown in Tables IV and V. This sees more diversity on the i10 top 10 list; particularly from AsRES (eg: Zheng, Chau, Hui). Again, ERES was even more strongly represented in the top players in the tier just outside the top 10 (eg: Hoesli, Eichholtz, Adair, Lizieri). Figures 5-7 also highlight the i10 analysis using *Google Scholar* for Sirmans, Hoesli and McGreal.

Consensus across impact metrics

A number of real estate researchers figure prominently in all three metrics for research impact; this includes CF Sirmans, Susan Wachter and Michael Ball. This partly reflects the long and active research careers of many of these leading real estate researchers. Importantly, a number of key players are moving through the ranks in these impact lists as their research becomes more widely cited; particularly from ERES and AsRES. Often, they have many years left in their research careers and ample opportunity to figure more prominently, as their real estate research actively contributes to the real estate body of knowledge and becomes increasingly cited. They will soon be "dancing with the academic elite".

RESEARCH IMPACT: REAL ESTATE JOURNALS

Journal h-index analysis

Using *Publish or Perish*, the research impact analysis was also done for specific real estate journals, with Table VII presenting the h-index for 22 leading real estate journals. Some clear trends emerged from this journal impact ranking that could potentially influence real estate researchers' journal selection strategies.

While the top 13 research impact journals are as expected, the ordering provides important insights. The top real estate journals figure prominently (ie: *Real Estate Economics* (#5), *Journal of Real Estate Finance and Economics* (#8), *Journal of Real Estate Research* (#10)), but they are dominated by the broader planning/policy/urban journals; this includes *Urban Studies* (#1), *Regional Studies* (#3), *Cities* (#6) and *Habitat International* (#8). This indicates a clear high impact market opportunity for papers relating to the bigger issues around real estate, rather than micro-focused strongly empirical papers. Often they are non-US focused papers, reflecting a fuller international real estate research agenda.

Similarly, non-US journals figure prominently in the top 13 research impact list; this includes *Urban Studies* (#1), *Housing Studies* (#7), *Journal of Property Investment and Finance* (#12) and *Journal of Property Research* (#13) as leading UK real estate journals. Across all of these 22 journals, it is clear they are all contributing to research impact in the real estate body of knowledge. This also highlights the high impact of papers in non-US journals; further expanding the scope of high impact research opportunities. With research impact taking on increased importance, some real estate journals may need to rethink their publication strategies to more fully embrace impact, as well as their current focus on research quality.

In comparing these real estate journal impacts in Table VII with the overall journals in other disciplines (eg: finance), real estate journals are well below the h-indices for the leading finance/science journals. This partly reflects the lesser number of real estate journals in this specialist research area, as well as the silo mind-set of many researchers in the real estate space.

While these journal h-index values are influenced by the journal's number of copies and number of papers per year, and the journal's history (some have over 50 year's history to draw on to capture their impact), the resulting journal h-indices provide an effective snapshot of the respective research impacts, as well as the research impact of the real estate journals at a

broader level. Importantly, high impact opportunities are clearly evident beyond the top 3 US real estate journals.

Linking journal quality and research impact

To explore the relationship between journal quality and research impact, Figure 8 presents the results for the 14 real estate journals used in Worzala and Tu (2010), where perceived journal quality scores were obtained, based on a survey of ARES/ERES/AsRES/PRRES researchers. Journal quality was assessed on a 1 to 5 basis, with lower scores indicating higher quality. This was then mapped by the authors against their respective journal h-index from Publish or Perish.

It is evident that there is a link between journal quality and journal research impact, but in two phases. Importantly, the threshold of approximately 2.3 in journal quality saw a more rapid increase in journal impact (via h-index), compared to the general increase in impact with an increase in journal quality seen for those real estate journals with lesser perceived quality .al . omics, Jc impact h-indu scores. This saw the higher quality journals of Journal of Urban Economics, Real Estate Economics, Journal of Real Estate Finance and Economics, Journal of Real Estate Research, Land Economics and Urban Studies with higher impact h-indices, even with a marginal increase in perceived journal quality.

IMPLICATIONS

This paper has clearly identified the increasing importance of research impact for real estate researchers at the level of the individual researcher and specific journal, and the need to embed this in their publications strategy to facilitate their research career. This is a long-term game, as the metrics involved need to be developed over time in a researcher's career; particularly for ECRs. This is further reinforced by most universities now using these research impact metrics in evaluating academic staff research performance.

The authors of this paper strongly believe a two-pronged approach is needed for your research agenda to facilitate your career. This involves doing high quality meaningful research, publishing in the top real estate journals globally and having an impact in your real estate research as measured by these research impact metrics; both are important dimensions to research performance.

This raises a number of critical issues to consider in developing your career research strategy. These issues are driven by the results of our research, as well as the depth of the research team's insights from helping ECRs. These issues include:

1: have a mentor: someone who has a publication track record who will support your career, where you can "learn to write"; many of the leaders in the various regional real estate societies can assist in this and are happy to play this mentor role and see your career develop.

2: work as part of a research team: you cannot do all of the research by yourself; it sees a very narrow research focus and limited research outputs. Develop your research networks. Technology lets you do this very effectively today, working with research colleagues across universities and countries. The regional real estate society conferences further facilitate these research network opportunities.

3: publish with your PhD students: their research is important and you are assisting them in their careers; as well as your own career.

4: engage in cross-disciplinary research: working with colleagues in other disciplines is actively encouraged by most universities. This exposes you to a wider range of research issues, methodologies and potential journals that often have higher impact rankings than the real estate journals. It also helps break down the research silos which are still prevalent.

5: think about publishing in the non-real estate journals: this takes your research into some of the major finance/business/planning/environment/management journals; often with higher journal rankings. It needs a different "style" of paper, based around "big picture" issues and establishing why real estate is important in a fuller context. This is in contrast to a paper which focuses on micro real estate issues using excessive econometric techniques.

6: self-citing is OK: it contributes to your research metrics (eg: h-index) in *Google Scholar*; but do not self-cite too excessively. You need to ensure a balance of your contributions versus those of other real estate researchers in your area.

7: use these research impact metrics for enhancing your career: these metrics are independent and objective measures of the impact of your research when you apply for promotion. They are the university benchmarks for your research credibility and stature, as well as being recognised across all disciplines. These research impact metrics are taking on increased importance in all universities when evaluating staff research performance. Importantly, it lets you objectively benchmark yourself against your peers (both locally and internationally) for a more effective career comparison; eg: ECRs. *Google Scholar* lets you do this effectively, as all real estate academics' impact profiles are in the public space and regularly updated.

8: definitely think about publishing beyond the top 3 US real estate journals. There is now a wide range of high quality real estate journals globally, with research agendas at an international level, reflecting opportunities for non-US focused research; often exploring unique and important local research questions. They are often more relevant outlets for your research.

9: publishing in a top US journal will not necessarily see your paper having high impact in the real world; you need to decide on the most suitable outlet for your research.

Many of the above issues go well beyond just research impact; eg: having a mentor. They capture key elements in broadly developing your research career and facilitating your research journey to be a high quality real estate researcher. So, it is more than just "playing the game" to improve your research impact metrics; it is about moving your career forward as a high calibre and highly-regarded real estate researcher.

In conclusion, the quality of your real estate research is important; reflected by targeting the top ranked real estate journals globally. However, we are seeing increasingly more focus given to the impact of your research at both the macro and micro levels; often with significant financial benefits and implications for your university. You need to be working on both of these key research aspects in moving your career forward and contributing to the real estate body of knowledge. Hence, a real estate research strategy around research quality and research impact

1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
15
16 17
1/
18
19
20
21
22
23
24
25
26
27
28
29
30
30 31
32
32 33
33
34
35 36
36
37
38
39
40
41
42
43
44
45
46
40 47
47 48
49 50
50
51
52

<text> is the most effective strategy for most real estate researchers to achieve their research career

REFERENCES

Azasu, S. and Simons, R.A. (2018), "What constitutes a research contribution in real estate related fields? A survey of journal editors", *Journal of Real Estate Literature*, Vol. 26 No. 2, pp. 263-290.

Bar-Ilan, J. (2008), "Which h-index - a comparison of WoS, Scopus and Google Scholar", *Scientometrics*, Vol. 74 No. 2, pp. 257-271.

Beard, R. and Allen, M. (2019), "Where else do the top 47 real estate researchers publish?", *Journal of Real Estate Practice and Education*, Vol. 27 No. 1, pp. 67-76.

- Blagus, R., Leskosek, B. and Stare, J. (2015), "Comparison of bibliometric measures for assessing relative importance of researchers", *Scientometrics*, Vol. 105 No.3, pp. 1743-1762.
- Bornmann, L. and David, H. (2007), "What do we know about the h-index?", *Journal of American Society for Information Science and Technology*, Vol. 58, pp.1381-1385.
- Bornmann, L. and Leydesdorff, L. (2018), "Count highly-cited papers instead of papers with h citations: use normalised citation counts and compare 'like with like'!", *Scientometrics*, Vol. 115 No. 2, pp. 1119-1123.
- Boshoff, D. and Parker, D. (2017), "Preferences among real estate journals: Perception versus reality", *Property Management*, Vol. 35 No. 4, pp. 414-432.
- Chi, P.S. and Glänzel, W. (2018), "Comparison of citation and usage indicators in research assessment in scientific disciplines and journals", *Scientometrics*, Vol. 116 No. 1, pp. 537-554.
- Castor, R. and Bordons, H. (2007), "The h-index: advantages, limitations and its relation with the other binliometric indicators at the micro level", *Journal of Informetrics*, Vol. 1, pp. 191-203.
- Dombrow, J. and Turnbull, G.K. (2000), "Individual and institutional contributors to the Journal of Real Estate Finance and Economics: 1988-1999", *Journal of Real Estate Finance and Economics*, Vol. 21 No. 3, pp. 203-214.
- Dombrow, J. and Turnbull, G. (2002), "Individuals and institutions publishing research in real estate: 1989-1998", *Journal of Real Estate Literature*, Vol. 10 No. 1, pp. 45-92.
- Gibler, K., Sah, V. and Chen, G. (2009), "Evaluating tiers of real estate publications in the US", *Journal of Real Estate Practice and Education*, Vol. 11 No. 2, pp. 127-143.
- Gibler, K. and Ziobrowski, A. (2002), "Authors' perceptions and preferences among real estate journals", *Real Estate Economics*, Vol. 30 No. 1, pp. 137-157.

Haley, R. (2013), "Rank variability of the Publish or Perish metrics for economics and finance journals", *Applied Economics Letters*, Vol. 20, pp. 830-836.

- Haley, R. (2014), "Ranking top economics and finance journals using Microsoft Academic Research versus Google Scholar. How do the new Publish or Perish option compare?", *Journal of the Association for Information Science and Technology*, Vol. 65 No. 5, pp. 1079-1084.
- Haley, R. (2017), "On the inauspicious incentives of the scholar-level h-index: a economist's take on collusive and coercive citation", *Applied Economics Letters*, Vol. 24 No. 2, pp. 85-89.
- Hardin, W.G., Liano, K. and Chan, K.C. (2006), "Influential journals, institutions and researchers in real estate", *Real Estate Economics*, Vol. 34 No. 3, pp. 457-478.
- Hardin, W.G., Liano, K. and Chan, K.C. (2007), "A citation proportions evaluation of real estate research", *Journal of Real Estate Literature*, Vol. 15 No. 3, pp. 383-396.

Harzing, A., Alekanges, S. and Adams, D. (2014), "hIa: an individual annual h-index to accommodate disciplinary and career-length differences", *Scientometrics*, Vol. 99, pp. 811-821.

Harzing, A. and Alakanges, S. (2016), "Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary analysis", *Scientometrics*, Vol. 106, pp. 787-804.

- Hirsch, J.E. (2005), "An index to quantify an individual's scientific research output", *Proceedings of National Academy of Science USA*, Vol. 102 No. 46, pp. 16569-16572.
- Hoesli, M. (2016), "Real estate research in Europe", Journal of European Real Estate Research, Vol. 9 No. 3, pp. 220-230.
- Jin, J.C. and Yu, E.S.H. (2011), "World ranking of real estate research: Recent changes in School competitiveness and research institutions", *Journal of Real Estate Finance and Economics*, Vol. 42 No. 2, pp. 229-246.

Kumar, M. (2007), "Evaluating scientists: citations, impact factor, online page hits and what else?", *IETE Technical Review*, Vol. 26, pp. 165-168.

Martin, B. (2013), "Whither research intensity? Plagiarism, self-plagiarism, and coercive citation in an age of research assessment", *Research Policy*, Vol. 42, pp. 1005-1014.

Mingers, J. and Lipitakis, E. (2010), "Counting the citations: a comparison of Web of Science and Google Scholar in the field of business and management", *Scientometrics*, Vol. 85, pp. 613-625.

Mongeon, P. and Paul-Hus, A. (2016), "The journal coverage of Web of Science and Scopus: a comparative analysis", *Scientometrics*, Vol. 106, pp. 213-228.

Newell, G., Acheampong, P., Juchau, R., Chau, K.W. and Webb, J.R. (2002), "An international analysis of real estate journals", *Journal of Property Investment and Finance*, Vol. 20 No. 6, pp. 454-472.

- Ong, S.E., Ooi, J.T.L. and Wong, N.H. (2001), "Crossing the great divide? A survey of US and UK real estate journals", *Journal of Property Investment and Finance*, Vol. 19 No. 6, pp. 519-535.
- Redman, A.L., Manakyan, H. and Tanner, J.R. (1998), "The ranking of real estate journals: A citation analysis approach", *Financial Practice and Education*, Vol. 8 No. 1, pp. 59-69.
- Redman, A.L., Manakyan, H. and Tanner, J.R. (1999), "A normalized citation analysis of real estate journals", *Real Estate Economics*, Vol. 27 No. 1, pp. 169-182.
- Saginor, J. (2015), "The real estate academic leadership (REAL) rankings of 2011-2015", Journal of Real Estate Literature, Vol. 23 No. 2, pp. 253-257.
- Saginor, J. (2016), "The real estate academic leadership (REAL) rankings of 2012-2016", Journal of Real Estate Literature, Vol. 24 No. 2, pp. 309-315.
- Saginor, J. (2017), "The real estate academic leadership (REAL) rankings of 2013-2017", Journal of Real Estate Literature, Vol. 25 No. 2, pp. 327-333.

Saginor, J. (2018), "The real estate academic leadership (REAL) rankings of 2014-2018", Journal of Real Estate Literature, Vol. 26 No. 2, pp. 255-261.

Saginor, J. (2019), "The real estate academic leadership (REAL) rankings of 2015-2019", *Journal of Real Estate Literature*, Vol. 27 No. 2, pp. 181-187.

Sidiropoulos, A., Katsaros, D. and Manolopoulos, Y. (2015), "Ranking and identifying influential scientists versus mass producers by the perfectionism index", *Scientometrics*, Vol. 103, pp.1-31.

- Tu, C.C. and Worzala, E.M. (2010), "The perceived quality of real estate journals: Does your affiliation matter?", *Property Management*, Vol. 28 No. 2, pp. 104-121.
- Urbancic, F. (2004), "Editorial board representation: An alternative method for ranking real estate programs", *Journal of Real Estate Practice and Education*, Vol. 7 No.1, pp. 53-63.

Waltman, L. and Jan Van Eck, N. (2012), "The inconsistency of the h-index", *Journal of American Society of Information Science and Technology, Vol. 63, pp. 406-415.*

- Wildgaard, L., Schneider, J.W. and Larsen, B. (2014), "A review of the characteristics of 108 author-level bibliometric indicators", *Scientometrics*, Vol. 101 No. 1, pp. 125-158.
- Wilhite, A. and Fong, E. (2012), "Coercive citation in academic publishing", *Science*, Vol. 335, pp. 542-545.
- Winson-Geideman, K. and Evangelopoulos, N. (2013a), "Topics in real estate research: 1973-2010: A latent semantic analysis", *Journal of Real Estate Literature*, Vol. 21 No. 1, pp. 59-76.

Winson-Geideman, K. and Evangelopoulos, N. (2013b), "Research in real estate: 1973-2010: A three-journal comparison", Journal of Real Estate Literature, Vol. 21 No. 2, pp. 255-267.

1. (A reh conn. Worzala, E.M. and Tu, C.C. (2010), "Real estate journal quality: Perceptions of the international real estate research community", Journal of Real Estate Literature, Vol. 18 No. 1, pp. 21-39.

Yan, Z., Wu, Q. and Li, X. (2016), "Do Hirsch-type indices behave the same in assessing single

	iversity of Texas at Dallas (Dallas 24)
JK: Find	ncial Times (FT45)
Cha	tered Association of Business Schools (CABS)
Australia	Australian Business Deans Council (ABDC)
rance:	Centre National de la Recherche Scientifique (CNRS)
-	ESSEC Business School (ESSEC)
enmark	: Danish Ministry of Higher Education and Science (DMHES)
aly: Na	ional Agency for the Evaluation of Universities and Research Institutes (ANVUR)
etherla	ds: Erasmus Research Institute of Management (ERIM)
ermany	: German Academic Association for Business Research (GAABR)

g index	e index	w index
f index	j index	hg index
π index	scaled h-index	a index
r index	ph index	m index
t index	p index	zp index
d index	c ³ index	EM index
fp ^k index	perfectionism index	individual h-index
Average annual increase in	h-index	
Citations per paper		
Age-weighted citation rate		

Table III. Leading researchers and journals for research impact across all disciplines*

Panel A: h-index Solomon Snyder: 279; neuroscience Graham Colditz: 279; diet and obesity Sigmund Freud: 273; psychology Robert Kessler: 266; medical disorders Joann Manson: 265; medical conditions

Panel B: total citations

Michel Foucault: 889,620; philosophy

Pierre Bourdieu: 646,337; sociology

Sigmund Freud: 542,097; psychology

Albert Bandura: 520,091; psychology

Douglas Altman: 406,486; medicine

Panel C: journal h-index

Nature: 1,052

Science: 1,015

New England Journal of Medicine: 902

Cell: 682

Proceedings of National Academy of Science USA: 675

*: metrics as at June 2019

Table IV. Leading real esta	
	ate researchers: h-index*
#1: CF Sirmans: 62	
#2: Susan Wachter: 48	
#3: John Quigley: 41	
#3: Martin Hoesli: 41	
#5: Don Haurin: 39	
#6: James Kau: 38	
#7: Michael Ball: 37	
#8: David Geltner: 36	
#8: Geoff Turnbull: 36	
#10: Jim Webb: 35	
#10: Brent Ambrose: 35	
Others:	
Yongheng Deng (#12: 34),	, Kwong Wing Chau (#12: 34),
John Clapp (#12: 34), Davi	id Ling (#15: 33), Siqi Zheng (#15: 33), Abdullah Yavas (#17: 30
Stan McGreal (#17: 30), E	ddie Hui (#17: 30), Graeme Newell (#17: 30),
Piet Eichholtz (#17: 30)	
Source: Authors' calculation *: metrics as at June 2019	on using <i>Google Scholar</i>

- #1: CF Sirmans:12,513
- #2: Susan Wachter: 9,167
- #3: Don Haurin: 6,514
- #4: Michael Ball: 6,334
- #5: Martin Hoesli: 5,879
- #6: David Geltner: 5,656
- #7: James Kau: 5,544
- #8: John Quigley: 5,489
- #9: Piet Eichholtz: 5,042
- #10: Tony Sanders: 4,976

Others:

Siqi Zheng (#11: 4,615), Yongheng Deng (#12: 4,528), David Ling (#13: 4,072), Brent Ambrose (#14: 3,996), Kwong Wing Chau (#15: 3,991), Geoff Turnbull (#16; 3,936), John Clapp (#17: 3,896),Nils Kok (#18: 3,855), Eddie Hui (#19: 3,843), Jim Webb (#20: 3,691), Dirk Brounen (#21: 3,654), Norm Miller (#22: 3,516), Graeme Newell (#23; 3,390), Stacy Sirmans (#24: 3,322), Stan McGreal (#25: 3,290), Peter Englund (#26: 3,227),

Crocker Liu (#27: 3,224)

Source: Authors' calculation using *Google Scholar* *: metrics as at June 2019

3
4
5
6
7
8
9
10
11
12
13
14
15
16 17
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
57
38
39
40
41
42
43
44
45
46
47
48
49
50
50
52
53
54
55
56
55

Table VI. Leading real estate researchers: i10*

- #1: CF Sirmans: 211
- #2: Susan Wachter:115
- #3: Siqi Zheng: 111
- #4: Kwong Wing Chau: 99
- #5: Eddie Hui: 98
- #6: Graeme Newell: 97
- #7: Jim Webb: 90
- #8: Michael Ball: 86
- #9: Stan McGreal: 85
- #9: Geoff Turnbull: 85

Others:

Martin Hoesli (#11: 82), John Quigley (#12: 76), James Kau (#13: 73),

Don Haurin (#14: 72), Piet Eichholtz (#15: 65), David Ling (#15: 65), Jim Shilling (#17: 63),

Brent Ambrose (#18: 62), Yongheng Deng (#19: 61), David Geltner (#20: 59),

Alastair Adair (#20: 59), Colin Lizieri (#20: 59), Stacy Sirmans (#20: 59)

Source: Authors' calculation using *Google Scholar* *: metrics as at June 2019

Table VII. Leading real estate journals: h-index*

- #1: Urban Studies: 235
- #2: Journal of Urban Economics: 206
- #3: Regional Studies: 189
- #4: Land Economics: 177
- #5: Real Estate Economics: 120
- #6: Cities: 117
- #7: Housing Studies: 110
- #8: Habitat International: 108
- #8: Journal of Real Estate Finance and Economics: 108
- #10: Journal of Real Estate Research: 91
- #11: Journal of Housing Economics: 82
- #12: Journal of Property Investment and Finance: 63
- #13: Journal of Property Research: 53

Others: Journal of Real Estate Portfolio Management (#14: 45), Property Management (#15: 42), Journal of Corporate Real Estate (#16: 41), Journal of Real Estate Literature (#17: 40), International Journal of Strategic Property Management (#18: 38), Pacific Rim Property Research Journal (#19: 26), International Journal of Housing Markets and Analysis (#20: 25), Journal of Real Estate Practice and Education (#21: 23), Journal of European Real Estate Research (#22: 18)

Source: Authors' calculation using *Publish or Perish* *: metrics as at June 2019

Contrance

Figure 1. Google Scholar profile: Michel Foucault

<complex-block><image/></complex-block>	
	The control water space and private space and pr
Reprint and putels The both of the putels 1072 ± 1077 1078 ± 1078 ± 1078 1078 ± 107	Sicpline and punish: The bith of the prison 7429 2012 Procent Norwdog: Selected interviews and other writings, 1972-1977 62776* 1960 Procent Prime 3913 1977 Procent Prime 3913 1977 Archaeology of knowledge 3912 2013 Microcititica del poder 2912 1992 Microcititica del poder 1900* 1992 Microcititica del poder 1900* 1992 Microcititica del poder 1900* 1992
Intermitting Note Ait Proventionality Cont Cont Proventionality Cont Cont Proventionality Cont Cont Proventionality Cont Cont Cont Proventionality Cont Cont Cont Cont Proventionality Cont Cont Cont Cont Cont Proventionality Cont Cont </td <td>Archaeologie Selected interviews and other writings, 1972-1977 6278 * 1960 Pedagogia de la autonomia: saberes necesarios para la práctica educativa 1910 1997 Prácusal 35123 2013 Robindgo 369270 1992 Microsoft 29612 1992 Microsoft 1990 * 1992 Microsofta del poder 1990 * 1992 Ource: Authors' calculation using Google Scholar</td>	Archaeologie Selected interviews and other writings, 1972-1977 6278 * 1960 Pedagogia de la autonomia: saberes necesarios para la práctica educativa 1910 1997 Prácusal 35123 2013 Robindgo 369270 1992 Microsoft 29612 1992 Microsoft 1990 * 1992 Microsofta del poder 1990 * 1992 Ource: Authors' calculation using Google Scholar
Program 0 </td <td>M Poccult Vertaging Qui 2014 2015 2016 2017 2018 2019 2001 Qui 2013 2014 2015 2017 2018 2019 201 Qui 2013 2014 2015 2017 2018 2019 2017 Qui 2013 2014 2015 2017 2018 2019 201 Qui 2014 2015 2016 2017 2018 2017 2018 2019 201 Qui 2014 2015 2016 2017 2018 2018 2017 2018 2018 2018 2018 2018 2018 2018 2018</td>	M Poccult Vertaging Qui 2014 2015 2016 2017 2018 2019 2001 Qui 2013 2014 2015 2017 2018 2019 201 Qui 2013 2014 2015 2017 2018 2019 2017 Qui 2013 2014 2015 2017 2018 2019 201 Qui 2014 2015 2016 2017 2018 2017 2018 2019 201 Qui 2014 2015 2016 2017 2018 2018 2017 2018 2018 2018 2018 2018 2018 2018 2018
Pedgagada da la autoomata suberes nocessarios para la práctica educativa de terma de 1997 en de la constructiva de la da	Perform 1997 100 Set 200 200 200 200 200 200 200 200 200 20
Manage 2012 192 Outstands 1920 192 Outstands 1920 192	M Focult, PAvare-Unia, J Vareba La Papana, Vega: Ource: Authors' calculation using <i>Google Scholar</i> Ource: Authors' calculation using <i>Google Scholar</i>
	M Pocualt, F Avarez-Uría, J Varela La Plopata, M Pocualt, AF Cascals, E Cordeio Vega
purce: Authors' calculation using Google Scholar	ource: Authors' calculation using Google Scholar
purce: Authors' calculation using <i>Google Scholar</i>	ource: Authors' calculation using Google Scholar
29	
29	

Harzing's Publish or Perish (Windows GUI Edition) 7.15.2643.7260 × File Edit Search View Help 🕑 🖻 📩 📑 📕 🖬 🖌 🖌 🖬 + 🗎 🗡 🔞 My searches Search terms Source Papers Cites Cites/v... h g hl,no... hl,ann... acc... Search date Cache date Las... Saved Saved queries G Google Sc 328 13345 290.11 64 102 40 0.87 9 19/12/2019 19/12/2019 0 Google Scholar Profile search How to search with Google Scholar Profiles Profile name: Find a profile. C.F. Sirmans - Professor, Florida State University Search Profile ID: InOcC3cAAAAJ "Real Estate" Housing Search Direct 1991 Annual citations: 1993 Clear All Year 1985 1986 1987 1988 1989 1990 1992 1994 1997 1999 55 620 New Total 41 456 41 565 66 686 66 752 66 818 88 906 76 982 105 1087 152 1239 137 1376 143 1519 187 1706 231 2078 28 524 141 1847 Show profile 196 < Copy citations New Results Help Cites Per year Rank Authors Title Year Publication Publisher Тур Publication years: 1973-2019 ✓ h 437 27.31 AE Gelfand, HJ Ki... 2003 Journal of the American S... Spatial modeling with spatially va... 1 Jour 46 (1973-2019) Citation years: ✓ h 335 15.95 RK Pace, R Barry, ... Spatial statistics and real estate 1998 The Journal of Real Estate ... Jour Papers: Citations: 328 13345 ✓ h 299 19.93 AE Gelfand, AM S... Nonstationary multivariate proce... 2004 Test 3 Jour Cites/year: 290.11 h 282 23 50 4 JP Harding, SS Ros... Depreciation of housing capital, ... 2007 Journal of urban Economi loui 40.69 Cites/paper: ✓ h 243 15.19 5 JP Harding, SS Ros... Review of Economics and... Estimating bargaining power in t... 2003 Jour Authors/paper: ✓ h 241 12.68 International Journal of F... 6 RK Pace, R Barry, ... A method for spatial-temporal fo... 2000 Jour h-index: 64 ✓ h 206 US Dhillon, JD Shil... 6.44 Choosing between fixed and adju... 1987 Journal of Money, Credit ... Jour g-index: 102 ✓ h 205 8.54 8 AJ Jaffe, CF Sirmans Fundamentals of real estate inves... 1995 Prentice hall Boo hI.norm: 40 C Gosh, M Miles, ... hI,annual 0.87 ✓ h 177 7.70 9 Are REITs Stocks? 1996 Real Estate Finance Jour Papers with ACC >= 1,2,5,10,20: h 167 11.13 10 AE Gelfand, MD E ... The dynamics of location in hom... 2004 The journal of real estate f ... Jour 170,106,38,9,2 ✓ h 166 10.38 11 C Ghosh, CF Sirm... 2003 The Journal of Real Estate ... Board independence, ownership ... Jour ✓ h 166 12 GK Turnbull, CF Si... Regional Science and Urb... 6.38 Information, search, and house p... 1993 Jour ✓ h 166 5 19 13 JD Shilling, CF Sir... Price adjustment process for rent... 1987 Journal of Urban Economi. Jour Copy Results -✓ h 164 6.56 14 M Rodriguez, CF S... Quantifying the value of a view in... 1994 Appraisal Journal loui Save Results ✓ h 163 15 JL Glascock, S Jah... Real Estate Economics 5.62 An analysis of office market rents... 1990 Jour ☑ h 158 7.18 RC Hill, JR Knight, ... Estimating capital asset price ind... 1997 Review of Economics and... 16 Jour ✓ h 156 17 C Ghosh, R Nag, C.. The pricing of seasoned equity of .. Real Estate Economics 8.21 2000 Jour

Figure 2. Publish or Perish profile: CF Sirmans

Source: Authors' calculation using Publish or Perish

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58

"	h (Windows G	Edition) 7.15.2	643.726	0											_2		×
ile Edit Search View																-	
E Edit Search View		XO															
	Search terms	^		Source	Dares	c -	Citert			hl -	0 H	ann	cc .	arch date	Cache	te las	
	Jearch terms			Google Sc	Paper 231		Cites/y 157.8		9 79		0 hl, 27	ann a 0.64		arch date /12/2019	Cache dat 19/12/201		
Saved queries			0	oogie sc	234	0030	137.8	42	19		£1	0.04	17 19)	12/2019	13/12/201	0	
oogle Scholar Brofile	*ch				u to or	arch with Or	nla Scholo-	Profiler									
Soogle Scholar Profile sear		Hoarli Dasta	or of Da	al Estate Finance, L		arch with Goo	gie Scholar	Profiles									
																Search	Concentration 1
Profile ID: ujsIDrIAA				real estate investm												Search Dir	
Annual citations: 200 89	91	004 2005 28 141	2006 213	2007 2008 237 286	200	5 407	2011 431	416	2013 572	201 488	8 517	7 442	7 510	495	2019 460	Clear A	
Show profile 445		64 805	1018	1255 1541	188		2725		3713	420	01 471	18 516		6170	6630	Revert	t
Copy citations <															>	New	-
	elp Cites	Per year	Rank	Authors		Title			Y	Year	Publicati	ion		Publisher		1	Typ ^
Publication years: 1977-20	19 Jahre			P Gaud, E Jani,		The capital	tructure o	of Swiss co.				n Financia	Mana				Jour
itation years: 42 (1977-20: apers: 2	⁽⁹⁾ 38 ⊠ h 37			SC Bourassa, M		Do housing							g Econo				Jour
itations: 66	30 🗹 h 34	7 17.35		SC Bourassa, F		Defining ho			19	999	Journal o	of Housin	g Econo	1			Jour
ites/year: 157. ites/paper: 27.				M Hoesli, BD M		Property inv		orinciples a		014	Environ	mart	Diamair	Routledg	e		Boo
uthors/paper: 2.	83 M h 20			SC Bourassa, M SC Bourassa, M		What's in a A simple alt		ouse price				ment and of Housin	g Econo				Joui Joui
	⁴² 79 ⊠ h 20			M Hoesli, J Leki		Internationa						of Real Est					Jour
	27 🗹 h 19	16.33	8	SC Bourassa, E	Ca	Spatial depe	ndence, h	ousing sub	b 20	007	The Jour	rnal of Rea	Estate			J	Jour
	64 🗹 h 18					House price						of Busines	s Finan				Jour
Papers with ACC >= 1,2,5,10,2 90,62,31,17,4	20:					Environmen Debt-equity					Urban stu Internatio	udies onal Revi	Play of E:				Jour Jour
1	✓ h 10					Internationa						onal Kevi ate econo					Jour
Copy Results 🔻	🗹 h 14	20.14				Are REITs re							tional M				Jour
Save Results	✓ h 13			M Hoesli, C Lizi		The inflation							Estate				Joui
Save Results	✓ h 13 ✓ h 12			PMA Eichholtz, S Bourassa, E C		Real estate p Predicting h						of Propert of Real Est	y Finance ate Res				Joui Joui
	✓ h 12			SC Bourassa, E C		Why do the							ate Kes				Jour 🗸

Figure 4. Publish or Perish profile: Journal of Property Investment and Finance

<complex-block><complex-block><complex-block><complex-block><complex-block></complex-block></complex-block></complex-block></complex-block></complex-block>	Harzing's Publish or Peris		Edition) 7.15.26	43.7260								_2		×
Warden generic Instrumente generic Numericani en la production de la productina de la production de la production de la production d		11790 H 25 C	XO											
In a contract of the participant of the particip			^	6					1.1.2.2	-	1.1.1	C 1 1	1.2	
Turk Image: Provide state of the state of t	Cound musica		12 10 12 07 2 1					7876						
<pre>in the nut</pre>		JPIF.csv [2019	12-19 13:07:24]	Publish or	124	4 18592 599.	/4 00	92	44 1.4	2 10 19	/12/2019	19/12/2019	0	-
are star in Proc. (2011-12-2012) Attem to the the (10) Attem to the (10) with the first to the the (10) Image: the first to the (10) Image: the first to the first t														-
ar met proderen transformer														
are with the set of														
Wart Autor														
					About imp	orting external data								
Image: Second	lay title: JPIF.csv	[2019-12-19 13:07	:24]										Apply	r -
	jinal format: Publish or	Perish (CSV)											Rever	t
Aladio year 1000000 test year 10000000 test year 1000000000000000000000000000000000000													New	•
Aladio year 1000000 test year 10000000 test year 1000000000000000000000000000000000000														
kateby operating 1000 000 stored registry 000 stored r														
etcher ymm 1 (1000) etcher ymm 1 (1000	ults H	elp Cites	Per vear	Rank Authors		Title		Year	Publication		Publishe	er		Typ ^
min 1,000 1	lication years: 1988-20	¹⁹ 2 h 222					a review of			vestment				70
Barry Bit Bit </td <td></td> <td>19) 144 ☑ h 253</td> <td></td>		19) 144 ☑ h 253												
Networksetti and seven	ons: 185	i92 🗹 h 168							Journal of Pro	operty Valuat				
New relationNew relation </td <td></td> <td>and the second se</td> <td></td> <td>_</td>		and the second se												_
Tere: Authors' calculation using Publish or Perish														_
Image: State Stat	EX:	65 A 130		the second s										
Image: 1.40 SNU-RACS 12,304 Image: 107 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		92												
\$13,285,61,107 It is 220 6 JOLA, M-Hanz The value opinio 200 JOLA (M-Hanz emerald com HT Speri Readfur It is 10 4.16 7 G. Kegh, M. Store (M-Hang) 2000 of Poperty (Investment emerald com HT Speri Readfur It is 10 4.16 7 G. Kegh, M. Store (Speri Kouth emerand of Poperty (Investment emerald droight com emeraldroight com	nual: 1.	42 🗹 h 137	5.07	5 DPH Tay, DKH	HH0						emerald	linsight.com		
Cop Result In 15 4 100 7 6 EMile; Log v Reforming ommendial office Log. 100 and of popperly lybuit, meredialing log of meredialing log.												-		
with Number with Number of Number of Number Num	515,285,61,10,2													HTN
Image: Service														-
Image: Note Reading of the PT of 14 22 is P Gallmone, M PHE Medading the influence of tooth 1999 Weaking note workstreak is emerald consiglet.com 1999 Property Viduation and emerald consiglet.com	Copy Results 🔻													-
In the term of	Save Results 🔻													
rce: Authors' calculation using <i>Publish or Perish</i>		🗹 h 131	9.36	8 E D'Arcy, S Ts	olac	Discounted cash flow	accountin	2005	of Property	Investment	emerald	l.com		HTN
arce: Authors' calculation using <i>Publish or Perish</i>			4.67	9 S McGreal, A	Adai	Neural networks: the	prediction o.	1998	Property Va	aluation and	emerald	linsight.com		. *
32	rce: Autho	ors' calc	ulation	using Pu	blisł			×						
32	urce: Autho	ors' calc	ulation	using Pu	blisł			×						
32	ource: Autho	ors' calc	ulation	using Pu	blish			* >						
	ource: Autho	prs' calc	ulation	using Pu	blisł			* ?						

Figure 5. Google Scholar profile: CF Sirmans

C.F. Sirmans Professor, <u>Florida State University</u> Verified email at cob.fsu.edu Real Estate Housing		Follow	Cited by Citations h-index	All 13510 64 217	VIEW ALL Since 2015 3769 32 105
TLE	CITED BY	YEAR	i10-index	217	800
atial modeling with spatially varying coefficient processes Gelfand, HJ Kim, CF Sirmans, S Banerjee rmal of the American Statistical Association 98 (462), 387-396	451	2003			600
patial statistics and real estate K Pace, R Barry, CF Sirmans he Journal of Real Estate Finance and Economics 17 (1), 5-13	341	1998			200
onstationary multivariate process modeling through spatially varying coregionalization E Gelfand, AM Schnidt, S Banerjee, CF Sirmans ist 13 (2), 263-312	309	2004	2013 2014 2015	5 2016 2017 2018 2	019 2020 0
Depreciation of housing capital, maintenance, and house price inflation: Estimates from a epeat sales model P Harding, SS Rosenthal, CF Sirmans ournal of urban Economics 61 (2), 193-217	289	2007			
stimating bargaining power in the market for existing homes Harding, SS Rosenthal, CF Sirmans view of Economics and statistics 85 (1), 178-188	248	2003			
A method for spatial-temporal forecasting with an application to real estate prices IK Pace, R Barry, OW Gilley, CF Sirmans iternational Journal of Forecasting 16 (2), 229-246	241	2000			
12					
31					

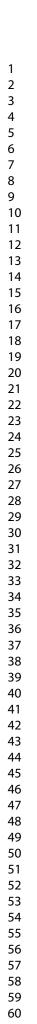
Figure 6. Google Scholar profile: Martin Hoesli

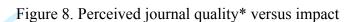


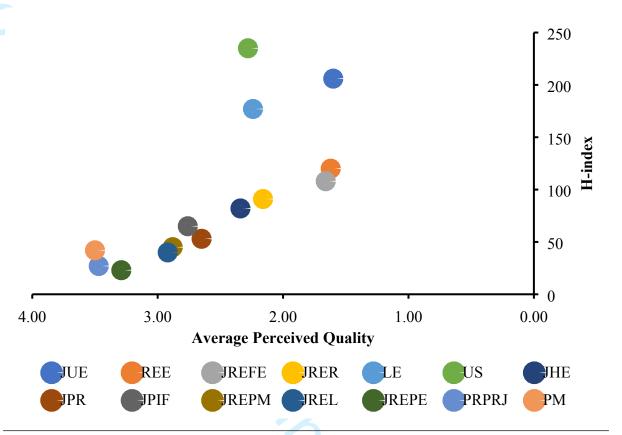
Source: Authors' calculation using Google Scholar

Figure 7. Google Scholar profile: Stan McGreal

3	tanley McGreal		FOLLOW	Cited by		VIEW ALL
	operty of Property Research rified email at ulster.ac.uk				All	Since 2015
	al estate			Citations h-index	3936 32	1522 21
				i10-index	94	45
TITLE		CITED BY	YEAR			360
House prices and acce A Adair, S McGreal, A Smyth Housing studies 15 (5), 699-	ssibility: The testing of relationships within the Belfast urban area , J Cooper, T Ryley 716	224	2000	нI	曲	270
An indicator-based app 1, conceptual foundatic L Hemphill, J Berry, S McGro Urban studies 41 (4), 725-75	roach to measuring sustainable urban regeneration performance: part $_{\rm pal}^{\rm sal}$, $_{\rm 6}^{\rm 5}$	214	2004	2013 2014 2015 2	016 2017 2018 20	90 19 2020 0
	behaviour in urban regeneration B Deddis, S Hirst	127	1999			
Business improvement MG Lloyd, J McCarthy, S Mo International Planning Studie	districts, planning and urban regeneration Greal, J Berry s 8 (4), 295-321	107	2003			
Financing property's co A Adair, J Berry, S McGreal Urban Studies 40 (5-6), 106	ntribution to regeneration 5-1080	105	2003			
The financing of urban A Adair, J Berry, S McGreal, Land Use Policy 17 (2), 147	B Deddis, S Hirst	104	2000			
ource: Autho	rs' calculation using Google Scholar					
	35					
	35					
	35					







Source: Authors' compilation/analysis

*: For perceived quality measurement, respondents used a Likert scale, with 1 being highest perceived quality and 5 being lowest perceived quality

JPIF revisions to research impact paper

All referees' comments were included in revised paper; thank you to the two referees for their incisive comments.

Key changes are:

- 1: balanced coverage of h-index; new section included on limitations of h-index
- 2: fuller coverage of literature on research impact metrics; numerous addition references

3: clear criteria for selection of authors; new section in methodology; need at least 50% of publications in RE

- 4: full details regarding UK REF and how impact is assessed in REF
- 5: fuller context for why do research is provided; beyond impact

6: updated tables for impact metrics in RE on basis of explicit selection criteria for RE authors

7: more balanced discussion of implications for ECR strategies in fuller research context; also removing focus on top 3 US RE journals.

All of above changes have resulted in a much improved and more incisive paper.

, proved and more.