THE IMPACT OF THE TOP 50 THINKERS IN MANAGEMENT: AN H-INDEX STUDY

HIROTOSHI TAKEDA, UNIVERSITÉ LAVAL

MICHEL KALIKA, IAE LYON, BUSINESS SCIENCE INSTITUTE

Abstract

Management researchers and practitioners have become important contributors to business. Many of these researchers have been coined "Thinkers" in management by the Thinkers50 group. The Thinkers50, a bi-annual list of the top 50 influential thinkers in management, is derived from academia and business. The ranking of these 50 'thinkers' is a confirmation of these managers, but the ranking criteria are somewhat obscure and objective. We propose to compare this list to a bibliometric measure of impact, the Hirsch index. The current study takes the Thinkers50 list from 2013 and 2015 and compares the top 50 influencers with their h-index, thereby comparing the Thinkers50 list to an objective measure of impact. We try to understand the list and the differences between the lists, as well as differences between practitioners and researchers on the list.

Keywords: Hirsch index (h-index), Impact, Influence, Journals, Management, Managers, Thinkers50

1. INTRODUCTION

The role of Management research producers in society is a great one. Business, government, and society require that management thinkers steer funds and resources towards good, efficient, and effective use. The methodologies, philosophies, and processes proposed by management thinkers is catamount to how businesses and society move forward today. The impact of research is an increasingly important issue for academic institutions, for accreditations bodies (AACSB, EFMD) and also for stakeholders. Behind the question of impact appears the delicate question of the measure of impact. We compare two approaches of the measure of author impact. The Thinkers50 list is mainly a managerial impact approach and we compare the Thinkers50 list to the h-index that is an academic impact measure based on citations. The research question is to understand the relationship between practitioners & academics (Liarte, 2015).

The role of meta-studies in the areas of ones own research is also relevant. As management research producers, researchers need to understand how their research is used and perceived and need to know if their research is indeed valid and useful. The process of meta-analysis and validation of ones own field is usually around since the start of a particular field.

The current research proposal tries to understand and validate the Global Top 50 Thinkers (Thinkers50) in the Management area. The research will attempt to identify impact using the Hirsch-index (h-index), a bibliometric metric that measures impact of the Thinkers50

researchers to see how they are indeed impactful in the field. This paper continues as follows. We introduce the Top 50 Thinkers ranking and how the ranking is created. We then introduce the bibliometric measure and in particular the Hirsch index. We then present the methodology used in data collection and comparison of the two lists and our results. We finish with a discussion, limitations with future possible research and a conclusion section.

2. THE TOP 50 THINKERS

The Thinkers50 is a list of the global 50 top management thinkers that was launched in 2001 and is released every 2 years. The Thinkers50 list has had some impact as there have been much coverage and praise by the business media outlets such as Forbes, Harvard Business Review, and The London Times.

The list is created via a team of advisors lead by founders Stuart Crainer and Des Dearlove. The team also takes suggested management thinkers from the public via their website. Then the team gets together and creates the list of top 50 in the current year (every odd year) based on ten criteria. Five of which are based on the thinkers performance in the last two years, on the relevance of ideas, rigor of research, presentation of ideas, accessibility/dissemination of ideas, and international outlook. They also look at five longer-term performance (over 20 years) on the originality of ideas, impact of ideas, practicality of ideas, business sense, and the power to inspire (Thinkers50, 2015). These criteria are listed in table 1.

Criteria	Term length
Relevance of ideas	2 years
Rigor of research	2 years
Presentation of ideas	2 years
Accessibility/dissemination of ideas	2 years
International outlook	2 years
Originality of ideas	20 years
Impact of ideas	20 years
Practicality of ideas	20 years
Business sense	20 years
Power to inspire	20 years

Table 1. Thinkers50 ranking criteria

The list from 2015 is the most recent list and is comprised as follows

1. Michael Porter	11. Richard D'Aveni	21. Teresa Amabile	31. Lynda Gratton	41. Sydney Finkelstein
2. Clayton Christensen	12. Eric Ries	22. Daniel Goleman	32. Sylvia Ann Hewlett	42. Julian Birkinshaw
3. W. Chan Kim & Renée Mauborgne	13. Vijay Govindarajan	23. Seth Godin	33. Fons Trompenaars	43. Liz Wiseman
4. Don Tapscott	14. Richard Florida	24. Henry Chesbrough	34. Morten Hansen	44. Doug Ready
5. Marshall Goldsmith	15. Alexander Osterwalder & Yves Pigneur	25. Adam Grant	35. Tammy Erickson	45. Umair Haque Andrew Kakabadse
6. Linda Hill	16. Amy Edmondson	26. Erik Brynjolfsson &	36. Jennifer Aaker	46. Hal Gregerson

		Andrew McAfee		
7. Roger Martin	17. Jeffrey Pfeffer	27. David Ulrich	37. John Kotter	47. Anil Gupta
8. Herminia Ibarra	18. Martin Lindstrom	28. Jim Collins	38. Zhang Ruimin	48. Nilofer Merchant
9. Rita McGrath	19. Pankaj Ghemawat	29. Stewart Friedman	39. Subir Chowdhury	49. Whitney Johnson
10. Daniel Pink	20. Steve Blank	30. Gary Hamel	40. Nirmalya Kumar	50. Amy Cuddy

Table 2. Thinkers50 list 2015

The list from 2013 is also listed as follows

1. Clayton Christensen	11. Pankaj Ghemawat	21. Nitin Nohria	31. Liu Chuanzhi	41. Fons Trompenaars
2. W. Chan Kim & Renée Mauborgne	12. Jim Collins	22. Teresa Amabile	32. John Kotter	42. Chris Zook
3. Roger Martin	13. Daniel Pink	23. Richard Rumelt	33. Chip Heath & Dan Heath	43. Sydney Finkelstein
4. Don Tapscott	14. Lynda Gratton	24. Jeffrey Pfeffer	34. Sheryl Sandberg	44. Anil Gupta
5. Vijay Govindarajan	15. Amy Edmondson	25. Richard Florida	35. Umair Haque	45. Andrew Kakabadse
6. Rita McGrath	16. Sylvia Ann Hewlett	26. A.G. Lafley	36. Daniel Goleman	46. Rakesh Khurana
7. Michael Porter	17. Richard D'Aveni	27. Stewart Friedman	37. Henry Chesbrough	47. Celia de Anca
8. Linda Hill	18. Marcus Buckingham	28. Morten Hansen	38. Rosabeth Moss Kanter	48. Liz Wiseman
9. Herminia Ibarra	19. Gary Hamel	29. Tammy Erickson	39. Julian Birkinshaw	49. Doug Ready
10. Marshall Goldsmith	20. Nirmalya Kumar	30. David Ulrich	40. Subir Chowdhury	50. Wang Shi

Table 3. Thinkers50 Authors 2013

3. BIBLIOMETRIC MEASURES

This paper uses bibliometric measures, in particular the Hirsch index, for assessing the impact of the Top 50 Management Thinkers. The h-index has been a measure used in bibliometrics that measures both productivity and influence of the authors. The older measure of author influence has been using survey research (Hirsch 2005), where surveys are sent out to the relevant audience to rank researchers or journals.

The Thinkers50 list is a survey by a team, which is a smaller population than survey research conducted on academic disciplines. The Thinkers50 list relies heavily on the ability of the team to assess the researcher contributions and is problematic in several ways. First, the team members have opinions and feelings that might bias the resulting Thinkers50 list. Second, criteria assessment is inexact. There is no mention of the Thinkers50 using an unbiased method to assess the ten criteria. Third, the team may be comprised of a self-selected group

that biases the data. The team members have more interest in particular researchers, even if the public is probed for suggestions of new management thinkers. Finally the decision makers and audience may favor different geographic areas in the creation of the list. As we find in the data, there is a heavy reliance on thinkers from North America and Europe on the list. We propose using a less biased approach by using bibliometric measures that look at influence by quantitatively measuring impact via citations. While this study does not look at all possible member of the list, and we are not trying to create a discussion on who was left out or on the list, we proposed to verify the current list and see if the Thinkers50 have indeed published impactful works.

The h-index was proposed by Hirsch in 2005 and is defined as "A scientist has index h if h of his/her Np papers have at least h citations each, and the other (Np − h) papers have no more than h citations each." in order to find the h-index of an author you need to gather all the publications by said author and the citations to those publications. Then you would list the publications in descending citations order. When the i-th publication from the top has less than i citations you have found the h-index for that author.

The h-index has caused a stir in the bibliometric field since its introduction in 2005. It has been hailed as a measure that requires both productivity, via paper production and publication, and impact, via citations, to generate a high number. Past research in this area had not been able to easily measure such meta-citation numbers until library databases became available and computers were able to easily calculate these numbers.

The h-index has received some criticism. The most problematic issues for the h-index are the fact that because a high h-index requires both many publications and many citations to those publications, it penalizes researchers that have been impactful with only a few publications, that is those that publish infrequently but each of these papers gets cited many times. Another issue is the h-index favors veteran researchers that have had time to garner citations, over younger researchers that have published but have not had those publications out in the public domain long enough to garner enough citations. There have been other measures proposed such as the g-index, which compensates for publications with large citation numbers by increasing the impact of the cumulative citations to an author (Egghe 2006) and the hc-index which compensates for time biases that exist in the h-index favoring more veteran researchers (Sidiropoulos, Katsaros, & Manolopoulos 2006). Currently there are many h-index inspired citation measures being introduced.

The h-index is seen as a better measure than survey or small group assessment of a researcher. The h-index is solely dependent on publication by the researcher and how the field accepts the research via citation, thus is less biased. The h-index is a measure of productivity and impact of the researcher and is not dependent on opinions of the people making the list.

The h-index is also open and easily replicable. We use the Publish or Perish (PoP) tool (Harzing, 2015), which in turn uses Google Scholar for data taking. The use of Google Scholar has also seen improvements in recent years and is starting to become a legitimate source of bibliometric information.

We do not expect our research to be controversial in that we are not proposing a better list than the Thinkers50 list. We merely hope to shed some light on the Thinkers50 list and create a discussion as to why there might be some differences and how impact is viewed in the management practitioner area. For example, one area that we expect the Thinkers50 list to be strong are managers that have become impactful speakers and producers of talks and books that might not be seen in the traditional citations creating journal publication arena. This does

not mean that the h-index is better or worse than the Thinkers50 list but that they come from two different points of view. We hope to be able to introduce a fairly new notion of measuring impact that is open, transparent, and more and more easily found with sources on the Internet and library databases. By doing so we hope to create discussion on the meaning of impact and how we can possibly measure impact.

4. METHODOLOGY

We compared the last listing of Thinkers50 in 2015 and 2013 using the bibliometric measures to see if indeed these thinkers have made an impact on the field. We expected to see some discrepancies with the Thinkers50 list and the h-index. This might be due to the fact that not all members on the Thinkers50 list are necessarily academics, whom may have an advantage over non-academics, in the citation building exercise. Popular business and management books tend to outsell any academic publication outlet such as journals or management review magazines. Popular books in general have higher sales numbers when they become 'best sellers'. In our study though we are looking at the PoP tool which measures citations. General sales in books does not translate into citations. While general popularity and readership is a pre-requisite to citations, unless those readers publish themselves, there is no chance for publication. So the results of this exploratory study are unforeseen, as academics may have higher citation numbers than non-academics.

Another reason the h-index may be different from the Thinkers50 list might be the process of creating the Thinkers50 list does not value publication impact as much as the h-index. The h-index is a measure of publication productivity, via publishing books and articles, and impact, via the citations to those publications. The Thinkers50 is created using ten criteria and only we can identify two as being a measure of publication or impact or related to h-index measure. These criteria were Presentation of Ideas and Impact of ideas. Presentation of ideas, as works needs to be presented in publications/venues that are visible to have impact and Impact of ideas as it seems by definition this measures impact. We also identified two more criteria as being tangentially relevant. These were:, accessibility/dissemination of ideas, as works need to be accessible to be cited, and power to inspire, as works need to be relevant enough that other authors cite the work. These impact criteria that are relevant are shown in bold in table 1.

In this study, we used the PoP tool (Harzing, 2015) to compute the h family of statistics. The PoP software is freely available for download at the Harzing website (harzing.com) and uses Google Scholar™(GS) to retrieve publication data. GS is thought of as being superior to other library databases such as the ISI Web of Science (WoS) or Elseviers Scopus due to five reasons. First, GS expands on data sources offered by the WoS set of sources, by incorporating books, dissertations, conference papers, and non-WoS cited journals. By incorporating books the non-academics in the Thinkers50 list will be on a more equal playing field as the academics. Second, GS's search capabilities includes the ability to capture all author information regardless of author position in the paper, which is not the case for some other databases that filter for only first authors. Not recognizing non-first author publications of an author under represents that author's contribution to the discourse. Third, GS is able to aggregate minor variations on similar and same publications to a single item. Fourth, GS allows the search for languages other than English (LOTE) sources that are generally not included in other English based library databases. Given that some of the Thinkers50 are foreign authors, this adds to the equality of our study. We also found that many of the books published by the Thinkers50 authors were translated into other languages than English and we were able to pick up these publications in our data collection. Finally, GS has a much broader

coverage of business journals, magazines, and periodicals than other library database sources. GS has also been increasing coverage in recent years adding more and more publications.

With the increased coverage, come some problems with capturing many unrelated publications using GS. With GS, we have many non-scholarly publications, uneven coverage, and older publications may be under represented compared to WoS. Also, with a GS search, we frequently have non-sensical results returned, as GS is not updated as much as WoS. Despite these problems, GS's inclusion of non-journal sources such as dissertations, books, conference publications, LOTE publications, retrieval capabilities for all authors, and GS's superior coverage in business publications make GS a superior tool that should be used in this study.

The names of all individuals on the Thinker50 list were entered into the PoP tool using the following methodology. One researcher conducted all the data taking in March of 2016. The Thinkers50 researcher name was entered into the PoP tool. Early on we recognized that the PoP tool would find many results for the author name. This became a problem of capturing too many authors with common names. For example, for Jim Collins, any combination of Jim Collins would be captured by PoP. His middle initial is C. So we find all combinations such as Jim Collins, James Collins, Jim C. Collins, James C. Collins, J.C. Collins, James C. C., etc. We also find that PoP retrieves some other authors that are not Jim Collins, such as Jeremy C. Collins, Joy Collins, etc. The data taking then has to comb through the publications that have been retrieved by PoP and uncheck those that are not ones of Jim Collins. Another problem seen with the names was that the first and last names were often reported in reverse order. This was an occurrence with many of the names, not just common names. So Jim Collins would also be reported as Collins Jim.

The filtering process can be very long as PoP retrieves up to a maximum of 1000 publications. We found that there are many publications in business, medicine, and hard science publications such as physics and chemistry. For most searches such medical and hard science publications that had minimal connections with business and management were removed. The filtering process for common names tended to take a long time and would take up to an hour for a single author.

We also found that some publications were duplicated. These were included in the calculation of PoP but highly cited articles were given to the correct citation and any copies picked up by GS were of minimal citation numbers that did not factor into the h-index calculations for all the authors.

Another problem was that since GS retrieved LOTE publications, we found many of the major publications to be repeated in other languages and garnering large citation numbers. The decision was made to include these publication for each language found. Often these non-English versions of the publications did not garner enough citations to make any impact on the h-index. We did not find any authors getting more than two publications highly cited for a same publication published in multiple languages. The reason we kept the two language versions is that we did not feel that they impacted the h-index much as we observed, and one can argue that the two versions did get the citations on their own and should be included in the citation numbers. This ability for the Thinker50 authors to publish internationally was something not seen by this author in past studies. For our work in academic publications impact, it was unheard of for academic journal publications to have translated versions that garnered large citation numbers. We found mostly that international academic researchers would cite the original English versions and not any translated versions if they existed. The

ability of the Thinker50 to make international impact in this fashion was a new observation, not seen in academic research, to the authors.

Another problem during the data collection process was the GS limits the number of queries run by a bot. PoP creates a script to go out and retrieve the information from GS. So each query, while limited to 1000 publications, can retrieve information about publications as many as the limitations of 1000 publications. Eventually the amount of queries can cause GS to limit queries originating from the searchers computer. When this occurs GS stops working and puts a halt on the queries from that particular computer for a period of a few hours (as seen by the authors of this research in the past). PoP does keep track of the queries being run by the user and gives a warning when the threshold is close. When this happens, the researcher had to take a few hours break from running queries. This seemed to happen every 4 to 5 author queries depending on the number of publications being retrieved.

The methodology of the data retrieval process was as follows.

a. Enter the name as listed in Thinker50. We entered the full name as listed in the Thinker50 into PoP.
b. Used the name and searched on Google to find any middle name or initial. In addition the author information was searched to find out if they were academic or non-academic and country affiliation. Academic authors were those that held a post as a professor at a university. The home university was recorded as their affiliate institutions.
c. Review each article from the most cited to the articles at a level one lower than the h-index reported by PoP. Authors that were not the current search author were eliminated. Many publications were eliminated by author names that did not correspond to the current search author. Publication topic/title was also needed to be parsed to find if the current search author was indeed the author. Many non-management or non-business articles were eliminated.
d. The values for the h, hc, and g indices, and type of author (academic or not), affiliation and country were captured into a spreadsheet.

The data taking process was conducted during March of 2016.

5. RESULTS

The results of the h-index study is presented in table 4 (2015) and table 5 (2013), listed by order of h index rank compared to the others on the Thinkers50 list.

	h rank	g rank	hc rank	T50_15 Rank	School	
Michael Porter	1	1	1	1	Harvard	USA
Jeffrey Pfeffer	2	2	2	17	Stanford	USA
Daniel Goleman	3	3	3	22	Non Academic	USA
Richard Florida	4	4	6	14	U of Toronto	Canada
Julian Birkinshaw	5	10	5	42	LBS	UK
Teresa Amabile	6	5	7	21	Harvard	USA
Gary Hamel	7	9	13	30	Non academic	USA
Clayton Christensen	8	7	4	2	Harvard	USA
Vijay Govindarajan	9	11	12	13	Dartmouth	USA
John Kotter	10	8	18	37	Harvard	USA

Henry Chesbrough	11	6	8	24	UC Berkeley	USA
Amy Edmondson	12	16	9	16	Harvard	USA
Pankaj Ghemawat	13	20	20	19	IESE	Spain
Don Tapscott	14	13	19	4	Non Academic	Canada
Anil Gupta	15	15	11	47	Indian Institute of Management, Ahmendedabad	India
Sydney Finkelstein	16	12	15	41	Dartmouth	USA
Rita McGrath	17	21	21	9	Columbia	USA
Hal Gregersen	18	25	17	46	MIT	USA
Jennifer Aaker	19	17	16	36	Stanford	USA
Fons Trompenaars	20	19	25	33	Non Academic	Netherlands
Adam Grant	21	28	10	25	U Penn	USA
Nirmalya Kumar	22	18	22	40	LBS	UK
Lynda Gratton	23	29	26	31	LBS	UK
Richard D'Aveni	24	22	27	11	Dartmouth	USA
Marshall Goldsmith	25	31	29	5	Non Academic	USA
Amy Cuddy	26	26	24	50	Harvard	USA
Morten Hansen	27	14	14	34	UC Berkeley	USA
Herminia Ibarra	28	23	23	8	INSEAD	France
Daniel Pink	29	27	30	10	Non Academic	USA
W. Chan Kim & Renée Mauborgne	30	24	28	3	INSEAD (both)	France
David Ulrich	31	39	33	27	Michigan	USA
Sylvia Ann Hewlett	32	30	32	32	Columbia	USA
Jim Collins	33	44	38	28	Non academic	USA
Roger Martin	34	40	35	7	U of Toronto	Canada
Linda Hill	35	34	31	6	Harvard	USA
Seth Godin	36	32	36	23	Non Academic	USA
Alexander Osterwalder & Yves Pigneur	37	37	34	15	Non Academic and Univ. of Lausanne	Switzerland
Martin Lindstrom	38	36	37	18	Non Academic	Denmark
Subir Chowdhury	39	33	40	39	Non Academic	Bangladesh
Tammy Erickson	40	35	41	35	LBS	UK
Doug Ready	41	41	42	44	Non Academic (Lecturer at MIT)	USA
Stewart Friedman	42	43	44	29	U Penn	USA
Erik Brynjolfsson & Andrew McAfee	43	45	39	26	MIT	USA
Eric Ries	44	38	43	12	Non Academic	USA
Umair Haque	45	46	46	45	Non Academic	UK
Steve Blank	46	42	45	20	Non Academic	USA
Liz Wiseman	47	47	47	43	Non Academic	USA
Nilofer Merchant	48	48	48	48	Non Academic	USA
Zhang Ruimin	49	49	49	38	Non Academic	China

Whitney Johnson	50	50	50	49	Non Academic	USA

Table 4. h-index ranking of Thinkers50 authors for 2015

	h rank	g rank	hc rank	T50_13 rank	School	Country
Michael Porter	1	1	1	7	Harvard	USA
Jeffrey Pfeffer	2	2	2	24	Stanford	USA
Daniel Goleman	3	3	3	36	Non Academic	USA
Richard Florida	4	5	6	25	U of Toronto	Canada
Rosabeth Moss Kanter	5	4	16	38	Harvard	USA
Julian Birkinshaw	6	12	5	39	LBS	UK
Teresa Amabile	7	6	7	22	Harvard	USA
Clayton Christensen	8	8	4	1	Harvard	USA
Gary Hamel	9	11	13	19	Non academic	USA
Vijay Govindarajan	10	13	12	5	Dartmouth	USA
Nitin Nohria	11	10	11	21	Harvard	USA
John Kotter	12	9	17	32	Harvard	USA
Amy Edmondson	13	19	9	15	Harvard	USA
Henry Chesbrough	14	7	8	37	UC Berkeley	USA
Pankaj Ghemawat	15	22	19	11	IESE	Spain
Don Tapscott	16	16	18	4	Non Academic	Canada
Anil Gupta	17	18	10	44	Indian Institute of Management, Ahmendedabad	India
Sydney Finkelstein	18	15	15	43	Dartmouth	USA
Rita McGrath	19	23	20	6	Columbia	USA
Fons Trompenaars	20	21	23	41	Non Academic	Nether.
Andrew Kakabadse	21	29	31	45	U of Reading	UK
Richard Rumelt	22	14	26	23	UCLA	USA
Marshall Goldsmith	23	34	29	10	Non Academic	USA
Lynda Gratton	24	30	24	14	LBS	UK
Richard D'Aveni	25	24	25	17	Dartmouth	USA
Nirmalya Kumar	26	20	21	20	LBS	UK
Herminia Ibarra	27	25	22	9	INSEAD	France
Morten Hansen	28	17	14	28	UC Berkeley	USA
W. Chan Kim & Renée Mauborgne	29	26	27	2	INSEAD (both)	France
Daniel Pink	30	27	30	13	Non Academic	USA
Rakesh Khurana	31	31	28	46	Harvard	USA
David Ulrich	32	40	34	30	Michigan	USA
Sylvia Ann Hewlett	33	33	33	16	Columbia	USA
Roger Martin	34	41	35	3	U of Toronto	Canada
Linda Hill	35	36	32	8	Harvard	USA
Jim Collins	36	45	36	12	Non academic	USA
Marcus Buckingham	37	32	37	18	Non academic books only	UK
Chris Zook	38	39	40	42	Non Academic	USA
Tammy Erickson	39	37	39	29	LBS	UK

Subir Chowdhury	40	35	38	40	Non Academic	Banglade sh
Doug Ready	41	42	41	49	Non Academic (Lecturer at MIT)	USA
Stewart Friedman	42	44	43	27	U Penn	USA
A.G. Lafley	43	46	42	26	Non Academic	USA
Chip Heath & Dan Heath	44	38	44	33	Stanford and Duke	USA
Umair Haque	45	47	48	35	Non Academic	UK
Sheryl Sandberg	46	43	45	34	Non Academic	USA
Celia de Anca	47	48	46	47	IE	Spain
Liz Wiseman	48	49	49	48	Non Academic	USA
Liu Chuanzhi	49	28	47	31	Non Academic	China
Wang Shi	50	50	50	50	Non Academic	China

Table 5. h-index ranking of Thinkers50 authors for 2013

The raw h-index numbers are given in the appendix in table A (2015) and table B (2013). Table 4 and 5 shows the list of Thinkers50 authors in order of highest h-index to lowest h-index. The corresponding g, hc, and Thinkers50 rankings are shown, along with their current affiliation and country of their affiliation. If a Thinkers50 author was not affiliated with a group or institution, their current residence or birthplace was used.

6. DISCUSSION

In the 2015 list, when one looks at table 4, we see a difference between the Thinkers50 list and the h-index list. There is agreement at the top as the top h-index ranked author is Michael Porter who is the top Thinkers50 author. In the top 10 of the top 10 h-index authors, only two show up in the top 10 in the Thinkers50. The top 10 according to the h-index and their corresponding Thinkers50 list rank in parenthesis are, Michael Porter (1), Jeffrey Pfeffer (17), Daniel Goleman (22), Richard Florida (14), Julian Birkinshaw (42), Teresa Amabile (21), Gary Hamel (30), Clayton Christensen (2), Vijay Govindarajan (13), and John Kotter (37).

In the 2013 list, when one looks at table 5, we distinctly see that there is a difference between the Thinkers50 list and the h-index list. The top h-index ranked author is Michael Porter who was 7th on the Thinkers50 list. The rest of the top 10 h-index ranked authors included only one top 10 authors from the Thinkers50 list, Clayton Christensen. The top 10 according to the h-index and their corresponding Thinkers50 list rank in parenthesis are, Michael Porter (7), Jeffrey Pfeffer (24), Daniel Goleman (36), Richard Florida (25), Rosabeth Moss Kanter (38), Julian Birkinshaw (39), Teresa Ambile (22), Clayton Christensen (1), Gary Hamel (19), and Vijay Govindarajan (5). Note that the list of top 10 using the h-index are the same except for Rosabeth Moss Kanter who fell off the list of the Thinkers50 from 2013, ranked 28th to 2015.

In the 2015 list, there were two non-academics in the top 10 Thinkers50 list and the h-index list had two as well. There is a disagreement between the lists on the actual non-academics to enter the list. The Thinkers50 has Don Tapscott (4 on the Thinkers50, 14 on the h-index) and Marshall Goldsmith (5 on the Thinkers50, 25 on the h-index) while the h-index list has Daniel Goleman (3 on the h-index, 22 on Thinkers50) and Gary Hamel (7 on the h-index, 30 on Thinkers50). The disagreement of where to place non-academics can be seen better by looking at the average ranking of non-academics. For the Thinkers50 the average rank of non-academics is 27.68 while for the h-index the average rank of non-academics is 34.26,

indicating a difference of about 7 spots. This can be attributed to the emphasis that the h-index has on citations, which are probably more likely to come from academic publishing.

In the 2013 list, there were two non-academics in the top 10 Thinkers50 while the h-index has one. This is not much of a difference but there is a disagreement between the lists on the actual non-academics that enter the top 10. Thinkers50 has Don Tapscott (4 on Thinkers50, 16 on h-index) and Marshall Goldsmith (10 on Thinkers50, 23 on h-index) while the h-index list has Daniel Goleman (3 on h-index, 36 on Thinkers 50). Looking at the average ranking of non-academics for the Thinkers50 the average rank of non-academics is 29.88 while for the h-index the average rank of non-academics is 33.76, indicating a difference of about 4 spots. This can be attributed to the emphasis that the h-index has on citations, which are probably more likely to come from academic publishing. We see a larger gap in the rankings of non-academics in 2015 compared to 2013.

Some of the lower ranked authors on the h-index list did not have any significant h-index numbers. Some were in the single digit and even in the 3-4 range. These are numbers that are very low for an h-index as some PhD students achieve these numbers before graduation. This may be due to the fact that the criteria for the Thinkers50 is not necessarily impact of publication.

We also saw a very North American centric view from the Thinkers50 list. While this is also a problem with the h-index, as most publications that are counted by PoP, GS, and many other library sites are very US centric, from our list we saw many homogeneity from the list of authors. Table 6 and 7 shows the country specific data.

Country	Count
USA	33
UK	5
Canada	3
France	2
Bangladesh	1
China	1
Denmark	1
India	1
Netherlands	1
Spain	1
Switzerland	1

Table 6. Thinkers50 2015 author country affiliation

Country	Count
USA	31
UK	7
Canada	3
China	2
France	2
Spain	2
Bangladesh	1
India	1
Netherlands	1

Table 7. Thinkers50 2013 author country affiliation

For the 2015 list, you can see that the US dominates with 33. North American authors consist of 36 out of the 50. Europe is represented with 11 authors and Asia with three. There were no authors from the other continents of Africa, Australia, Middle East, nor South America.

For the 2013 list, you can see that the US dominates with 31. North American authors consist of 34 out of the 50. Europe is represented with 12 authors and Asia with four. There were no authors from the other continents of Africa, Australia, Middle East, nor South America.

In addition to the North American centricity, we also saw the same institutions showing up many times. Table 8 (2013) and table 9 (2015) shows the institution data.

School	Count
Non Academic	19
Harvard	7
LBS	4
Dartmouth	3
INSEAD	3
MIT	3
Columbia	2
Stanford	2
U of Toronto	2
U Penn	2
IESE	1
Indian Institute of Management, Ahmendedabad	1
Michigan	1
U. of Lausanne	1

Table 8. Thinkers50 2015 author affiliation count

School	Count
Non Academic	17
Harvard	9
LBS	4
Dartmouth	3
INSEAD	3
U of Toronto	2
UC Berkeley	2
Columbia	2
Stanford	2
IESE	1
Indian Institute of Management, Ahmendedabad	1
U of Reading	1
UCLA	1
Michigan	1
U Penn	1
Duke	1
IE	1

Table 9. Thinkers50 2013 author affiliation count.

For the 2015 list, from table 8 we see that we have 19 non-academics. The highest affiliation to one institution is Harvard with seven authors, then London Business School with four, and then Dartmouth, INSEAD, and MIT with three.

For the 2013 list, from table 9 we see that we have 17 non-academics. The highest affiliation to one institution is Harvard with nine authors, then London Business School with four, and then Dartmouth and INSEAD with three. We see that from 2013 to 2015 we see more spread with less dominance by Harvard, but we have more universities represented in 2013 than in 2015.

7. LIMITATIONS

There are several limitations to our study such as the different criteria of the two lists, the changing nature of the lists, and the problems with the data gathering of the h indices. First the h-index and the Thinkers50 have different criteria in their rankings. The h-index is a purely quantitative number derived from the publication and citation of papers from authors. The Thinkers50 list is a qualitative/quantitative ranking using various criteria listed in table 1. The Thinkers50 list is made by a committee, which may cause some subjectivity in their rankings. The h-index is transparent and anyone can replicate the data. The goals of the two methods are also different. The h-index is trying to measure the h-index purely based on the Hirsch definition. The Thinkers50 has a mission "of identifying and sharing the best management thinking in the world". So given the goals and measure criteria being different, we expect the outcomes to be different.

Both lists also change over time. The Thinkers50 releases a new list every 2 years. So authors fall off and jump on the list every two years. With the h-index, author publication and citation continues as long as the author continues to publish and get cited. So the h-index changes over time as well. So the current study is only a snapshot and as time passes the lists also change.

Finally the gathering of data for the h-index saw many issues. Names that were common were hard to decipher and returned many results, first name and last name were interchanged, many non-author papers in other research areas such as the hard sciences (physics and chemistry) and medical publications were gathered and required filtering. The author worked to apply a consistent manner in filtering works of authors. Some LOTE publications and even same language publications were duplicated for many authors.

8. CONCLUSION

Globally and beyond the difference of ranking between the two metrics, we can attest that there is global convergence between the two measures. Most of the authors are part of the two lists. The differences are in the relative position. If we consider that the Thinkers50 is rather a managerial metric and that the h-index is rather an academic one, we must conclude that there is quite a global convergence between the two worlds.

While we are making comparisons of the Thinkers50 to the h-index, we are not saying one or the other is better or not. What we are saying is that the impact is measured by the h-index and that impact measure of the authors tend to favor authors at academic institutions. Many of the non-academic authors on the Thinkers50 list perform lectures, appear on TV shows, and conduct seminars, which have impact but do not show up in the publication arena. If there is another index that can measure impact of such non-publication impact that would be a better

measure to compare to the Thinkers50 list. But until such measure is introduced we find the h-index the best measure to date.

Our findings were that the h-index tended to favor authors that publish from academic institutions. We also found that there was some North American/European bias to the lists. Finally we found that several key institutions were at the center of the Thinkers50 list of authors.

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Top 50 Management Thinkers http://thinkers50.com/events/thinkers50-2015-awards-gala/

3. Appendix

	T50_15 Rank	h	h rank	g	g rank	hc	hc rank	School	Country
Michael Porter	1	137	1	531	1	93	1	Harvard	USA
Jeffrey Pfeffer	17	103	2	306	2	55	2	Stanford	USA
Daniel Goleman	22	72	3	258	3	48	3	Non Academic	USA
Richard Florida	14	70	4	217	4	44	6	U of Toronto	Canada
Julian Birkinshaw	42	65	5	160	10	47	5	LBS	UK
Teresa Amabile	21	62	6	212	5	40	7	Harvard	USA
Gary Hamel	30	55	7	163	9	34	13	Non academic	USA
Clayton Christensen	2	55	8	197	7	47	4	Harvard	USA
Vijay Govindarajan	13	54	9	154	11	35	12	Dartmouth	USA
John Kotter	37	50	10	194	8	29	18	Harvard	USA
Henry Chesbrough	24	49	11	199	6	40	8	UC Berkeley	USA
Amy Edmondson	16	49	12	136	16	40	9	Harvard	USA
Pankaj Ghemawat	19	45	13	114	20	29	20	IESE	Spain
Don Tapscott	4	44	14	145	13	29	19	Non Academic	Canada
Anil Gupta	47	42	15	141	15	38	11	Indian Institute of	India

								Management, Ahmendedabad	
Sydney Finkelstein	41	40	16	150	12	31	15	Dartmouth	USA
Rita McGrath	9	39	17	108	21	27	21	Columbia	USA
Hal Gregersen	46	37	18	96	25	30	17	MIT	USA
Jennifer Aaker	36	37	19	128	17	30	16	Stanford	USA
Fons Trompenaars	33	36	20	122	19	23	25	Non Academic	Netherlands
Adam Grant	25	33	21	80	28	40	10	U Penn	USA
Nirmalya Kumar	40	29	22	125	18	26	22	LBS	UK
Lynda Gratton	31	29	23	64	29	22	26	LBS	UK
Richard D'Aveni	11	29	24	106	22	21	27	Dartmouth	USA
Marshall Goldsmith	5	29	25	57	31	19	29	Non Academic	USA
Amy Cuddy	50	27	26	95	26	24	24	Harvard	USA
Morten Hansen	34	27	27	142	14	32	14	UC Berkeley	USA
Herminia Ibarra	8	27	28	103	23	24	23	INSEAD	France
Daniel Pink	10	26	29	83	27	18	30	Non Academic	USA
W. Chan Kim & Renée Mauborgne	3	26	30	97	24	20	28	INSEAD (both)	France
David Ulrich	27	24	31	34	39	16	33	Michigan	USA
Sylvia Ann Hewlett	32	22	32	59	30	17	32	Columbia	USA
Jim Collins	28	21	33	24	44	13	38	Non academic	USA
Roger Martin	7	21	34	32	40	15	35	U of Toronto	Canada
Linda Hill	6	21	35	45	34	18	31	Harvard	USA
Seth Godin	23	20	36	55	32	13	36	Non Academic	USA
Alexander Osterwalder & Yves Pigneur	15	20	37	37	37	15	34	Non Academic and Univ. of Lausanne	Switzerland
Martin Lindstrom	18	16	38	40	36	13	37	Non Academic	Denmark

Subir Chowdhury	39	13	39	46	33	11	40	Non Academic	Bangladesh
Tammy Erickson	35	13	40	43	35	10	41	LBS	UK
Doug Ready	44	12	41	30	41	9	42	Non Academic (Lecturer at MIT)	USA
Stewart Friedman	29	11	42	25	43	7	44	U Penn	USA
Erik Brynjolfsson & Andrew McAfee	26	11	43	24	45	13	39	MIT	USA
Eric Ries	12	10	44	36	38	8	43	Non Academic	USA
Umair Haque	45	6	45	10	46	4	46	Non Academic	UK
Steve Blank	20	6	46	30	42	6	45	Non Academic	USA
Liz Wiseman	43	4	47	9	47	4	47	Non Academic	USA
Nilofer Merchant	48	3	48	6	48	4	48	Non Academic	USA
Zhang Ruimin	38	2	49	4	49	4	49	Non Academic	China
Whitney Johnson	49	1	50	2	50	1	50	Non Academic	USA

Table A 2015 data

	Top 50 rank	h	h rank	g	g rank	hc	hc rank	School	Country
Clayton Christensen	1	55	8	197	8	47	4	Harvard	USA
W. Chan Kim & Renée Mauborgne	2	26	29	97	26	20	27	INSEAD (both)	France
Roger Martin	3	21	34	32	41	15	35	U of Toronto	Canada
Don Tapscott	4	44	16	145	16	29	18	Non Academic	Canada
Vijay Govindarajan	5	54	10	154	13	35	12	Dartmouth	USA
Rita McGrath	6	39	19	108	23	27	20	Columbia	USA
Michael Porter	7	137	1	531	1	93	1	Harvard	USA
Linda Hill	8	21	35	45	36	18	32	Harvard	USA

Herminia Ibarra	9	27	27	103	25	24	22	INSEAD	France
Marshall Goldsmith	10	29	23	57	34	19	29	Non Academic	USA
Pankaj Ghemawat	11	45	15	114	22	29	19	IESE	Spain
Jim Collins	12	21	36	24	45	13	36	Non academic	USA
Daniel Pink	13	26	30	83	27	18	30	Non Academic	USA
Lynda Gratton	14	29	24	64	30	22	24	LBS	UK
Amy Edmondson	15	49	13	136	19	40	9	Harvard	USA
Sylvia Ann Hewlett	16	22	33	59	33	17	33	Columbia	USA
Richard D'Aveni	17	29	25	106	24	21	25	Dartmouth	USA
Marcus Buckingham	18	14	37	61	32	12	37	Non academic books only	UK
Gary Hamel	19	55	9	163	11	34	13	Non academic	USA
Nirmalya Kumar	20	29	26	125	20	26	21	LBS	UK
Nitin Nohria	21	54	11	177	10	36	11	Harvard	USA
Teresa Amabile	22	62	7	212	6	40	7	Harvard	USA
Richard Rumelt	23	30	22	153	14	20	26	UCLA	USA
Jeffrey Pfeffer	24	103	2	306	2	55	2	Stanford	USA
Richard Florida	25	70	4	217	5	44	6	U of Toronto	Canada
A.G. Lafley	26	9	43	21	46	8	42	Non Academic	USA
Stewart Friedman	27	11	42	25	44	7	43	U Penn	USA
Morten Hansen	28	27	28	142	17	32	14	UC Berkeley	USA
Tammy Erickson	29	13	39	43	37	10	39	LBS	UK
David Ulrich	30	24	32	34	40	16	34	Michigan	USA
Liu Chuanzhi	31	3	49	68	28	4	47	Non Academic	China
John Kotter	32	50	12	194	9	29	17	Harvard	USA
Chip Heath & Dan Heath	33	7	44	37	38	6	44	Stanford and Duke	USA
Sheryl Sandberg	34	5	46	27	43	6	45	Non Academic	USA
Umair Haque	35	6	45	10	47	4	48	Non Academic	UK
Daniel Goleman	36	72	3	258	3	48	3	Non	USA

								Academic	
Henry Chesbrough	37	49	14	199	7	40	8	UC Berkeley	USA
Rosabeth Moss Kanter	38	66	5	223	4	30	16	Harvard	USA
Julian Birkinshaw	39	65	6	160	12	47	5	LBS	UK
Subir Chowdhury	40	13	40	46	35	11	38	Non Academic	Bangl.
Fons Trompenaars	41	36	20	122	21	23	23	Non Academic	Neth.
Chris Zook	42	14	38	35	39	9	40	Non Academic	USA
Sydney Finkelstein	43	40	18	150	15	31	15	Dartmouth	USA
Anil Gupta	44	42	17	141	18	38	10	Indian Institute of Managemen t, Ahmendeda bad	India
Andrew Kakabadse	45	35	21	67	29	18	31	U of Reading	UK
Rakesh Khurana	46	25	31	63	31	19	28	Harvard	USA
Celia de Anca	47	4	47	9	48	5	46	IE	Spain
Liz Wiseman	48	4	48	9	49	4	49	Non Academic	USA
Doug Ready	49	12	41	30	42	9	41	Non Academic (Lecturer at MIT)	USA
Wang Shi	50	3	50	3	50	3	50	Non Academic	China

Table B 2013 data