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Servant Leadership: A bibliometric Review

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ABSTRACT

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This study examines the various features of existing servant leadership research by retrieving and analyzing the publications within the social sciences field. The main objective of this study is to review the last 50 years of servant leadership research in the field of social science starting from 1970s till end of 2019. The bibliometric analysis such as bibliographic coupling, co-authorship and co-occurrence analysis was conducted. The study result shows the most researched concept, key authors, sources/journals, institutions, countries and publication within the servant leadership field. This study also highlights the collaborative research networks of servant leadership research existing between the authors across the globe. This study is the first effort to conduct a comprehensive bibliometric review on academic servant leadership literature and also it is the first attempt to map an orderly conceptual structure by applying visualization bibliometric techniques. The major contributions of this study are the results from examining the literature in a structured, comprehensive and objective manner. These results offer the researchers and scholars a guidance to further explore the servant leadership research area in the field of social sciences. This study also provides the researchers to build networks with multiple institutions, countries and authors across the globe that have contributed significantly in this field.

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“Servant Leadership” term was first coined in 1977 by Robert K.(Greenleaf). Greenleaf believes that leader characterizing servant attributes is driven by the natural feeling of serving others, that’s urges the individual to desire for leading people with the motive of serving their needs (Spears, 1996). Servant leadership because of its closeness with transformation and ethical leadership, it has been taken as an overlapping concept or as a sub dimension of ethical leadership. However, in literature search we have identified theoretical and empirical evidences that distinguishes servant leadership from authentic, ethical and transformational leadership (Banks, Gooty, Ross, Williams, & Harrington, 2018).

There are numerous studies that distinguish servant leadership from transformational leadership but the work of Van Dierendonck (2011a) has conceptually differentiated from the higher connotations of leadership literature. He comprehensively distinguishes between the servant leadership across the other seven leadership approaches. The argument made by Van Dierendonck, Stam, Boersma, de Windt and Alkema (2014) for differentiating it from transformational leadership based on the philosophy of both the leadership styles. Van Dierendonck (2011a) stated Transformational leader's primary motivation is to achieve the organizational goals by aligning these goals with the individual goals, on contrary to this servant leader is more concerned towards the psychological needs of follower as a goal in itself and puts organization goals as secondary. Although to an extent these styles do overlap with one another on the orientation of both leadership style that is based on but they relatively differ in qualitative terms that one priorities follower needs over the organizational needs (Eva, Robin, Sendjaya, van Dierendonck, & Liden, 2019).

There has been various leadership theories and styles emerged and adopted over the period of time; however, the main objective and purpose of these leadership styles was to rule people in order to attain a common goal (Vallesi, Mapelli, Schiff, Amodio, & Umiltà, 2005). Even the contemporary leadership styles like charismatic and transformational leadership styles remained focused on inspiring followers and keeping them engaged in order to attain a common goal. The servant leadership style distinguishes it from other leadership style by having the philosophy of serving the follower rather leading them. The servant leadership solely focused on individual's growth and development (Seyal & Abd Rahman, 2014).

The servant leadership style is considered the follower-oriented leadership with the sole focus on developing employees which results in creating positive psychological organizational behavior among employees (Walumbwa, Hartnell, & Oke, 2010). There are numerous studies highlighted that the servant leaders have enhanced the followers emotional healing process by putting follower concerns ahead of organization and even their personal interests (Barbuto & Gottfredson, 2016; Barbuto, Gottfredson, & Searle, 2014; Barbuto & Wheeler, 2006a; Walumbwa et al., 2010). In continuation, researchers also found that supervisor traits, attitude and skills such as empathy, humility, empowering attitude and conceptual skills are linked positively towards developing of psychological capital (Ice, 2017; Liden, Wayne, Zhao, & Henderson, 2008).

In a recent systematic literature review by Eva, Robin, Sendjaya, van Dierendonck and Liden (2019) published by leadership quarterly, they have explained and categorized the different phases of servant leadership research over the span of 20 years (1998-2018).

The research on servant leadership can be seen into three distinct phases. In the first phase, researchers (Greenleaf, 2016) were mostly interested in explaining the conceptual definition and construct development of servant leadership. The second phase focused on the development of a multidimensional scale for servant leadership research and also researchers remained focused on finding the antecedent and outcome of servant leadership style. And in the third phase, the focus is on building model that explores the underlying mediating mechanisms and boundary constraint that exist between servant leadership and its outcome variables. Irrespective of the few meta-analysis and systematic review on the research on servant leadership, still there is no holistic picture exist for the servant leadership research (Eva et al., 2019). We believe there is a need for a comprehensive and integrated bibliometric review to identify the key dynamic of the research and the evolution of the servant leadership research. Therefore, we can have a clear idea from where it started, where it has been and where it should go.

For this purpose, this study tries to identify the key research areas, current dynamic and future directions in the field of servant leadership research. In order to do so, bibliometric review technique has been used to answers the following questions:

1. How servant leadership research has evolved so far?
2. What are the key research streams in the servant leadership research?
3. Which channels (journals, articles, authors, institutions and countries) are the most influential in servant leadership research?
4. Is there any collaborative servant leadership research network exist between authors across the world?

To answer the above-mentioned research questions, this study uses the bibliometric approach to provide an extensive review of the existing research that focuses on servant leadership or servant leader. The aim is to provide a structured, quantitative and objective analysis on the existent servant leadership research. By doing so, we can identify some potential areas and research gaps that future researcher can take into consideration.

Method

This study provides a major contribution to the servant leadership research by retrieving and analyzing all the publications on servant leadership in various disciplines published by journals indexed in web of science database (WoS). To present the finding in a structured manner, the bibliometric analysis approach was used to analyze the characteristics of all the publications (SSCI) in the field of servant leadership research.

Bibliometric Technique

Zupic and Čater (2015) explained “Bibliometrics” as a quantitative tool/measure to analyze the various elements of the publications such as journal, author, keywords, country, citation and co-author etc. The bibliometric analysis requires visualization and mapping software in order to conduct the quantitative analysis (Cobo, López-Herrera, Herrera-Viedma, & Herrera, 2011). The software helps in extracting the citation links, strength of the links, ‘bibliographic coupling’ on the basis of authors, country, citation, source etc.

Software

The software like ‘VOS-VIEWER’ not only provides descriptive statistic among the various publication rather it can also assist in analyzing more complex associations between various characteristics of those publications (e.g., citation analysis, citation links, or bibliographic coupling) (Van Eck & Waltman, 2009). VOS viewer software is developed for creating, visualizing, and exploring scientific bibliometric maps (Van Eck & Waltman, 2009).

Database

The study uses the web of Science (WoS) core collection. The Social Sciences Citation Index (SSCI) and SCI-Expanded index are the most important databases of ‘WoS’ (Zupic & Čater, 2015). It is known as the most admired and prestigious institution for the storage of scientific information for the discipline in social sciences (Mongeon & Paul-Hus, 2016). According to the Journal Citation Report 2012, SCI-Expanded index includes more than 8470 journals with citations in 174 scientific disciplines (Chuang & Ho, 2014). Norris and Oppenheim (2007) pointed that there is a significant advantage of Web of Science over other data bases because it includes social sciences literature.

Search Strategy

The Web of Science database was searched by the author(s) at the end of 2019 to find out all the servant leadership related publications. The “servant leadership” keyword was searched in the ‘topic’ and the ‘title’ fields. The social science citation index database was searched in Web of Science Core collection. The following search code was used to search the database:

“TOPIC: (“SERVANT LEADERSHIP”) OR TOPIC: (servant leader) Timespan: All years. Indexes: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI.”

The topics and title retrieved were manually rechecked and confirmed whether they actually incorporate servant leadership concept or not. Initially 437 publications appeared on the basis of the search criteria. After refinement on the basis of document type, excluding corrections, meeting abstracts, reviews and editorial material, a total of 380 publications were found. Table 1 shows the number of publications by year along with each year percentage of publication in the field of servant leadership. In 1978, the first publication on servant leadership was published in SSCI database, the second one appeared in 1979. Then till 2009, publication remained less than 10 per year. The servant leadership research got the momentum in 2010 and in 2018 research trend reached highest value of 70 publications. So far in 2019, a total of 45 publications have been done till December 10th 2019.

Table 1

Publication Records and Percentages by Publication Years

Year	Publications	% of 380
2019	45	11.84
2018	70	18.42
2017	45	11.84
2016	44	11.57
2015	36	9.47
2014	44	11.57
2013	15	3.947
2012	19	5.00
2011	13	3.42
2010	22	5.78
2009	4	1.05
2008	6	1.57
2007	4	1.05
2006	1	0.26
2005	1	0.26
2002	3	0.78
1999	3	0.78
1998	1	0.26
1995	2	0.52
1979	1	0.26
1978	1	0.26

Quality, Quantity and Structural Indicators

This bibliometric study uses quality, quantity and structure indicators as proposed by Merigó, Gil-Lafuente and Yager, (2015). In order to measure the productivity of authors, Journal, Institution or country with respect to number of publications, quantity indicators are used. The quality indicators are used to measure

the frequency with which an author, article or journal is cited in other publications, and to measure the connectivity and relationship among the publications structural indicators are used.

Descriptive Analysis

A total 380 publications were retrieved and analyzed from web of science core collection in this study. The results shown in Table 2 exhibit the number of records and percentage of each document type. With respect to document category, most of those publications were articles (263 articles, 69.2%), followed by book chapters (57, 15%), proceeding paper (44, 11.6%), book reviews (12, 3.2%) and book (4, 1.1%).

Table 2

Document Types Record and Percentage

<i>Document Types</i>	<i>Records</i>	<i>% of 380</i>
ARTICLE	263	69.2
BOOK CHAPTER	57	15.0
PROCEEDINGS PAPER	44	11.6
BOOK REVIEW	12	3.2
BOOK	4	1.1

Table 3 shows the number of publication and percentage in each journal. The highest number of publications was published by leadership and organization development journal (17, 4.4%), followed by international journal of sports science coaching (16, 4.2%) and journal of business ethics (15, 3.9%).

Table 3

Journal Records and Percentage

<i>Source Titles</i>	<i>Records</i>	<i>% of 380</i>
Leadership & organization development journal	17	4.47
International journal of sports science coaching	16	4.21
Journal of business ethics	15	3.94
Servant leadership developments in theory and research	14	3.68
Palgrave studies in workplace spirituality and fulfillment	12	3.15
Leveraging the power of servant leadership building high performing organizations	9	2.36
Biblical servant leadership an exploration of leadership for the contemporary context	8	2.10
Christian faith perspectives in leadership and business	8	2.10
International journal of contemporary hospitality management	8	2.10
Palgrave studies in leadership and followership	8	2.10
Servant leadership and followership examining the impact on workplace behavior	8	2.10
International journal of psychology	6	1.57
Leadership	6	1.57
Leadership quarterly	6	1.57
Procedia social and behavioral sciences	6	1.57
European journal of work and organizational psychology	5	1.31
Journal of managerial psychology	5	1.31
Journal of applied psychology	4	1.05
Journal of leadership organizational studies	4	1.05
Administrative sciences	3	0.78
Advances in social science education and humanities research	3	0.78
British journal of hospital medicine	3	0.78
Frontiers in psychology	3	0.78
Journal of management	3	0.78
Nonprofit management leadership	3	0.78

Findings

Evolution of Servant Leadership Research

In order to cater our first research question regarding how servant leadership has evolved, we did a timeline analysis on servant leadership research from beginning (1970) till date (2020). The publications in the Web of science database from 1970 to 2020 were analyzed. The variation in the time period with respect to number of publications, leads to emergence of two research stages in the field of servant leadership, i.e. The pre expansion and expansion stage. Figure 1 shows the time period T1 spans 1978-2009 comprised of pre expansion stage. Out of total 380 publications, only 27 publications produced during this development phase (1978-2009). The average per year publication is even less than one publication per year. The time period T2, called as expansion stage, as it reflects the exponential growth from the year 2010 to 2019. There have been 353 publications during this expansion phase.

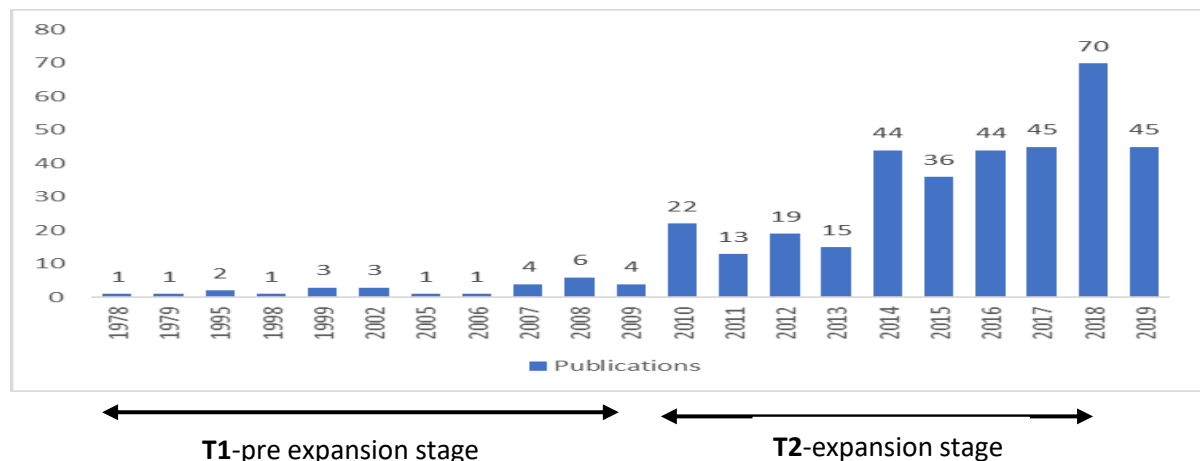


Figure 1. Publication timeline

Key Research Streams

To address our first and second research question, co-occurrences of author keywords conducted in order to find out the key areas of servant leadership research.

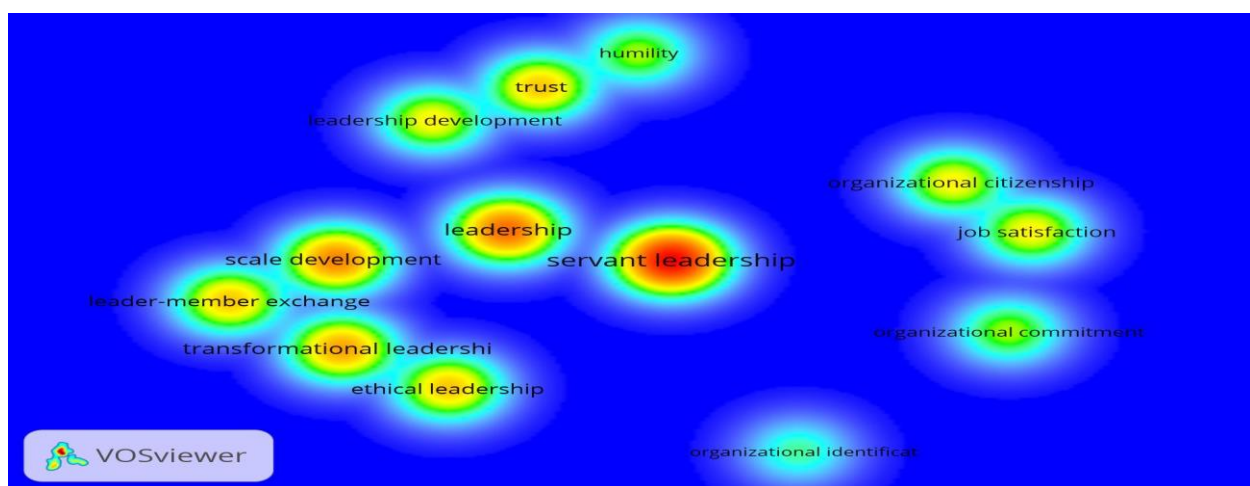


Figure 2. Density visualization (Co-occurrences analysis on author keywords) (1978-2019)

Figure 2 shows the results for the co-occurrence of author keywords density visualization. There were 695 keywords total, out of which 18 meets the criteria of minimum 10 keywords. The total strength of the co-author links with other keywords was analyzed on these 18 shortlisted keywords used by authors. In

Figure 2, the closer the terms mean there is a strong link between them. The terms in red color shows the denser the concepts are meant plentiful research have been done on these concepts. The result indicated 'servant leadership' as a main concept with 204 occurrences and 116 total link strength followed by 'Leadership' having occurrence value of 31 and a total link strength of 32. The other important concept related to the servant leadership were: Transformational Leadership (12 occurrences, 25 total link strength), Scale development (7 occurrences, 17 total link strength), job satisfaction (11 occurrences, 15 total link strength), organizational citizenship behavior (8 occurrences, 14 the total link strength), ethical leadership (6 occurrences, 12 total link strength), authentic leadership (5 occurrences, 11 total link strength), Leader-member exchange (6 occurrences, 11 total link strength), Organizational Commitment (9 occurrences, 11 total link strength), psychological empowerment (5 occurrences, 9 total link strength), Organizational identification (7 occurrences, 8 total link strength), psychological safety (5 occurrences, 8 total link strength), trust (6 occurrences, 8 total link strength), humility (6 occurrences, 7 total link strength), Leadership development (6, 7 total link strength), empowerment (5 occurrences, 6 total link strength), Vietnam (5, 3 total link strength). The term 'Servant leadership' emerged as the main term. The other term mentioned in the density visualization are reflecting the commonly used keywords along with the main term servant leadership.

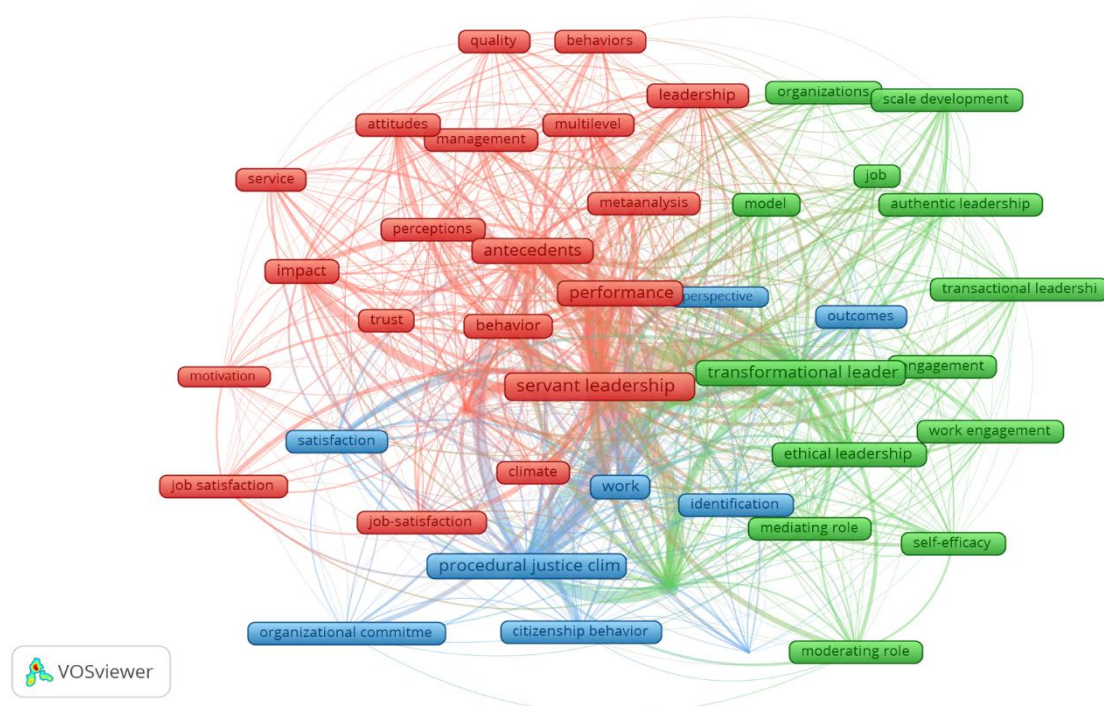


Figure 3. Network visualization of author keywords

In Figure 3, network visualization of author keywords is shown. There are three kind of cluster, red, green and blue. Red cluster represents the keywords that are related to servant leadership antecedents and outcome variable. Green cluster contains keywords that represent other leadership style that researchers have studied along with servant leadership such as transformational leadership, transactional leadership, ethical leadership, authentic leadership, mediating and moderating variables. Whereas blue cluster represents the servant leadership research with the organizational variables such as organizational climate, commitment, organizational citizenship behavior and outcome.

Pre-expansion Era of Servant Leadership Research (1978-2009)

Pre expansion era of servant leadership research mainly focused on the themes displayed in Figure 4. The first publication on servant leadership came out in 1978 by Robert K Greenleaf. In this first publication he

defines the servant leader as a leader who is servant first. This was the first time the idea of leading a corporate organization by a servant leadership style was introduced. Afterward servant leadership remained in an embryonic phase till 2010. In this embryonic phase, the focus was on defining the servant leadership construct and building of the measurement scale. The density visualization (Figure 4) shows that from 1978 to 2009, mainstream research on servant leadership focuses on development of its measurement scale, research capacity, collaboration, the practice of servant leadership, empowerment, and servant leadership across cultures. The tipping point for servant leadership research came afterward when a multi-dimensional measurement scale was developed by Liden et al. (2008). Figure 4 overlay visualization shows that most of the research on servant leadership during the initial stage conducted during year 2007 to 2009.

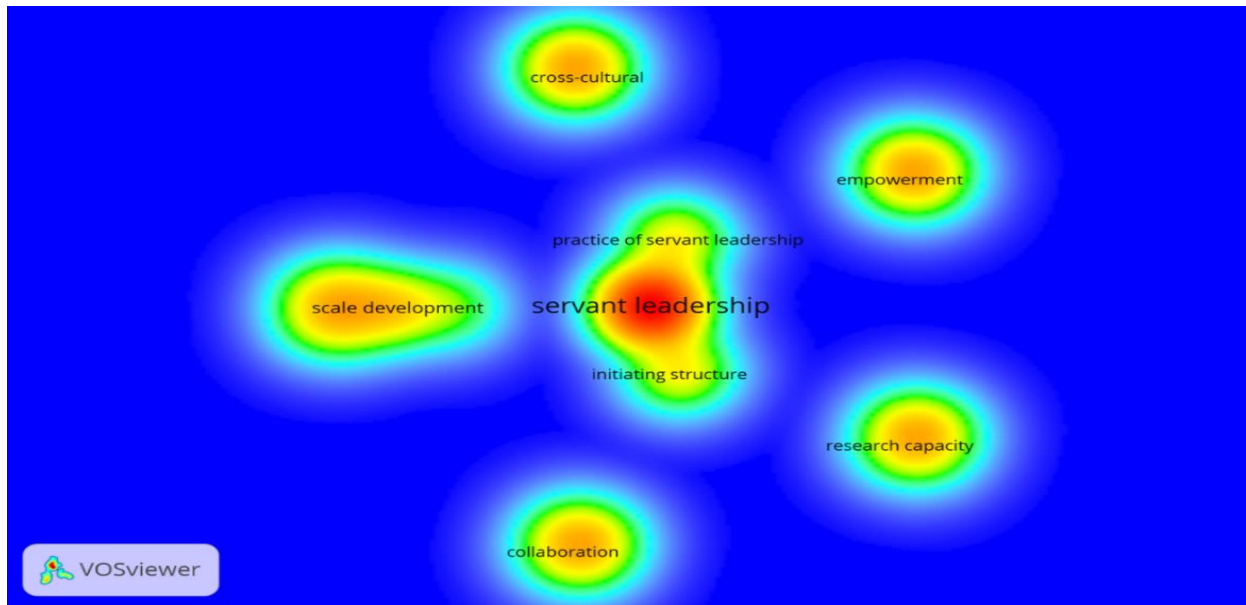


Figure 4. Thematic density visualization of conceptual structure in servant leadership during pre-expansion stage (T1, 1978-2009)

Expansion era of servant leadership research (2010-2019)

The expansive era of servant leadership is exhibited in the overlay visualization diagram (see Figure 5). During the phase 2010-2019, the research mainly focuses on servant leadership and its outcome on the followers and organizational factors. Concepts such as organizational identification, followers trust level, humility, organizational commitment, organizational citizenship behavior, employee satisfaction, psychological empowerment and leadership development have been studied. Also, the focus remained on servant leadership and its comparison with other leadership style such as ethical leadership and transformational leadership.

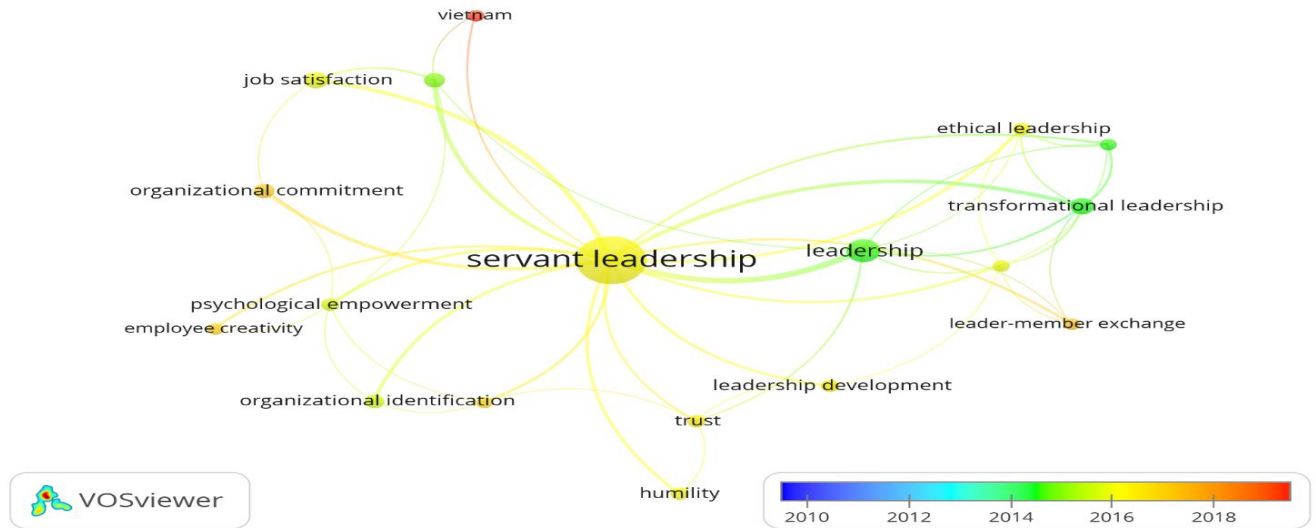


Figure 4. Thematic cluster at T2- Expansion stage (2010-2019)

Bibliographic Coupling

In order to cater our third research question regarding the research dynamics of servant leadership, bibliometric coupling algorithm has been used to find out the influential authors, journals, publications, countries and institution in the servant leadership research field.

Influential Journal

The Bibliographic coupling analysis based on journals as unit of analysis was conducted in order to find the most influential journal in the field. The 5 publications per journal was set as default minimum threshold value. Of the 214 total sources, 13 sources met this threshold level. The result was ranked relatively from high to low, on the basis of total link strength, citations and number of publications of each of the 13 journals (see Table 4). Leadership and Organization development has the highest number of publications (17), 119 citations and 5393 total link strength. The second highest is the Journal of Business Ethics with 15 publications, 398 citations and 4919 total link strength, followed by Leadership Quarterly with 6 publications, 613 citations, and 2768 total link strength. The other journals in this list were as follows; international journal of contemporary hospitality management (8 publications; 43 citations; 2102 total link strength), journal of managerial psychology (5 publications; 20 citations; 128 total link strength), leadership (6 publications; 121 citations; 1223 total link strength), European journal of work and organizational psychology (5 publications; 31 citations; 1076 total link strength), servant leadership and followership: examining the impact on workplace behavior (8 publications; 4 citations; 945 total link strength), leveraging the power of servant leadership: building high performing organizations (9 publications; 0 citations; 931 total link strength), servant leadership: developments in theory and research (14 publications; 80 citations; 708 total link strength), international journal of sports science & coaching (16 publications; 36 citations; 290 total link strength), biblical servant leadership: an exploration of leadership for the contemporary context (8 publications; 0 citations; 213 total link strength), international journal of psychology (6 publications; 0 citations; 0 total link strength).

Table 4
Top Journals in the Field

source	documents	TC	TLS
leadership and organization development journal	17	120	5181
journal of business ethics	15	408	4742
leadership quarterly	6	627	2676
international journal of contemporary hospitality management	8	44	1968
journal of managerial psychology	5	22	1223
leadership	6	123	1189
European journal of work and organizational psychology	5	32	1042
leveraging the power of servant leadership: building high performing	9	0	886
servant leadership and followership: examining the impact on workplace	8	4	813
servant leadership: developments in theory and research	14	80	696
international journal of sports science & coaching	16	36	237
biblical servant leadership: an exploration of leadership for the	8	0	213
international journal of psychology	6	0	0

Note: TC = Total citation. TLS = total link strength.

The network overly visualization given in Figure 5 shows three main clusters (yellow, green and blue) depending on the time of their publication. Yellow color represents the journals which are publishing the research on servant leadership in the recent years. Green represents journals that have published servant leadership related research in 2015 to 2017. And blue represents journals that have published the research before 2015. Furthermore, the size of thread connecting the journals represents how much each of the journal are coupled in the citation. You can see leadership and organizational development; journal of business ethics and leadership quarterly have cited each other work more than the other journals.

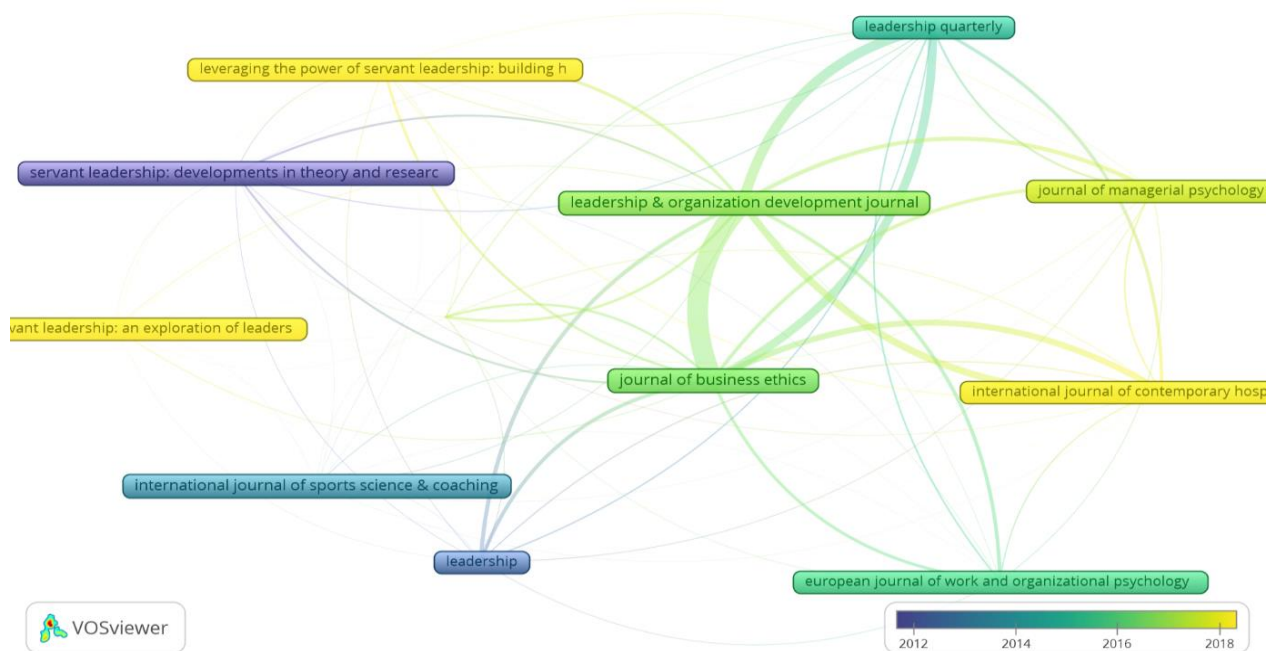


Figure 5. Network overly visualization

Influential Countries

The bibliographic coupling analysis of the countries was conducted in order to identify the most influential countries driving the servant leadership research. The threshold value for number of publications per country was set at 9. Among the 48 countries, 11 met the thresholds. On the basis of these 11 countries, the total strength of the bibliographic coupling links with other countries was calculated (see Figure 6).

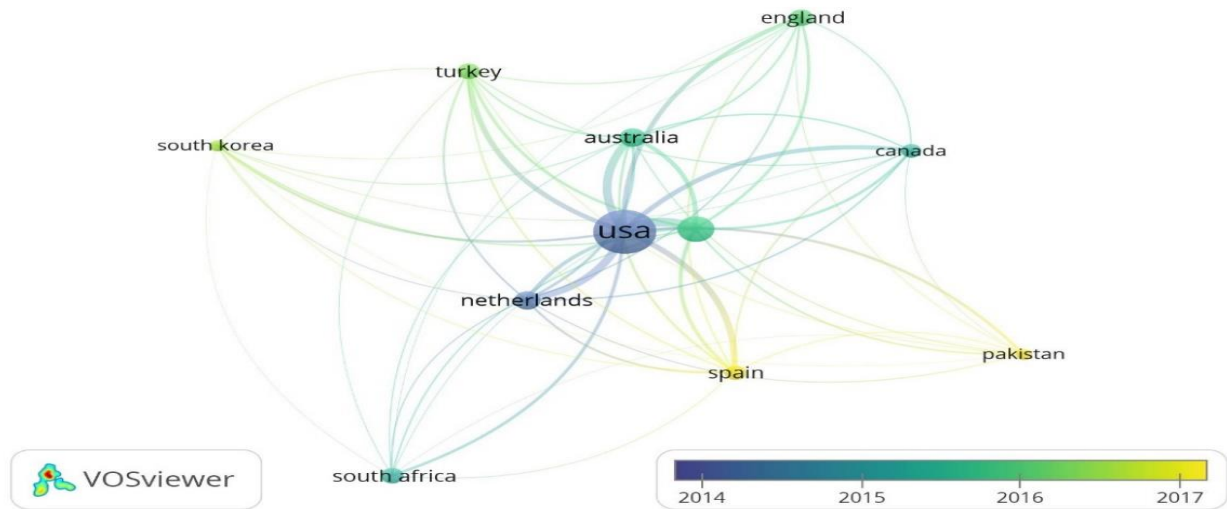


Figure 6. Overlay visualization Based on countries

USA was found to have the strongest values with 137 publications, 2906 citations, and 60417 total link strength. Table 5 Shows the total link strength, number of citations and number of publications from 11 shortlisted countries. The overlay visualization shows that initial major work done in USA, Australia and China; however, recent work on servant leadership is seen in England, Spain, Pakistan, Canada and Turkey in the last three years. This explains that currently the servant leadership research trend has spread out of the initial hub of USA, China and Australia.

Table 5

Country Wise Research Trend

Country	Documents	TC	TLS
USA	137	2906	60417
PEOPLES R CHINA	48	425	36137
AUSTRALIA	25	515	24113
NETHERLANDS	25	852	23984
SPAIN	15	51	18185
CANADA	14	245	15389
TURKEY	17	60	15284
ENGLAND	20	142	13659

Note: TC = Total citation. TLS = total link strength.

Influential Authors

The Bibliographic coupling with author as unit of analysis is given in Figure 7. The threshold of 5 publication was set for each author and 8 authors met the thresholds out of the total of 694 authors. The bibliographic coupling with authors as unit of analysis was conducted for each of the 8 authors, then total strength of the author was calculated and ranked accordingly.

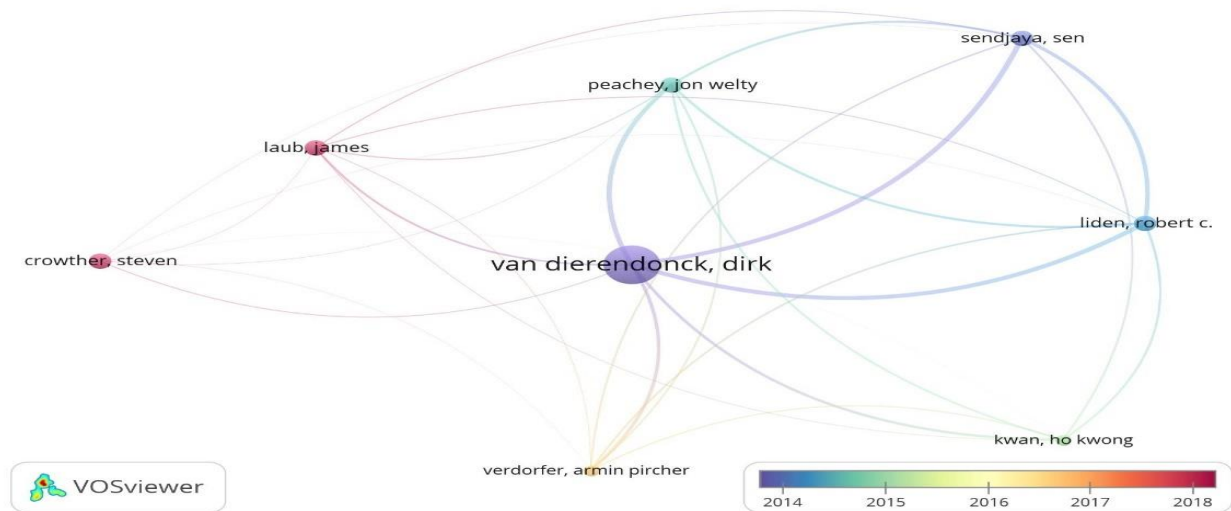


Figure 7. Overlay visualization based on authors

The author with most servant leadership publication was Van Dierendonck, Dirk with 17 publications, 805 citations, and 3544 total link strength. Table 6 below also explains the number of publications, citation and total strength of each author 8 shortlisted by bibliographic coupling. The overlay visualization also exhibits the major contribution in the servant leadership field is done by Van Dierdonck, liden and Sedjaya during the time period of 2008 to 2014. Their work has been cited by the later researcher till date. The recent trends show new research work enter in the field of servant leadership research such as Laub and Crowther in 2018.

Table 6

Top Authors Contribution to the Field

Author	Documents	TC	TLS
VAN DIERENDONCK, DIRK	17	805	3544
LIDEN, ROBERT C.	7	780	2326
SENDJAYA, SEN	7	293	2232
PEACHEY, JON WELTY	7	214	1938
KWAN, HO KWONG	5	130	1198
VERDORFER, ARMIN PIRCHER	5	26	1155
LAUB, JAMES	7	0	652
CROWTHER, STEVEN	7	0	165

Note: TC = Total citation. TLS = total link strength.

Influential Publications

The bibliographic coupling with unit of analysis (document) was conducted to find out the most influential publication in the field. The 50 citations per document was set as threshold for each publication to be selected for the analysis. Among the total of 380 publications, 21 publications met the minimum criteria. The documents are ranked on the basis of strongest total link strength and citations. Van Dierendonck (2011a) with work cited 379 times and a total link strength of 130 was the strongest publication. The second strongest was Parris and Peachey (2013) with 140 citations and 95 total link strength. The third one was by Dierendonck, Nuijten, van Dierendonck, and Nuijten (2011) with 151 citations and 89 total link strength (see Table 7).

The publication having the strongest total link strength was “Servant leadership: A review and synthesis” by Van Dierendonck (2011a) published in Journal of Management. This review research deals with servant leadership background, key features, measurement tools and previous servant leaderships researches. The second strongest publication was “A Systematic Literature Review of Servant Leadership Theory in Organizational Contexts” published in journal of Business Ethics. The research using systematic literature review methodology, portrayed servant leadership as a new research area linked to ethics, virtues, and morality. The third strongest publication was “The Servant Leadership Survey: Development and Validation of a Multidimensional Measure” by Dierendonck et al. (2011). This 8-dimensional scale having 30 items was the first measure where the underlying factor structure was developed and confirmed across several fields.

Table 7

Top Publications in the Field

Publication Title	Authors	Year	TC	TLS
Servant leadership: Development of a multidimensional measure and multi-level assessment	Liden, RC, Zhao, H, Wayne, SJ, Henderson, D	2008	412	104
Servant Leadership: A Review and Synthesis	van Dierendonck, D	2011	385	250
Regulatory Focus as a Mediator of the Influence of Initiating Structure and Servant Leadership on Employee Behavior	Neubert, Kacmar, Carlson, Chonko, and Roberts, 2008	2008	271	85
Servant Leadership, Procedural Justice Climate, Service Climate, Employee Attitudes, and Organizational Citizenship Behavior: A Cross-Level Investigation	Walumbwa, F. O., Hartnell, C. A., & Oke	2010	268	131
‘Scale development and construct clarification of servant leadership	Barbuto, JE, Wheeler, DW	2006	238	70
Defining and measuring servant leadership behaviour in organizations	Sendjaya, S, Sarros, JC, Santora, JC	2008	171	123
The Servant Leadership Survey: Development and Validation of a Multidimensional Measure	van Dierendonck, D, Nuijten,	2011	154	161
Antecedents of Team Potency and Team Effectiveness: An Examination of Goal and Process Clarity and Servant Leadership	Liden, RC, Hu, J	2011	148	131
A Systematic Literature Review of Servant Leadership Theory in Organizational Contexts	Peachey, JW, Parris, DL	2013	147	200
Servant leadership and serving culture: influence on individual and unit performance	Liden, RC, Wayne, SJ, Meuser, JD, Liao, CW	2014	144	159
Ceo servant leadership: exploring executive characteristics and firm performance	Peterson, SJ, Galvin, BM, Lange, D	2012	100	147
Exploring Servant Leadership across Cultures: A Study of Followers in Ghana and the USA	Hale, JR, Fields, DL	2007	84	44
Do Ethical, Authentic, and Servant Leadership Explain Variance Above and Beyond Transformational Leadership? A Meta-Analysis	Hoch, JE, Bommer, WH, Dulebohn, JH, Wu, DY	2018	81	137
Does servant leadership foster creativity and innovation? A multi-level mediation study of identification and prototypicality	Yoshida, D. T., Sendjaya, S., Hirst, G., & Cooper, B	2014	81	112
Same difference? Exploring the differential mechanisms linking servant leadership and transformational leadership to follower outcomes	van Dierendonck, D, Stam, D, Boersma, P, de Windt, N, Alkema, J	2014	77	183
A New Scale to Measure Executive Servant Leadership: Development, Analysis, and Implications for Research	Reed, LL, Vidaver-Cohen, D, Colwell, SR	2011	68	170
Linking servant leadership to individual performance: Differentiating the mediating role of autonomy, competence and relatedness need satisfaction	Chiniara, M, Bentein, K	2016	58	195
How Does a Servant Leader Fuel the Service Fire? A Multilevel Model of Servant Leadership, Individual Self Identity, Group Competition Climate, and Customer Service Performance	Chen, ZJ, Zhu, J, Zhou, MJ	2015	56	96
Servant leadership: Validation of a short form of the SL-28	Liden, RC, Wayne, SJ, Meuser, JD, Hu, J, Wu, JF, Liao, CW	2015	53	159
The Impact of Servant Leadership on Hotel Employees' "Servant Behavior"	Wu, L. Z., Tse, E. C. Y., Fu, P., Kwan, H. K., & Liu, J.	2013	53	121
Servant leadership, organizational identification, and work-to-family enrichment: The moderating role of work climate for sharing family concerns	Zhang, HN, Kwan, HK, Everett, AM, Jian, ZQ	2012	52	104

Note: TC = Total citation. TLS = total link strength.

Influential Institutions

The bibliometric coupling based on organization as unit of analysis was conducted to identify the most influential institution in the field of servant leadership research. The threshold of five publications per organization was set as a criteria form institution to be selected for the analysis. Out of total 404 institutions, 12 met the thresholds and 12 organizations with the greatest total link strength were ranked from high to low (see Table 7). With a total of 5575 total link strength, over 787 citations and 16 publications so far Erasmus University is the strongest institute with respect to work done in the field of servant leadership. University of Illinois with total of 12 publications, 810 number of citations, and 4599 total link strength ranked second. Table 8 shows the total link strength, citation and number of publications with respect to each institution.

Table 8

Top Organization/Institution in the Field

Organization	Documents	TC	TLS
Erasmus University (Netherland)	16	787	5575
University of Illinois (USA)	12	810	4599
Monash University (Australia)	10	400	3540
Shanghai University of Finance	7	150	2455
Texas A&M University	5	187	2312
Renmin University China	5	72	2006
Regent University	9	164	1804
Tech University Munich	5	26	1689
University Texas Arlington	5	295	1572
Vrije University Amsterdam	5	41	1208
Palm Beach Atlantic University	8	10	948
Grace Coll Divin	7	0	232

Co-Authorship Network Across the Globe

To address the fourth research question, we have applied the co-authorship analysis keeping countries as unit of analysis, so that we can find out how authors from different countries have worked together in this research field. Out of the total 48 countries, 16 countries were shortlisted based on the threshold criteria of five publications per countries. Figure 8 shows clusters that explains the co-authorship in the world. Six clusters emerged on the bases of total link strength. Table 8 presents the cluster formed on the basis of servant leadership research co-authorship across the world.

The co-author analysis with respect to countries shown in Table 9 and Figure 8 presents the collaboration of the authors across globe. Each cluster represents the authors collaboration on the research regarding servant leadership. The cluster represents the author collaboration between European and Asian author such as German, Turkish, Italian and South Korean. Cluster 2 shows England, Spain and Pakistan researcher's collaboration. Cluster 3 shows USA research collaborating with Asian researcher from Malaysia and India. Cluster 4 represents Australian and Indonesian researcher, cluster 5 represents Netherlands and south African researchers and Cluster 6 shows Chinese researchers collaborating with Canadian researchers.

Table 9

Co-authorship Across the Globe

Cluster	Countries
1	Germany, Italy, South Korea and Turkey
2	England, Spain and Pakistan
3	USA, Malaysia and India
4	Australia and Indonesia
5	Netherland and South Africa
6	Canada and China

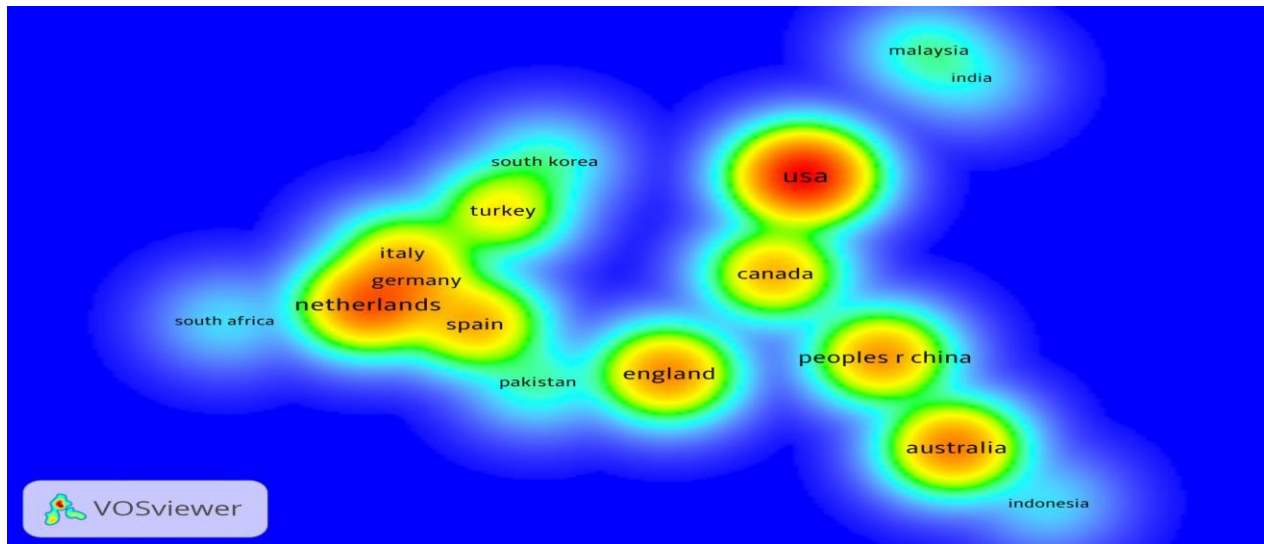


Figure 8. Density visualization based on co authorship across the globe.

Discussion and Concluding Remarks

The main objective of this study was to review the last 50 years of servant leadership research in the field of social science starting from 1970s till end of 2019. The present research has retrieved and analyzed the publications on servant leadership in social science research. This study has used the Social Science Citation Indexed database of Web of Science. VOS Viewer software was used to conduct the bibliometric analysis by analyzing and visualizing several characteristics of publications such as ‘co-occurrence’ of author keywords, Co-authorship analysis on the basis of countries and ‘Bibliographic coupling’ on the basis of authors, sources, institutions, countries and documents.

The analysis of the co-occurrence of author keywords revealed what concepts the researchers have most frequently researched along with the main concept, i.e. ‘servant leadership’. The concepts such as Leadership, Transformational Leadership (Van Dierendonck et al., 2014), Scale development (Barbuto & Wheeler, 2006), job satisfaction (C.H. Chan & Mak, 2014), organizational citizenship behavior (Chiniara & Bentein, 2016), ethical leadership (Hoch, Bommer, Dulebohn, & Wu, 2016), authentic leadership, Leader-member exchange (Newman, Schwarz, Cooper, & Sendjaya, 2017), Organizational Commitment (Van Dierendonck et al., 2014), psychological empowerment, Organizational identification, psychological safety, trust, humility, Leadership development and empowerment (Schneider & George, 2011).

Pre-expansion era of servant leadership research mainly focused on the themes such as servant leadership measurement scales, research capacity, collaboration, the practice of servant leadership, empowerment, and servant leadership across cultures. Whereas the research on servant leadership since 2010 have been focusing on concept such as organizational identification, followers trust level, humility, organizational commitment, organizational citizenship behavior, employee satisfaction, psychological empowerment and leadership development. Also, the researcher remained focuses on servant leadership and its comparison with other leadership style such as ethical leadership and transformational leadership (Hoch et al., 2016).

The 'Bibliographic coupling' analysis shows that the journal with the most servant leadership related publications, strongest total link strength was the Leadership and Organizational Development Journal. However, the journal with the highest number of citations on servant leadership research was leadership quarterly.

The most influential country in the field of servant leadership research was the USA with huge difference from the other countries such as Australia, People Republic of China, Netherlands, Spain, Canada, Turkey, England, Pakistan, South Africa and South Korea.

The analysis found Van Dierendonck, as the most influential author in the field of servant leadership. He has the highest number of citations and strongest total link strength followed by was Liden, R.C. and at third was Sendjaya. The most significant work done in the field of servant leadership literature was "Servant leadership: A review and synthesis" by Van Dierendonck (2011a), the second was "A Systematic Literature Review of Servant Leadership Theory in Organizational Contexts" by Parris (2013) and third most influential publication was "The Servant Leadership Survey: Development and Validation of a Multidimensional Measure" by Dierendonck et al. (2011).

The most influential institution in the field of servant leadership research was Erasmus University (Netherland), second was University of Illinois (USA) and third was Monash University (Australia). The other important institution in this regard were; Shanghai University of Finance and Econ, Texas A&M University, Renmin University China, Regent University, Tech University Munich, University Texas Arlington, Vrije University Amsterdam, Palm Beach Atlantic University and Grace College Divine.

From the above-mentioned results and finding we can infer there has been research from different part of the world on the various aspect of servant leadership. In the recent years, servant leadership research has gained the momentum. However, servant leadership is still at the nascent level when it comes to applicability of the concepts. So far, the research on servant leadership have relied on themes such as scale development, cross cultural contextual outcome, how servant leadership differ from other similar looking leadership style, i.e. ethical and transformational leadership and how servant leadership impact follower's outcome, i.e. well-being, commitment, psychological empowerment, satisfaction etc. The researcher coauthor analysis between different countries show not only inter countries rather inter continent collaboration between researcher on the servant leadership research. Furthermore, most of the research so far have done in USA, Netherland, China and Australian Context. There exists a huge gap for studying servant leadership in the African, Middle Eastern and South Asian context.

The major contribution of this study are the results from examining the literature in a structured, comprehensive and objective manner. These results offer the researchers and scholars a guidance to further explore the servant leadership research area in the field of social sciences. This study also

provides the researchers to build networks with multiple institutions, countries and authors across the globe that have contributed significantly in this field.

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