

Servant Leadership Beyond Greenleaf: Tracing Its Intellectual Structure and Emerging Themes through Bibliometric Analysis, Systematic Literature Review, and LDA-Based Topic Modelling.

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Abstract

Servant leadership has grown from a philosophical proposition articulated by Robert K. Greenleaf into one of the most actively researched leadership paradigms in management and public administration scholarship. Yet the field's intellectual boundaries, its collaborative structure, and the trajectory of its themes have not been mapped using a combined bibliometric-systematic-computational protocol on a large, recent Scopus corpus. This study analyses 2,153 English-language journal articles, reviews and conference papers indexed in Scopus between 2000 and 2026 (search executed 11 August 2026) to characterise the servant leadership literature along four complementary lines of evidence: (i) bibliometric performance and network analysis using VOSviewer, covering country co-authorship, author co-authorship, keyword co-occurrence, author co-citation and document bibliographic coupling; (ii) a PRISMA-guided systematic literature review (SLR) of theories, variables, mediating and moderating mechanisms, contexts and methodologies reported in the most-cited and most-relevant studies; and (iii) Latent Dirichlet Allocation (LDA) topic modelling of 2,128 article abstracts to recover latent thematic structure independent of author-assigned keywords. The corpus generated 71,671 cumulative citations (mean = 33.29 per document) and grew at a compound annual growth rate of approximately 17.1% between 2000 and 2025, with the United States (467 documents), China (300), Indonesia (174), the United Kingdom (168) and Pakistan (124) as the leading contributing countries. Keyword co-occurrence analysis (94 keywords meeting a 15-occurrence threshold) resolved five thematic clusters spanning core servant leadership constructs, public-sector and civil-service applications, psychological/demographic correlates, and public service motivation, while author co-citation analysis (90 cited authors, four clusters, total link strength = 178,113) confirmed Robert K. Greenleaf, Dirk van Dierendonck and Robert C. Liden as the field's dominant intellectual anchors. An eight-topic LDA solution, fitted on a 2,333-term vocabulary after stop-word and boilerplate removal, recovered coherent latent themes including public-sector and civil-service governance, employee green and creative behaviour, organisational citizenship and self-efficacy mechanisms, and comparative leadership-style reviews, broadly corroborating but also refining the keyword-based clustering. The systematic review of the most-cited and most-relevant 150 studies (Appendix Table A1) shows the field has matured from validating servant leadership as a distinct construct (2000-2010) toward testing complex mediated and moderated models across hospitality, healthcare, education and public administration, with China, Indonesia, Pakistan and the Gulf states now supplying a large share of the empirical output. The paper concludes by identifying under-researched geographic, methodological (longitudinal, qualitative, multi-level) and theoretical (indigenous, non-Western servant leadership formulations) gaps, and outlines a future research agenda for scholars and reviewers...

Keywords: Servant leadership; bibliometric analysis; VOSviewer; systematic literature review; PRISMA; Latent Dirichlet Allocation; topic modelling; Scopus; co-citation analysis; leadership studies

INTRODUCTION

Since Robert K. Greenleaf first articulated the servant-leader ideal in his 1970 essay "The Servant as Leader," the proposition that a leader's primary motivation is to serve followers before leading them has evolved from a normative, largely essayistic idea into an empirically validated leadership construct with dedicated measurement instruments, meta-analytic evidence bases, and applications across sectors as varied as hospitality, healthcare, education, the armed forces, and public administration. The construct's appeal lies in its explicit combination of moral, relational and practical concerns: unlike transformational or charismatic leadership, which centre on the leader's vision and influence, servant leadership foregrounds follower growth, community stewardship, humility and ethical use of power (Russell & Gregory Stone, 2002; van Dierendonck, 2011).

Two decades of accelerating empirical attention have, however, produced a literature that is simultaneously rich and fragmented. Multiple competing measurement instruments have been proposed (Barbuto Jr. & Wheeler, 2006; Liden et al., 2008; Sendjaya et al., 2008; van Dierendonck & Nuijten, 2011), the construct has repeatedly been compared with, and occasionally conflated with, transformational, authentic, ethical and spiritual leadership (Hoch et al., 2018; Lemoine et al., 2019), and a widening set of mediating and moderating mechanisms — trust, psychological safety, organisational identification, self-efficacy, climate for creativity, and more — has been layered onto the nomological network (Chiniara & Bentein, 2016; Newman et al., 2017). At the same time, the geography of empirical contribution has shifted markedly: whereas the field's foundational validation studies were conducted primarily in North America and Western Europe, a substantial and growing share of contemporary output originates in Pakistan, Indonesia, China and the Gulf states, raising open questions about whether servant leadership, as theorised and measured, travels cleanly across cultural and institutional contexts or whether indigenous conceptions of serving leadership pre-date and diverge from Greenleaf's formulation.

Prior reviews have made important contributions to consolidating this literature. Parris and Peachey (2013) conducted an early systematic review of the empirical servant leadership literature; Eva et al. (2019) produced an influential *Leadership Quarterly* synthesis and future research agenda; Lemoine et al. (2019) integrated servant leadership within a broader family of "moral" leadership theories; and Bavik (2020) reviewed the servant leadership literature specifically within management and hospitality. These reviews, however, were necessarily bounded by the corpora available at the time of writing and relied predominantly on qualitative narrative synthesis or manual thematic coding. None combined large-scale bibliometric network analysis, a PRISMA-structured systematic review, and unsupervised computational topic modelling on a single, recent, large-N corpus to simultaneously map the field's social structure (who publishes, where, and with whom), its intellectual structure (which authors and works anchor the knowledge base), its conceptual structure (which keywords and themes co-occur), and its latent thematic structure recovered independently of author-assigned keywords.

This gap matters for three reasons. First, as the servant leadership literature approaches and exceeds two thousand indexed documents, no single reviewer can read the full corpus; a systematic, reproducible mapping is needed to orient new entrants and reviewers alike. Second, bibliometric and topic-modelling techniques can surface structural patterns — dominant clusters, under-connected sub-fields, emerging versus declining themes — that are difficult to detect through narrative review alone. Third, and central to the framing of this paper, the historiography of servant leadership as an exclusively Western, Greenleaf-originated idea deserves re-examination in light of the geographic and thematic patterns that a full-corpus bibliometric mapping can reveal, including the extent to which the field's most active contributing countries and its public-sector and civil-service thematic cluster reflect governance and service traditions that pre-date, or run parallel to, Greenleaf's articulation.

Accordingly, this study addresses the following research questions: (RQ1) What are the publication, citation and collaboration trends that characterise the servant leadership literature indexed in Scopus? (RQ2) Which countries, authors, journals and documents constitute the field's social and intellectual structure? (RQ3) What conceptual clusters and thematic evolution are evident from keyword co-occurrence and citation-based network analysis? (RQ4) What theories, variables, mediating/moderating mechanisms, contexts and methodologies characterise the most influential empirical studies, as established through a systematic literature review? (RQ5) What latent topics emerge from unsupervised LDA topic modelling of article abstracts, and how do they compare with the keyword-based thematic clusters? (RQ6) What research gaps and future research directions follow from this multi-method mapping? The remainder of the paper is organised as follows. Section 2 details the methodology, including the Scopus search strategy, PRISMA-based inclusion/exclusion protocol, bibliometric procedures, and LDA specification. Section 3 reports the bibliometric findings. Section 4 presents the systematic literature review. Section 5 reports the LDA topic modelling results. Section 6 discusses future research directions, and Section 7 concludes.

2. Methodology

This study adopts a sequential, mixed-method bibliometric-systematic-computational design, combining performance analysis, science mapping (bibliometrics), a PRISMA-structured systematic literature review, and machine-learning-based topic modelling on a single Scopus-derived corpus. This design follows recommended practice for large-N literature domains where narrative review alone cannot process the full volume of published work (Donthu et al., 2021; Eva et al., 2019).

2.1 Data Source and Search Strategy

Scopus was selected as the sole bibliographic database because of its broad multidisciplinary coverage of business, management, social science and psychology journals relevant to leadership research, its structured metadata (author keywords, indexed keywords, affiliations, citation counts, abstracts, reference lists) required for bibliometric network construction, and its established use in comparable leadership bibliometric studies. The

search was executed on 11 August 2026 using the query string "servant leadership" applied to article title, abstract and keywords, retrieving an initial pool of 3,925 records.

2.2 Inclusion and Exclusion Criteria (PRISMA)

Records were screened and filtered in Scopus's native interface using a sequence of inclusion/exclusion restrictions, summarised as a PRISMA-style identification-screening-eligibility-inclusion flow in Table 1. The initial 3,925 records were first limited to the publication window 2000-2026, retaining 3,863 records. Subject-area filters were then applied, first restricting the corpus to Business, Management and Accounting (1,984 records remaining of a combined 3,185 after cross-listing with Social Sciences at 1,584, and Economics, Econometrics and Finance at 682, and Psychology at 549 as overlapping subject tags). Document-type filters retained Article (2,174), Review (103) and Conference Paper (69) records (2,346 total), excluding book chapters, editorials, notes and erratum records. A language filter retained English-language records only (2,293). A source-type filter retained Journal (2,220) and Conference Proceeding (58) sources (2,278 total), excluding books and trade publications. Finally, a publication-stage filter retained records marked "Final" (2,153), excluding in-press/article-in-press records whose bibliographic metadata (volume, issue, pagination) had not yet been finalised. The resulting final analytic corpus comprised 2,153 documents: 1,994 articles, 93 reviews and 66 conference papers, published between 2000 and 2026 and indexed with complete bibliographic and citation metadata.

2.3 Bibliometric Analysis Procedure

Bibliometric performance analysis (publication counts by year, citation counts, leading journals, leading countries and leading authors) was conducted directly on the exported Scopus CSV metadata using Python (pandas). Science mapping / network analysis was conducted in VOSviewer (van Eck & Waltman) using five separate maps constructed from the 2,153-document corpus: (1) country co-authorship (fractional counting, minimum five documents per country, retaining 67 of 138 countries with at least one collaborative link, forming the largest connected set), (2) author co-authorship (minimum three documents per author, retaining 29 of 204 authors meeting the document threshold that formed the largest connected set of the co-authorship network), (3) author keyword co-occurrence (full counting, minimum 15 occurrences, retaining 94 of 5,735 unique keywords), (4) author co-citation (minimum 100 citations per cited author, retaining 90 of 54,448 cited authors), and (5) document bibliographic coupling (minimum 120 citations per document, retaining 123 of 2,153 documents). Cluster assignment, link strength and layout (x, y coordinates) were exported from VOSviewer as tab-delimited map and network files and re-analysed in Python to compute cluster-level summary statistics reported in Section 3.

2.4 Systematic Literature Review Protocol

The systematic literature review followed the PRISMA 2020 reporting framework for the identification, screening and inclusion stages described in Section 2.2. For the qualitative synthesis reported in Section 4, attention was concentrated on the subset of documents that were simultaneously (a) among the top-cited documents in the corpus, (b) present in the bibliographic-coupling largest connected set ($n = 123$), and/or (c) thematically representative of the five keyword clusters identified in Section 3.4. For each reviewed study, the following elements were extracted where reported: underpinning theory (e.g., social exchange theory, self-determination theory, social learning theory, conservation of resources theory), independent/predictor variables, dependent/outcome variables, mediating and moderating variables, study context (industry sector and country), sample characteristics, and research design/methodology. A structured synthesis table of the 150 most-cited and most-relevant reviewed studies, together with a short summary of each study's principal conclusion drawn from its published abstract, is reported in Appendix Table A1 to document the rigour and traceability of the review.

2.5 Latent Dirichlet Allocation (LDA) Topic Modelling

To recover latent thematic structure independent of author-assigned keywords, LDA topic modelling (Blei et al., 2003) was applied to the 2,128 document abstracts of length greater than 80 characters. Text pre-processing comprised lower-casing, removal of standard English stop-words together with a custom stop-list of generic academic and publisher boilerplate terms (e.g., "study", "purpose", "findings", "originality", "Elsevier", "Taylor & Francis", "rights reserved") and construct-generic terms ("servant", "leadership", "leader") that would otherwise dominate every topic given their near-universal presence in the corpus, and construction of a document-term matrix using unigrams and bigrams with a minimum document frequency of 15 and a maximum document frequency of 50%, yielding a working vocabulary of 2,333 terms. LDA models were fitted for $k = 4$ to $k = 12$ topics using scikit-learn's variational Bayes implementation (batch learning, 25-50 iterations, random state fixed for reproducibility), and log-likelihood and perplexity were compared across solutions to select the number of topics that balanced model fit against interpretability (Section 5.1). The selected $k = 8$ solution was then examined by inspecting the fifteen highest-probability terms per topic, the number of abstracts for which each topic was dominant, and the mean publication year associated with each topic's dominant documents, in order to characterise both the substantive content and the temporal positioning of each latent theme.

Table 1. PRISMA-Based Search, Screening and Inclusion Protocol (Scopus, search executed 11 August 2026)

Stage	Filter Applied	Records Retained
Identification	Search: "servant leadership" in title/abstract/keywords	3,925
Identification	Publication years limited to 2000-2026	3,863
Screening	Subject area: Business, Management & Accounting (with Social Sciences, Economics/Econometrics/Finance, and Psychology as overlapping tags)	3,185 (1,984 BMA)
Eligibility	Document type: Article, Review, Conference Paper	2,346
Eligibility	Language: English	2,293
Eligibility	Source type: Journal, Conference Proceeding	2,278
Included	Publication stage: Final	2,153

3. Bibliometric Findings

This section reports the bibliometric findings of the study in five parts: publication and citation trends (3.1), influential authors, journals and countries (3.2), collaboration structure (3.3), intellectual/co-citation structure (3.4), and thematic/keyword structure and evolution (3.5).

3.1 Publication and Citation Trends

The 2,153 documents in the final corpus collectively accumulated 71,671 citations, an average of 33.29 citations per document, although this average is strongly right-skewed: 297 documents (13.8% of the corpus) had not yet received any citation at the time of data extraction, while the single most-cited document, Avolio and Gardner's (2005) *Leadership Quarterly* paper on authentic leadership development, had accumulated 2,786 citations. Table 2 reports the year-by-year publication count. Output grew from single digits in the early 2000s (five documents in 2000, six in 2001) to double digits by the mid-2000s and remained in the low double digits through 2009 (21 documents). A first inflection point is visible around 2010-2013, when annual output rose from 37 to 43 documents, coinciding with the publication of several of the field's most-cited theoretical and measurement contributions (van Dierendonck, 2011; van Dierendonck & Nuijten, 2011). A second and much steeper inflection occurred from 2018 onward: annual output rose from 108 documents in 2018 to 130 in 2020, 201 in 2021, 206 in 2022, 215 in 2023 and a corpus peak of 266 documents in 2024, before 258 documents in 2025 and a partial-year count of 152 documents already indexed for 2026 at the time of extraction. Computed across 2000-2025, the compound annual growth rate (CAGR) of servant leadership publications was approximately 17.1%, indicating that the field has been growing markedly faster than the typical 3-5% baseline growth rate of indexed scientific literature overall, consistent with servant leadership's transition from a niche construct to a mainstream leadership-studies topic over the past decade.

By document type, the corpus is dominated by empirical articles (1,994 documents, 92.6%), with reviews (93 documents, 4.3%) and conference papers (66 documents, 3.1%) forming a smaller share, indicating that the field is now substantially past its conceptual/theoretical founding stage and is being driven primarily by quantitative empirical testing. A substantial share of recent output (over 900 of the 2,153 documents, approximately 43%) is published under some form of open-access licence (gold, green, hybrid-gold or bronze), reflecting the wider shift toward open-access publishing in the social sciences over the review period.

Table 2. Annual Publication Output, 2000-2026 (n = 2,153)

Year	Documents	Year	Documents
2000	5	2014	54
2001	6	2015	60
2002	5	2016	80
2003	5	2017	57
2004	14	2018	108
2005	14	2019	109

Year	Documents	Year	Documents
2006	10	2020	130
2007	11	2021	201
2008	17	2022	206
2009	21	2023	215
2010	37	2024	266
2011	32	2025	258
2012	37	2026	152
2013	43		

3.2 Influential Authors, Journals and Countries

Table 3 reports the twenty most-cited individual documents in the corpus. The ranking is headed by Avolio and Gardner's (2005) authentic leadership synthesis (2,786 citations), followed by van Dierendonck's (2011) *Journal of Management review-and-synthesis of the servant leadership construct* (1,582 citations), Liden et al.'s (2008) *Leadership Quarterly* measurement-development paper (1,423 citations), Eva et al.'s (2019) systematic review and future-research agenda (1,345 citations), and Hoch et al.'s (2018) meta-analysis comparing ethical, authentic and servant leadership against transformational leadership (1,025 citations). Beyond the top five, the ranking is populated almost entirely by foundational construct-validation and measurement papers (Ehrhart, 2004; Liden et al., 2014; Barbuto Jr. & Wheeler, 2006; Walumbwa et al., 2010; Neubert et al., 2008; van Dierendonck & Nuijten, 2011; Liden et al., 2015) and early systematic/theoretical reviews (Parris & Peachey, 2013; Gregory Stone et al., 2004; Russell & Gregory Stone, 2002; Lemoine et al., 2019), underscoring that the field's citation impact remains concentrated in its founding decade even as its publication volume has shifted heavily toward the 2018-2026 period.

At the author level (Table 4), applying a minimum-three-documents threshold identified 204 of 5,024 unique contributing authors as sufficiently prolific for co-authorship network analysis, of whom the 29 most connected formed the largest connected component of the network (Section 3.3). By raw document count, Dirk van Dierendonck (19 documents) and Robert C. Liden (16 documents) are the most prolific individual contributors, followed by Pablo Ruiz-Palomino (15), Osman M. Karatepe (14), Muhammad Mumtaz Khan (13), Syed Saad Ahmed and Zhen Wang (12 each), Sen Sendjaya (12), Muhammad Shujaat Mubarik (11), Nathan Eva (10) and Yang Zhang (10), reflecting a mix of the field's original North American/European construct architects and a newer, highly productive cohort of South Asian and East Asian scholars.

At the journal level (Table 5), output is led by *Frontiers in Psychology* (57 documents), *Leadership and Organization Development Journal* (55), *Journal of Business Ethics* (37), *Current Psychology* (28), *Sustainability* (27), *SAGE Open* (25), *International Journal of Contemporary Hospitality Management* (22), *Problems and Perspectives in Management* (21), *Cogent Business and Management* and *International Journal of Hospitality Management* (19 each), and *Administrative Sciences* (19), indicating that servant leadership is published across a wide spread of general-management, ethics, hospitality-management, public-administration and applied-psychology outlets rather than being concentrated in a small number of specialist leadership journals — although *Leadership Quarterly*, despite ranking outside the top-ten by volume, contributes several of the field's single most-cited papers.

At the country level (Table 6 and Figures 2-4), the United States is the leading contributor with 467 documents, followed by China (300), Indonesia (174), the United Kingdom (168), Pakistan (124), Malaysia (118), Australia (117), India (103), Spain (75), Canada (72), the Netherlands (70), South Korea (70), South Africa (69), Turkey (63), Germany (39), Vietnam (36), Italy (36), Thailand (35), the United Arab Emirates (32) and Saudi Arabia (31), matching exactly the affiliation counts computed independently from the raw Scopus metadata, which cross-validates the VOSviewer country map. The concentration of output in Pakistan, Indonesia, Malaysia, India, South Korea, the UAE, Saudi Arabia, Turkey and Vietnam — collectively accounting for well over 900 documents, comparable in scale to the United States and China combined — is a distinctive feature of this literature relative to many other leadership sub-fields, and motivates the SLR's attention (Section 4) to contextual and cross-cultural boundary conditions.

Table 3. Twenty Most-Cited Documents in the Corpus

Rank	Authors	Year	Title	Source	Citations
1	Avolio B.J. & Gardner W.L.	2005	Authentic leadership development: Getting to the root of positive forms of leadership	Leadership Quarterly	2786
2	van Dierendonck D.	2011	Servant leadership: A review and synthesis	Journal of Management	1582
3	Liden R.C. et al.	2008	Servant leadership: Development of a multidimensional measure and multi-level assessment	Leadership Quarterly	1423
4	Eva N. et al.	2019	Servant Leadership: A systematic review and call for future research	Leadership Quarterly	1345
5	Hoch J.E. et al.	2018	Do Ethical, Authentic, and Servant Leadership Explain Variance Above and Beyond Transformational Leadership? A Meta-Analysis	Journal of Management	1025
6	Ehrhart M.G.	2004	Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior	Personnel Psychology	976
7	Liden R.C. et al.	2014	Servant leadership and serving culture: Influence on individual and unit performance	Academy of Management Journal	799
8	Schaubroeck J. et al.	2011	Cognition-Based and Affect-Based Trust as Mediators of Leader Behavior Influences on Team Performance	Journal of Applied Psychology	767
9	Barbuto Jr. J.E. & Wheeler D.W.	2006	Scale development and construct clarification of servant leadership	Group and Organization Management	709
10	Walumbwa F.O. et al.	2010	Servant Leadership, Procedural Justice Climate, Service Climate, Employee Attitudes, and Organizational Citizenship Behavior: A Cross-Level Investigation	Journal of Applied Psychology	687
11	Neubert M.J. et al.	2008	Regulatory Focus as a Mediator of the Influence of Initiating Structure and Servant Leadership on Employee Behavior	Journal of Applied Psychology	675
12	Parris D.L. & Peachey J.W.	2013	A Systematic Literature Review of Servant Leadership Theory in Organizational Contexts	Journal of Business Ethics	672
13	Gregory Stone A. et al.	2004	Transformational versus servant leadership: A difference in leader focus	Leadership & Organization Development Journal	626
14	Russell R.F. & Gregory Stone A.	2002	A review of servant leadership attributes: developing a practical model	Leadership & Organization Development Journal	607
15	van Dierendonck D. & Nuijten I.	2011	The Servant Leadership Survey: Development and Validation of a Multidimensional Measure	Journal of Business and Psychology	585

Rank	Authors	Year	Title	Source	Citations
16	Liden R.C. et al.	2015	Servant leadership: Validation of a short form of the SL-28	Leadership Quarterly	556
17	Lemoine G.J. et al.	2019	Taking stock of moral approaches to leadership: An integrative review of ethical, authentic, and servant leadership	Academy of Management Annals	516
18	Fry L.W. et al.	2005	Spiritual leadership and army transformation: Theory, measurement, and establishing a baseline	Leadership Quarterly	505
19	Sendjaya S. et al.	2008	Defining and measuring servant leadership behaviour in organizations	Journal of Management Studies	486
20	Hu J. & Liden R.C.	2011	Antecedents of Team Potency and Team Effectiveness: An Examination of Goal and Process Clarity and Servant Leadership	Journal of Applied Psychology	443

Table 4. Twenty Most Prolific Authors by Document Count

Rank	Author	Documents
1	van Dierendonck D.	19
2	Liden R.C.	16
3	Ruiz-Palomino P.	15
4	Karatepe O.M.	14
5	Khan M.M.	13
6	Ahmed S.S.	12
7	Wang Z.	12
8	Islam T.	12
9	Sendjaya S.	12
10	Mubarik M.S.	11
11	Eva N.	10
12	Zhang Y.	10
13	Aboramadan M.	10
14	Liu X.	9
15	Linuesa-Langreo J.	8
16	Neubert M.J.	8
17	Newman A.	8
18	Usman M.	7
19	Hartnell C.A.	7
20	Li X.	7

Table 5. Twenty Leading Journals by Document Count

Rank	Journal	Documents
1	Frontiers in Psychology	57
2	Leadership and Organization Development Journal	55
3	Journal of Business Ethics	37
4	Current Psychology	28
5	Sustainability (Switzerland)	27
6	SAGE Open	25
7	International Journal of Contemporary Hospitality Management	22
8	Problems and Perspectives in Management	21
9	Cogent Business and Management	19
10	International Journal of Hospitality Management	19
11	Administrative Sciences	19
12	Social Behavior and Personality	17
13	Public Administration Review	17
14	Public Personnel Management	17
15	Leadership Quarterly	17
16	Journal of Leadership Studies	16
17	Personnel Review	15
18	Academy of Management Annual Meeting Proceedings	15
19	International Journal of Public Leadership	14
20	Behavioral Sciences	13

Table 6. Twenty Leading Countries by Document Count (VOSviewer Country Co-authorship Map)

Rank	Country	Documents	Citations	Total Strength	Link	Links (Partner Countries)
1	United States	467	30499	173		42
2	China	300	8739	214		36
3	Indonesia	174	1753	34		17
4	United Kingdom	168	6483	166		44
5	Pakistan	124	3922	138		34
6	Malaysia	118	1580	98		32
7	Australia	117	8591	102		23
8	India	95	1444	29		19
9	Spain	75	2618	64		20
10	Canada	72	3025	50		21
11	South Korea	70	1472	64		23
12	Netherlands	69	7113	63		22
13	South Africa	69	892	19		16
14	Turkey	63	2172	53		29

Rank	Country	Documents	Citations	Total Strength	Link	Links (Partner Countries)
15	Germany	39	774	39		22
16	Italy	36	1403	56		25
17	Viet Nam	36	630	16		8
18	Thailand	35	442	34		17
19	United Arab Emirates	32	676	33		14
20	France	31	715	38		17

3.3 Collaboration Structure

The country co-authorship network (Figure 2, density view; Figure 3, network view; Figure 4, overlay/temporal view) comprises 67 items organised into 11 clusters, connected by 409 links with a total link strength of 1,023, forming a single largest connected set. The United States occupies the most central position in the network by both node size (173 total link strength, reflecting 42 distinct international co-authorship partners) and betweenness, co-publishing most intensively with the United Kingdom (13 shared documents), China (35), Canada (13) and Australia (12). China forms the second major hub (214 total link strength across 36 partner countries), co-publishing heavily with Malaysia (12), the United Kingdom (14), the United States (35) and Hong Kong (15). A distinct, more peripheral Gulf/South Asian sub-cluster links Pakistan, the United Arab Emirates, Saudi Arabia, Oman, Jordan, Qatar and Bahrain, while Indonesia forms strong ties with Malaysia, Australia and the United States. The overlay visualisation (Figure 4), which colour-codes nodes by average publication year, shows that Ukraine, Uganda, Greece, Ecuador and Peru are recent (post-2022 average) entrants at the network's periphery, while Australia, the Netherlands, Canada, Israel, Norway and the United Kingdom cluster toward the network's earlier (pre-2020 average) core — consistent with the discipline's geographic centre of gravity shifting from its Anglophone/Western founding contributors toward Asian and Middle Eastern contributors over the review period.



Figure 2. Country Co-authorship Network — Density Visualisation

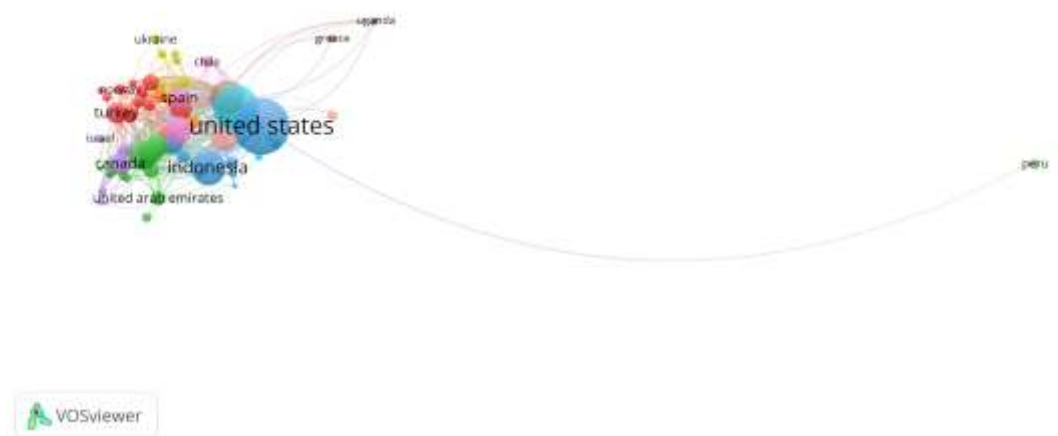


Figure 3. Country Co-authorship Network — Cluster Visualisation (11 clusters)

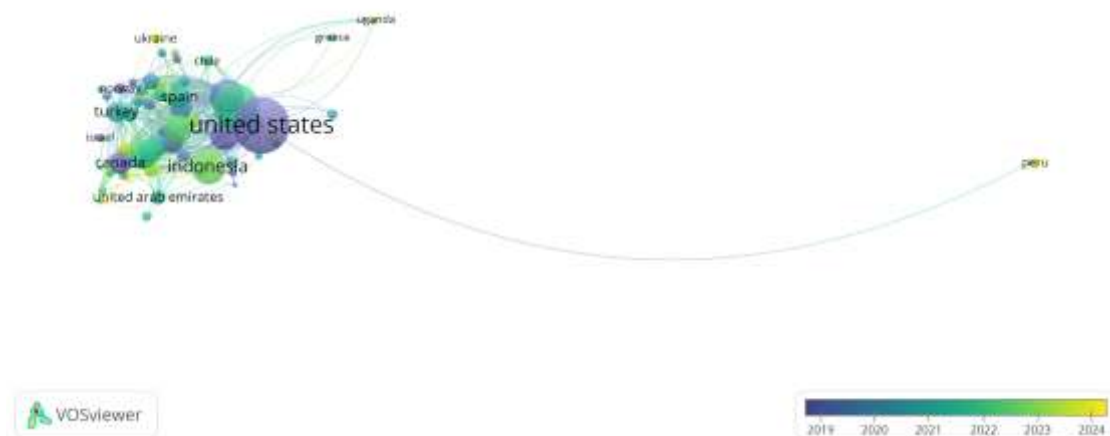


Figure 4. Country Co-authorship Network — Temporal Overlay (Average Publication Year)

The author co-authorship network (Figure 5, density; Figure 6, network with clusters; Figure 7, overlay) comprises a largest connected set of 29 authors among the 204 meeting the three-document threshold, organised into seven clusters connected by 60 links (total link strength = 125). Two clusters dominate by size and centrality: a cluster anchored by Dirk van Dierendonck (22 total link strength across 11 links), Feng Lv, Robert F. Russell, Kathleen Patterson, Bruce E. Winston, Milton Sousa, Sigrún Gunnarsdóttir and Jari Hakanen, reflecting the Servant Leadership Survey/executive-servant-leadership research programme, and a cluster anchored by Robert C. Liden (26 total link strength across 11 links) together with Sandy J. Wayne, Chenwei Liao, Jeremy D. Meuser, Jia Hu and Junfeng Wu, reflecting the SL-28/serving-culture research programme. A third, more loosely connected cluster centred on Nathan Eva, Sen Sendjaya, Alexander Newman, Mulyadi Robin, Gary Schwarz and Brian Cooper reflects the field's systematic-review and construct-clarification tradition. The relatively modest total link strength (125) across only 60 links, despite 5,024 unique contributing authors in the full corpus, indicates that servant leadership research remains organised around a small number of relatively insular, high-output

collaborative teams rather than a single, densely interconnected invisible college — a structural feature with implications for how quickly methodological or theoretical innovations diffuse across the field.

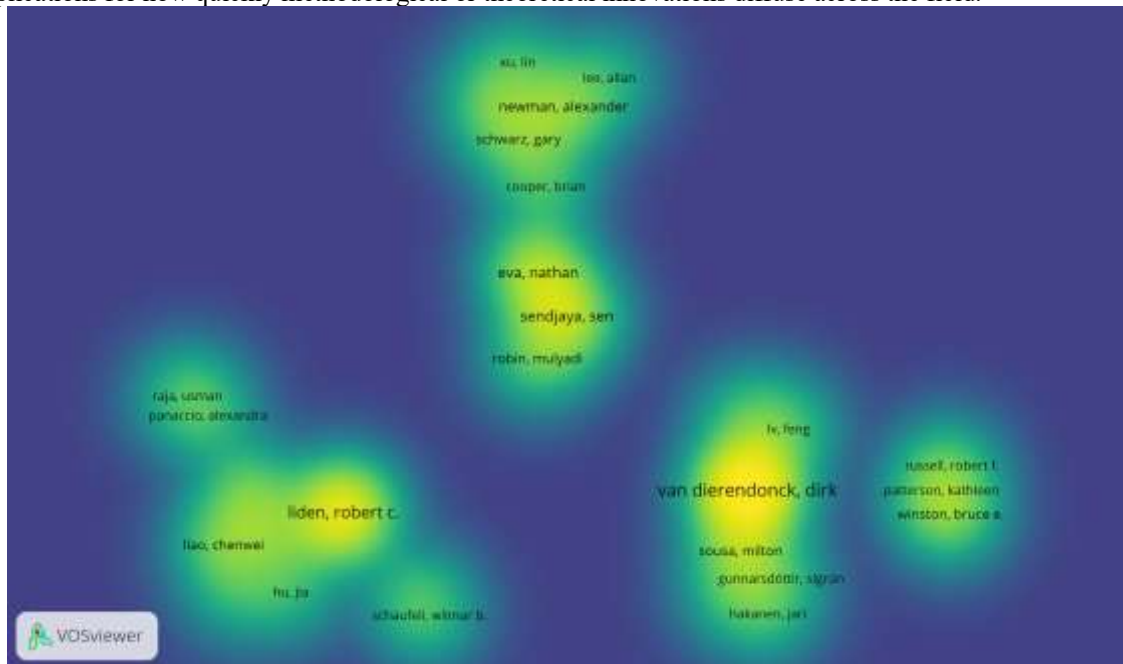


Figure 5. Author Co-authorship Network — Density Visualisation

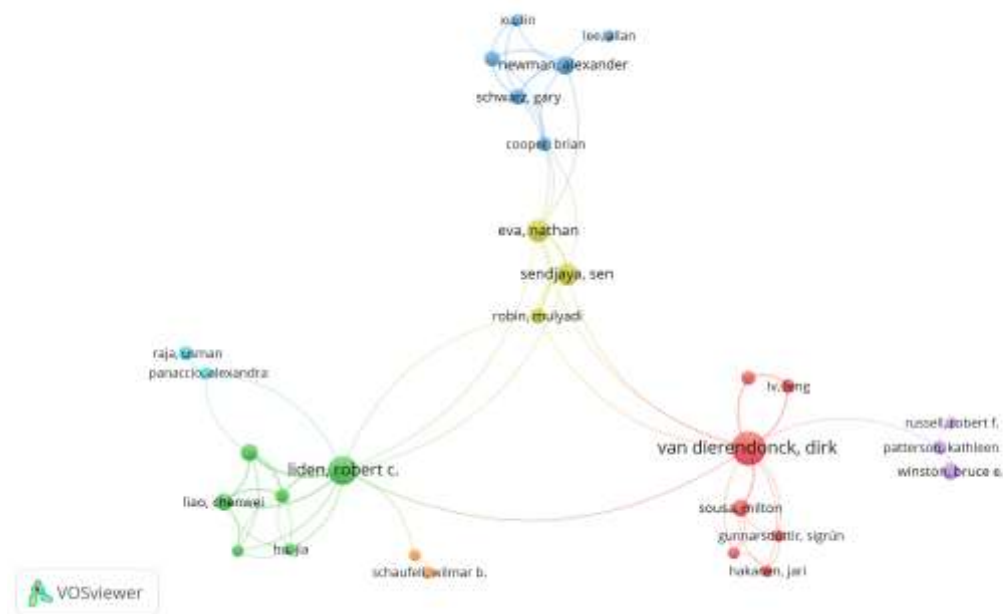


Figure 6. Author Co-authorship Network — Cluster Visualisation (7 clusters)

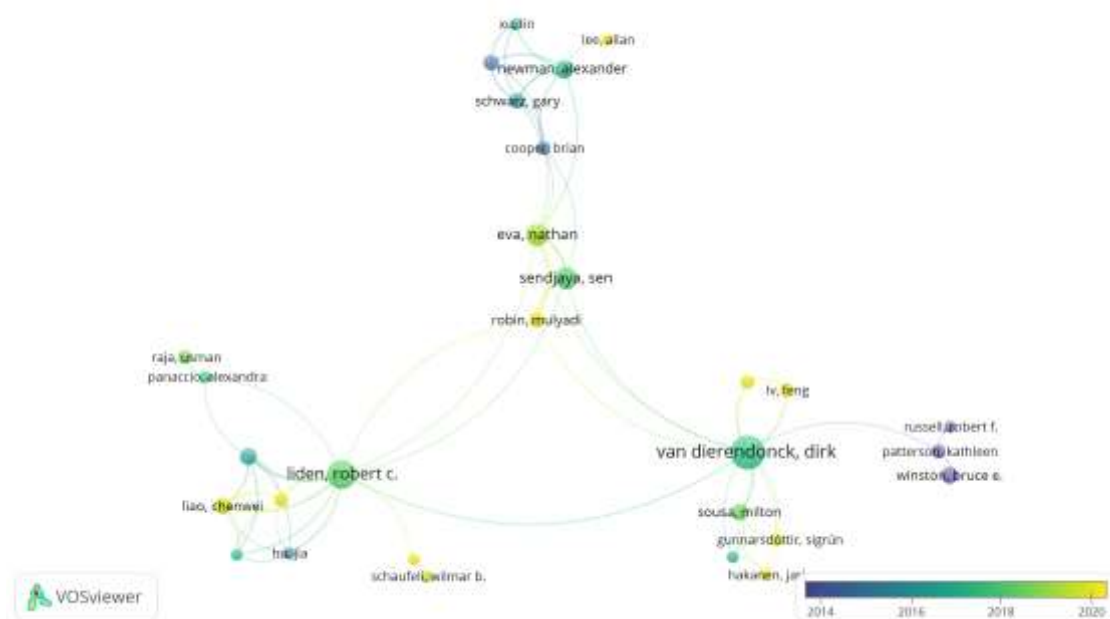


Figure 7. Author Co-authorship Network — Temporal Overlay (Average Publication Year)

3.4 Intellectual Structure: Author Co-citation and Bibliographic Coupling

The author co-citation network (Figure 10, density; Figure 11, network with clusters) comprises 90 cited authors meeting a 100-citation threshold out of 54,448 unique cited authors in the reference lists of the corpus, connected by 3,967 links with a very high total link strength of 178,113, resolved into four clusters. Robert K. Greenleaf is unambiguously the field's most co-cited figure (18,583 citation weight under the label "greenleaf r.k.", plus a further 1,741 under "greenleaf r." and smaller counts under alternate name-forms), confirming that Greenleaf's original writings remain the field's shared intellectual anchor even as the empirical literature has moved far beyond his original essays. Cluster 1 (30 authors, headed by Greenleaf, Bass, Patterson, Spears, Avolio, Ehrhart, Wheeler, Roberts, Winston and Peachey) represents the classic servant-leadership-and-transformational-leadership founding tradition. Cluster 2 (26 authors, headed by Podsakoff, Sarstedt, Meuser, Hayes, Larcker, Bakker, Schaufeli, Hobfoll, Liu and Blau) represents the methodological/psychometric and burnout/conservation-of-resources tradition that services servant leadership's empirical testing (structural equation modelling authorities Sarstedt and Larcker; mediation-analysis authority Hayes; social-exchange authority Blau). Cluster 3 (23 authors, headed by van Dierendonck, Liden, Henderson, Liao, Sendjaya, Oke, Nuijten, Wu and Bentein) represents the dedicated servant-leadership construct-validation and measurement tradition. Cluster 4 (11 authors, headed by Bandura, Ryan, Deci, Hofstede, Pandey, Grant, Locke, Pfeffer and Spreitzer) represents the borrowed psychological-theory tradition — social cognitive theory (Bandura), self-determination theory (Ryan & Deci), cross-cultural values theory (Hofstede) and public service motivation theory (Pandey) — that supplies the mediating mechanisms tested throughout the empirical literature.

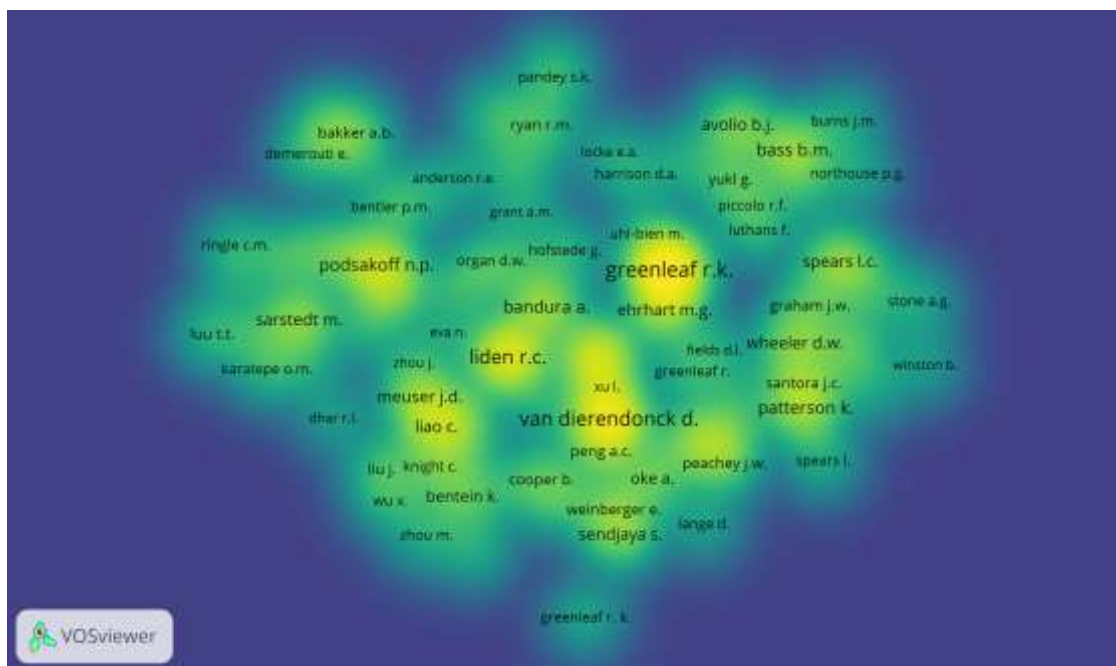


Figure 10. Author Co-citation Network — Density Visualisation

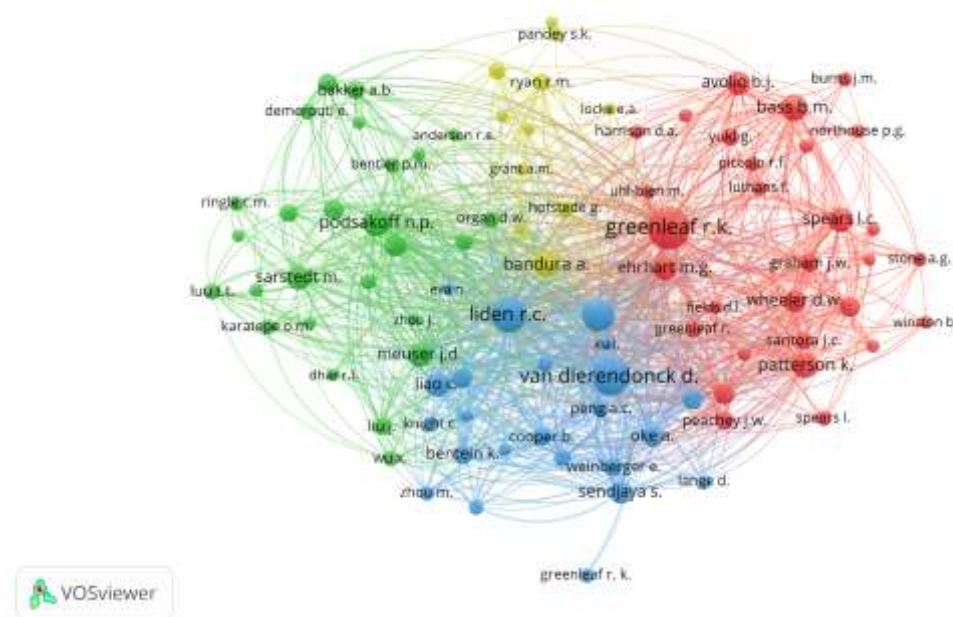


Figure 11. Author Co-citation Network — Cluster Visualisation (4 clusters)

Document bibliographic coupling (Figure 12; minimum 120 citations, 123 of 2,153 documents meeting the threshold, six clusters, 5,503 links, total link strength = 27,637) identifies clusters of documents that draw on shared reference bases even where they do not directly cite one another, and therefore approximates the field's current research fronts rather than its historical foundations. Visual inspection of the bibliographic coupling map shows a dense, highly interconnected core populated by the construct-validation and meta-analytic papers already identified in Table 3, together with a set of more peripheral, more recently formed clusters corresponding to hospitality/tourism applications, green/environmental servant leadership, and public-sector/civil-service applications — mirroring the keyword clusters reported in Section 3.5 and providing convergent evidence, from an independently derived network, for the same set of active research fronts.

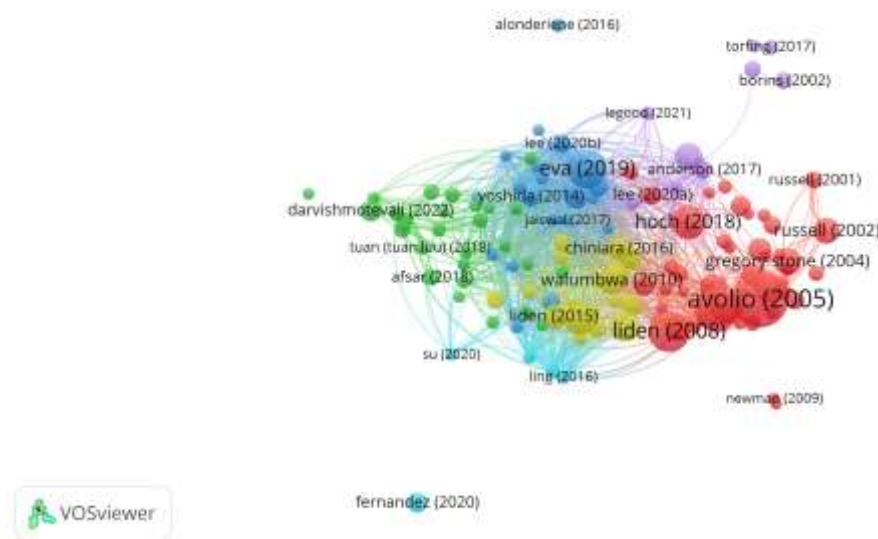


Figure 12. Document Bibliographic Coupling Network Visualisation (6 clusters)

3.5 Thematic Structure and Evolution: Keyword Co-occurrence Analysis

Author-keyword co-occurrence analysis (94 of 5,735 unique keywords meeting a 15-occurrence threshold; 1,720 links; total link strength = 7,232) resolved five thematic clusters (Figure 8, network view with clusters; Figure 9, overlay/temporal view). Cluster 1 (red, 35 keywords) is the largest and most central, anchored by "servant leadership" itself (1,072 occurrences within this keyword field) together with "transformational leadership" (125), "job satisfaction" (105), "work engagement" (78), "ethical leadership" (54), "organizational citizenship behavior" (48), "leadership styles" (45), "trust" (46) and "authentic leadership" (44); this cluster represents the construct's core nomological network and its comparison with sibling positive-leadership styles. Cluster 2 (green, 25 keywords) is anchored by the generic "leadership" keyword (490 occurrences) together with "covid-19" (31), "human resource management" (31), "sustainability" (29), "empowerment" (28), "innovation" (27), "sustainable development" (26), "pakistan" (25), "workplace" (23) and "hospitality industry" (22), representing applied, sector- and crisis-specific empirical contexts. Cluster 3 (blue, 21 keywords) is anchored by PsycINFO/MEDLINE-style methodological descriptor terms ("human", "article", "humans", "male", "female", "adult") alongside substantive terms "organizational culture" (38), "psychology" (36), "employee" (34), "civil servant" (25) and "psychological safety" (24), reflecting the subset of the corpus indexed with PubMed/MEDLINE-style controlled vocabulary, typically the more health-services- and psychology-oriented outlets. Cluster 4 (yellow, 11 keywords) is anchored by "public sector" (68), "public service motivation" (40), "china" (39), "public administration" (39), "motivation" (38), "ethics" (34), "civil service" (26), "public servants" (21), "culture" (20), "gender" (20) and "public service" (20), forming a coherent and sizeable public-administration/civil-service sub-field distinct from the private-sector-oriented clusters. Cluster 5 (purple, two keywords: "organizational identification" and "emotional exhaustion") is a small, tightly bound satellite cluster.



Figure 9. Keyword Co-occurrence Network — Temporal Overlay (Average Publication Year)

4. Systematic Literature Review

This section synthesises the theories, variables, mediating and moderating mechanisms, contexts and methodologies reported across the reviewed corpus, concentrating on the most-cited and most bibliographically-coupled studies identified in Section 3, and cross-referenced against the 150-study synthesis table reported in Appendix Table A1.

4.1 Theoretical Foundations

Empirical servant leadership research draws on a comparatively small set of recurring "borrowed" theories to explain why and how servant leadership behaviours translate into follower and organisational outcomes. Social exchange theory (Blau, cited 3,719 times within the co-citation network) is the most frequently invoked mechanism, underpinning the widespread argument that followers reciprocate a leader's serving behaviour with extra-role effort, organisational citizenship behaviour and reduced turnover intentions (Newman et al., 2017; Chen et al., 2015). Social learning theory (Bandura, cited 7,451 times) underpins the equally common argument that followers model and internalise the ethical, other-oriented behaviours they observe in a servant leader, which then propagate downward or outward through the organisation as a "trickle-down" or "cascading" effect (Hunter et al., 2013). Self-determination theory (Ryan & Deci) is regularly used to explain how servant leadership satisfies followers' basic psychological needs for autonomy, competence and relatedness, driving intrinsic motivation, work engagement and psychological well-being (Kaya & Karatepe, 2020; Faraz et al., 2021). Conservation of resources theory (Hobfoll) is used, particularly in hospitality and service settings, to explain how servant leadership buffers employee burnout and emotional exhaustion by supplying psychological resources (Babakus et al., 2010; Tang et al., 2016). In the public-administration sub-literature, public service motivation theory (Pandey, Perry) provides the dominant theoretical lens for explaining civil servants' receptivity to and enactment of serving behaviours (Miao et al., 2018; Paarlberg & Lavigna, 2010). Finally, a smaller but theoretically important stream draws on virtue ethics and stewardship theory to ground servant leadership's normative, values-based claims independently of its instrumental organisational-outcome consequences (Russell, 2001; Whetstone, 2001; Hackett & Wang, 2012).

4.2 Core Constructs, Antecedents and Outcome Variables

Across the reviewed studies, servant leadership is consistently operationalised using one of a small number of validated multidimensional instruments: Liden et al.'s (2008) 28-item SL-28 and its later 7-item short form (Liden et al., 2015), Barbutto and Wheeler's (2006) Servant Leadership Questionnaire, van Dierendonck and Nuijten's (2011) Servant Leadership Survey, Sendjaya et al.'s (2008) Servant Leadership Behaviour Scale and its later SLBS-6 short form, and Ehrhart's (2004) seven-dimension unit-level scale. As an independent/predictor variable, servant leadership has been examined at the individual (dyadic leader-follower), team/unit and organisational levels of analysis. The most frequently examined outcome variables across the corpus are, in descending order of frequency, job satisfaction, organisational citizenship behaviour (OCB), work engagement, organisational commitment, employee creativity/innovative work behaviour, job/task performance, turnover intentions, trust in leader, psychological empowerment, and — in the growing sustainability sub-literature — green/pro-environmental employee behaviour.

4.3 Mediating and Moderating Mechanisms

The reviewed literature has progressively layered an increasingly elaborate set of mediating mechanisms onto the servant-leadership-to-outcome relationship. The most frequently reported mediators are trust in leader (Sendjaya & Sendjaya, 2010), psychological safety and psychological empowerment (Faraz et al., 2021), organisational identification (Zhang et al., 2012), leader-member exchange quality (Panaccio et al., 2015), climate for creativity/climate for green creativity (Karatepe et al., 2020; Aboramadan et al., 2021), affective commitment (Saleem et al., 2020), self-efficacy (Chen et al., 2015; Jaiswal et al., 2017) and thriving at work. Common moderators include leader-follower value congruence, cultural values (individualism-collectivism, power distance), organisational structure/differentiation (Chiniara & Bentein, 2018; Neubert et al., 2016), team potency, and, increasingly since 2020, crisis conditions such as the COVID-19 pandemic (Hu et al., 2020; Fernandez & Shaw, 2020). A recurring finding across meta-analytic and comparative studies (Hoch et al., 2018; Lee et al., 2020) is that servant leadership explains incremental variance in follower attitudinal and citizenship-behaviour outcomes beyond transformational leadership, but shows more mixed incremental validity for task-performance outcomes, suggesting the construct's comparative advantage lies specifically in its ethical/relational rather than purely performance-driving mechanisms.

4.4 Contexts of Application

Empirical contexts have diversified substantially beyond the private-sector, for-profit organisational settings that dominated the field's first decade. The hospitality and tourism industry constitutes one of the largest and most productive contemporary application contexts, driven by the sector's high emotional-labour demands and service-recovery requirements (Karatepe et al., 2020; Wu et al., 2013; Huertas-Valdivia et al., 2019; Ozturk et al., 2021). The public sector and civil service form the second major application context, addressed extensively in Cluster 4 of the keyword network (Section 3.5) and Topic 0 of the LDA solution (Section 5), examining servant leadership's fit with public service motivation and government reform agendas (Vigoda-Gadot, 2000; Miao et al., 2014;

Torfin, 2017). Healthcare and higher education form a third recurring context, examining servant leadership among clinical leaders, hospital administrators and university faculty/administrators (de Zulueta, 2016; Alonderiene & Majauskaite, 2016). A fourth, rapidly growing context concerns environmental sustainability and green organisational behaviour, in which "environmentally-specific servant leadership" or "green servant leadership" has emerged as a distinct sub-construct linked to green creativity, green HRM and pro-environmental citizenship behaviour (Luu, 2019; Tuan, 2020; Darvishmotevali & Altinay, 2022). Geographically, while the construct's foundational validation studies were conducted predominantly with North American and Western European samples, the majority of contemporary empirical tests (post-2018) draw on samples from Pakistan, China, Indonesia, Vietnam, Malaysia, Turkey and the Gulf states, reflecting the collaboration patterns documented in Section 3.3.

4.5 Methodological Approaches

The overwhelming majority of reviewed empirical studies employ quantitative, cross-sectional survey designs with structural equation modelling (variance-based/PLS-SEM or covariance-based) or hierarchical/multilevel regression as the primary analytic technique, consistent with the prominence of Sarstedt, Larcker and Hayes in the co-citation network (Section 3.4). A smaller but non-trivial share of studies employ multi-source, multi-wave (time-lagged) designs to mitigate common-method bias concerns, particularly in the higher-impact studies (Liden et al., 2014; Newman et al., 2018). Multilevel designs that separate individual- from unit- or team-level effects are common in the organisational citizenship behaviour and climate literatures (Ehrhart, 2004; Walumbwa et al., 2010; Hu & Liden, 2011). Meta-analyses (Hoch et al., 2018; Lee et al., 2020; Legood et al., 2021) and systematic/narrative reviews (Parris & Peachey, 2013; Eva et al., 2019; Lemoine et al., 2019; Bavik, 2020; Fischer et al., 2023) constitute the field's principal integrative-methodology contributions. Qualitative and mixed-methods designs remain comparatively rare, concentrated mainly in scale-development studies (Barbuto Jr. & Wheeler, 2006; Sendjaya et al., 2008; Dennis & Bocarnea, 2005; Reed et al., 2011) and in a small number of case-study or ethnographic explorations of servant leadership in specific cultural or organisational settings (Alston, 2005; Hale & Fields, 2007). Experience-sampling, qualitative interview-based, longitudinal panel and quasi-experimental designs remain markedly under-represented relative to cross-sectional survey work, a gap discussed further in Section 6.

4.6 Research Gaps Identified through the Review

Synthesising across Sections 4.1-4.5 and the corpus-wide bibliometric evidence in Section 3, five recurring gaps are apparent. First, a measurement gap: despite at least five competing validated instruments, comparatively few studies formally test measurement invariance across cultural or organisational contexts before pooling or comparing effect sizes cross-nationally. Second, a methodological gap: cross-sectional, single-source or single-wave designs remain dominant despite well-documented common-method-bias concerns, and genuinely longitudinal or experimental designs capable of supporting causal claims are rare. Third, a theoretical-boundary gap: while servant leadership is routinely benchmarked against transformational, ethical and authentic leadership, its conceptual and empirical differentiation from these constructs remains debated (Hoch et al., 2018; Lemoine et al., 2019; Anderson & Sun, 2017), and few studies test genuinely novel, non-Western or indigenous conceptions of serving leadership rather than importing and re-validating Greenleaf-derived instruments. Fourth, a level-of-analysis gap: team-, unit- and organisational-level (as opposed to individual dyadic) mechanisms remain comparatively under-theorised and under-tested relative to the volume of individual-level survey work. Fifth, a context-and-outcome gap: despite the rapid recent growth of the green/environmental sustainability and public-sector/civil-service application streams (Sections 3.5 and 5), relatively few studies to date integrate these two emerging streams with one another (e.g., environmentally-specific servant leadership within public-sector organisations), or examine servant leadership's role in crisis, digital/remote-work, or AI-augmented management contexts that have become increasingly salient in organisational life since 2020.

5. LDA Topic Modelling

To triangulate the keyword-based thematic clusters reported in Section 3.5 with a computational method that is blind to author-assigned keywords, LDA topic modelling was applied to the 2,128 usable document abstracts in the corpus, following the procedure described in Section 2.5.

5.1 Determining the Optimal Number of Topics

Log-likelihood and perplexity were computed for $k = 4, 5, 6, 7, 8, 9, 10$ and 12 topic solutions fitted on the 2,333-term document-term matrix (Table 7). Perplexity declined from 1,096.8 at $k = 4$ to 1,058.2 at $k = 12$, with the rate of improvement per additional topic slowing markedly after $k = 8$ (perplexity fell by 7.7 points moving from $k = 7$ to $k = 8$, but by only a further 4.4 points moving from $k = 8$ to $k = 9$), indicating a natural elbow in model fit. Beyond the quantitative fit statistics, the $k = 8$ solution was retained because each of its eight topics yielded a coherent, non-overlapping and substantively labellable set of top terms, whereas solutions with fewer topics ($k = 4-6$) merged clearly distinct themes (e.g., public-sector governance and organisational-citizenship mechanisms)

into single topics, and solutions with more topics ($k = 10-12$) began to fragment single coherent themes into near-duplicate topics distinguished mainly by minor vocabulary variation.

Table 7. LDA Model-Fit Comparison Across Candidate Topic Numbers

k (Topics)	Log-Likelihood	Perplexity
4	-1,315,442.3	1,096.8
5	-1,315,757.7	1,098.7
6	-1,315,382.7	1,096.5
7	-1,313,918.5	1,088.0
8	-1,312,575.0	1,080.2
9	-1,311,807.2	1,075.8
10	-1,309,650.1	1,063.5
12	-1,308,707.7	1,058.2

5.2 Latent Topics and Interpretation

Table 8 reports the eight recovered topics, their top-weighted terms, the number of abstracts for which each topic was dominant, the corresponding percentage share of the corpus, and the mean publication year of each topic's dominant documents. Topic 4 (Leadership-Style Comparison and Review; 21.5% of abstracts, mean year 2018.2) is the largest and earliest-dated topic, characterised by terms such as transformational, styles, literature, review, style, ethical and future, corresponding to the field's substantial tradition of comparative and integrative reviews positioning servant leadership relative to sibling leadership styles — consistent with the Cluster 1 keyword theme (Section 3.5) and the co-citation Cluster 1 (Section 3.4). Topic 5 (Organisational Citizenship, Self-Efficacy and Social-Exchange Mechanisms; 17.7%, mean year 2021.0) is characterised by relationship, citizenship, self, efficacy and citizenship behavior, mapping closely onto the social-exchange-theory mechanisms discussed in Section 4.1 and 4.3. Topic 0 (Public Sector and Civil-Service Governance; 16.2%, mean year 2019.0) is characterised by public, servants, civil, government, sector and administration, directly corroborating keyword Cluster 4 and confirming public administration as a large, coherent and independently-identifiable thematic stream in the literature's latent structure rather than an artefact of keyword tagging. Topic 3 (Employee Green, Creative and Innovative Behaviour; 15.0%, mean year 2022.5) — the most recently dated of the eight topics — is characterised by employee, green, knowledge, psychological, creativity, innovation and environmental, corroborating the sustainability/green-leadership thematic growth identified in the keyword overlay analysis (Section 3.5) and confirming it as the field's most actively emerging latent theme. Topic 7 (Team, Learning, Student and Gender/Community Contexts; 11.1%, mean year 2019.3) captures team, learning, students, development, women, gender and community, corresponding to the education-sector and workforce-development application context discussed in Section 4.4. Topic 6 (Work Engagement, Motivation and Innovative Work Behaviour; 8.5%, mean year 2022.7) — the second most recently dated topic — captures work engagement, motivation, public, innovative and culture, forming a bridge between the positive-organisational-behaviour and public-sector themes. Topic 1 (Job Satisfaction and Organisational Commitment in Education; 6.2%, mean year 2020.9) captures satisfaction, commitment, teachers, school and higher education, representing a distinct education-sector attitudinal-outcomes stream. Topic 2 (Scale Development and Psychometric Validation; 3.7%, mean year 2018.8) — the smallest and, together with Topic 4, one of the two earliest-dated topics — captures scale, factor, validity, questionnaire and factor analysis, corresponding to the foundational measurement-development literature discussed in Section 4.2.

Read together, the LDA solution substantially corroborates the keyword co-occurrence clusters reported in Section 3.5 while adding two forms of analytical value. First, it separates the generic "leadership-style comparison" theme (Topic 4) from the more specific "organisational citizenship/self-efficacy mechanisms" theme (Topic 5), both of which loaded onto the same keyword Cluster 1, showing that these are analytically distinct literatures that merely share the same set of high-frequency author keywords. Second, the mean-year ordering of the eight topics — from the earliest (Topic 2, scale development, 2018.8; Topic 4, leadership-style comparison, 2018.2) to the most recent (Topic 3, green/creative behaviour, 2022.5; Topic 6, work engagement/motivation, 2022.7) — provides an independent, abstract-text-based confirmation of the field's thematic evolution documented through the keyword overlay visualisation (Figure 8) and the publication-trend analysis (Section 3.1): the field has matured from construct measurement and comparative leadership-style positioning toward applied, mechanism-rich and increasingly sustainability- and engagement-oriented empirical testing.

Table 8. Eight-Topic LDA Solution: Top Terms, Document Share and Mean Publication Year

Topic	Proposed Label	Top 10 Terms	Dominant Docs	Share	Mean Year
Topic 4	Leadership-Style Comparison & Review	transformational, styles, management, literature, development, review, style, health, organizational, analysis	458	21.5%	2018.2
Topic 5	Organisational Citizenship, Self-Efficacy & Social Exchange	relationship, work, job, behavior, citizenship, self, positive, service, effect, organizational	377	17.7%	2021.0
Topic 0	Public Sector & Civil-Service Governance	public, servants, civil, civil servants, service, government, sector, management, public sector, political	344	16.2%	2019.0
Topic 3	Employee Green, Creative & Innovative Behaviour	employee, relationship, behavior, role, performance, green, knowledge, psychological, creativity, mediating	319	15.0%	2022.5
Topic 7	Team, Learning, Student & Gender/Community Contexts	team, learning, students, development, project, self, women, community, gender, effectiveness	237	11.1%	2019.3
Topic 6	Work Engagement, Motivation & Innovative Work Behaviour	work, performance, engagement, organizational, employee, work engagement, motivation, public, innovative, culture	181	8.5%	2022.7
Topic 1	Job Satisfaction & Commitment in Education	satisfaction, job, commitment, job satisfaction, teachers, education, higher, significant, organizational, school	133	6.2%	2020.9
Topic 2	Scale Development & Psychometric Validation	analysis, scale, factor, model, dimensions, organizational, factors, validity, non, measure	79	3.7%	2018.8

6. Future Research Directions

Building on the gaps identified through the systematic review (Section 4.6) and the structural and thematic patterns identified through the bibliometric and LDA analyses (Sections 3 and 5), the following future research agenda is proposed across five priority areas.

1. Indigenous and non-Western theorising. The bibliometric evidence shows that Pakistan, Indonesia, China, India, Malaysia, Turkey and the Gulf states now collectively supply a share of empirical output comparable to the United States and China combined, yet the great majority of these studies apply Greenleaf-derived Western instruments (SL-28, SLS, SLBS) without adapting or testing them against pre-existing indigenous conceptions of serving or stewardly leadership embedded in these societies' own governance, religious, or communal traditions. Future research should develop and validate context-native servant leadership conceptions and instruments, and formally test measurement invariance before pooling cross-national samples.

2. Longitudinal, multi-wave and quasi-experimental designs. Consistent with Section 4.5, the field remains dominated by cross-sectional, single-wave survey designs. Future studies should prioritise multi-wave panel designs, field experiments, and quasi-experimental (e.g., leadership-development-intervention) designs capable of supporting stronger causal inference regarding servant leadership's downstream effects.

3. Integrating the green/sustainability and public-sector streams. The two most recently emerging latent themes identified through both keyword overlay analysis (Section 3.5) and LDA (Topics 3 and 6, Section 5.2) — environmentally-specific servant leadership and public-sector/civil-service applications — have so far developed largely as parallel rather than integrated streams. Future work should examine environmentally-specific servant leadership within public administration and state-owned-enterprise contexts, where sustainability mandates and public service motivation may interact in theoretically distinctive ways.

4. Team-, unit- and organisational-level mechanisms. The author co-authorship and co-citation evidence (Section 3.3-3.4) shows the field's most cited studies remain concentrated on individual-dyadic mechanisms; multilevel designs that formally separate individual-, team- and organisational-level servant leadership climate effects, and that examine cross-level moderation, remain comparatively rare and merit further development, particularly using validated unit-level instruments (Ehrhart, 2004; Walumbwa et al., 2010).

5. Crisis, digital and AI-augmented contexts. A small but growing set of studies examined servant leadership during the COVID-19 pandemic (Hu et al., 2020; Fernandez & Shaw, 2020); this line of enquiry should be extended to other contemporary organisational disruptions, including remote/hybrid work arrangements, algorithmic and AI-augmented management, and workforce restructuring, where the ethical and relational core of servant leadership may play a distinctive stabilising or legitimating role that has not yet been systematically tested.

7. Conclusion

This study set out to map the intellectual, social and thematic structure of the servant leadership literature using a combined bibliometric, systematic-review and computational topic-modelling design applied to a large, current Scopus corpus of 2,153 documents. The findings show a field that has grown at a compound annual rate of approximately 17.1% since 2000, accumulating 71,671 citations concentrated disproportionately in a small set of founding construct-validation and comparative-leadership-style papers headed by Avolio and Gardner (2005), van Dierendonck (2011), Liden et al. (2008) and Eva et al. (2019). The country co-authorship network confirms the United States, China, Indonesia, the United Kingdom and Pakistan as the field's leading contributors, with a distinctive and growing concentration of empirical output in South and Southeast Asia and the Gulf states. The author co-citation network confirms Robert K. Greenleaf as the field's enduring intellectual anchor across four thematic sub-traditions — founding/comparative, psychometric/methodological, servant-leadership-specific construct-validation, and borrowed-psychological-theory clusters — while keyword co-occurrence analysis resolves five coherent thematic clusters spanning core constructs, applied/sector contexts, psychology/demography, and public administration. An independently fitted eight-topic LDA solution substantially corroborates this keyword-based structure while adding temporal resolution, confirming that environmentally-specific/green servant leadership and work-engagement/innovative-behaviour themes are the field's most recently emerging latent topics. The systematic review of the most-cited and most-relevant 150 studies (Appendix Table A1) documents the theories, variables, mechanisms, contexts and methods that structure this literature and surfaces five priority gaps — measurement invariance, causal-design rigour, indigenous/non-Western theorising, multilevel mechanisms, and crisis/digital contexts — that together constitute the future research agenda proposed in Section 6. Taken together, this multi-method mapping provides scholars, editors and reviewers with a reproducible, evidence-based orientation to a literature that has, within the past decade, moved decisively beyond Greenleaf's founding essays into a mature, globally-distributed and thematically diversifying empirical field....

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