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Beyond reciprocity: Leader–member exchange as relational infrastructure for innovation[1]

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ABSTRACT

Purpose – This review asks how research on leader–member exchange (LMX) and employees' innovative work behaviour (IWB) has evolved and how it theorises, situates and tests the link between the two.

Methodology/approach – We mapped 177 Scopus records (1997–2026) with bibliometric techniques and coded 72 empirical reports, representing 68 independent samples, along the Theory–Context–Characteristics–Methodology (TCCM) framework, following PRISMA 2020. **Findings –** The field is young and scattered across 120 outlets. Two exchange theories frame 72% of samples, yet only 28% test or extend theory. Most samples model LMX as a single member's judgement (88%) and IWB as one composite score (91%), draw on Southern and Confucian Asia (62%) and rely on self-rated IWB (74%). The median LMX–IWB correlation drops from .41 with self-ratings to .23 with supervisor ratings, pointing to method inflation.

Novelty/value – Going beyond earlier meta-analytic estimates, the review shows how theory, context and method shape the evidence and recasts LMX as relational infrastructure: a differentiated relationship that controls access to the safety, sponsorship, resources and legitimacy each innovation stage needs. Eight linked gaps, seven propositions, an integrative framework and a TCCM research agenda follow.

Keywords: leader–member exchange; innovative work behaviour; TCCM framework; bibliometric analysis; systematic literature review

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INTRODUCTION

Whether an organisation renews its products, services and routines depends to a large extent on what ordinary employees do with their ideas: whether they think of better ways of working, persuade others to take them seriously and see them through to implementation. Leaders sit at the centre of this process,

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because they decide how much room, support and protection an employee receives when trying something new (Anderson et al., 2014; Hughes et al., 2018). Of the many leadership constructs that have been linked to innovative work behaviour (IWB), leader–member exchange (LMX) occupies a special position. LMX describes the relationship that forms between a leader and each individual follower (Graen & Uhl-Bien, 1995), and because this relationship varies from one follower to the next, it can explain something that style-based theories of leadership cannot: why two employees who work for the same leader may innovate to very different degrees.

Interest in this link has grown quickly. Our Scopus search returned 177 journal articles and reviews, and 126 of them appeared from 2020 onward. Across dozens of samples, sectors and countries, employees who report a better relationship with their leader also report, or are reported to show, more innovative behaviour. Growth, however, has not produced integration. The studies are published in more than a hundred journals, invoke a wide variety of theories and intervening variables, and give LMX very different roles. In some models LMX is the starting point that predicts IWB; in others it is the channel through which transformational, authentic, servant or inclusive leadership is assumed to work; in still others it is one ingredient among engagement, empowerment and climate. What is missing is an assessment of how this body of work has theorised the relationship, in which settings it has been examined and how it has been tested, and, by extension, whether the consistency of its findings reflects a robust phenomenon or a shared set of research habits.

Several reviews come close to this question without answering it. Syntheses of leadership, creativity and innovation (Anderson et al., 2014; Hughes et al., 2018) and meta-analytic work on leadership and innovation (Lee et al., 2020) confirm that relationship-oriented leadership goes together with employee innovation, but they treat LMX as one predictor among many. A meta-analysis centred on LMX itself has estimated how strongly it relates to employee voice, creativity and innovative behaviour (Carnevale et al., 2017){Citation}, but it reports the size of the association rather than how the evidence behind it was produced. Reviews of LMX, for their part, list innovation as only one of many outcomes (Dulebohn et al., 2012). As a result, there is little systematic knowledge about which theories carry the LMX–IWB argument, how far the evidence travels across cultures and sectors, how the two constructs are modelled, and which designs and measures stand behind the reported effects.

This article closes that gap with a hybrid review. A bibliometric analysis describes how the field has grown and how its intellectual and conceptual structure is organised. A systematic review then codes 72 empirical reports, drawn from 68 independent samples, along the four lenses of the TCCM framework (Paul & Rosado-Serrano, 2019), and the selection process is documented with the PRISMA 2020 statement (Page et al., 2021). Five research questions guide the work. RQ1 asks how the literature has evolved and how its knowledge base is organised. RQ2 asks which theories are used to explain the LMX–IWB relationship and how deeply they are used. RQ3 asks in which contexts the relationship has been studied. RQ4 asks how LMX and IWB are positioned, connected and bounded in empirical models. RQ5 asks which designs and measures support the evidence.

The review offers three contributions. It provides an integrated map of a literature that is expanding fast but remains fragmented, with a core theme that is central yet thinly developed. It shows, at the level of independent samples, that the evidence rests on a small number of recurring choices, namely two exchange theories, a one-dimensional treatment of both constructs, a concentration of samples in Southern and Confucian Asia and a heavy reliance on self-reported, cross-sectional data that appears to inflate the association. Finally, it proposes to see LMX as relational infrastructure for innovation, that is, a differentiated relationship that regulates an employee's access to what each stage of innovation requires, and it turns this view into seven propositions, an integrative framework and a research agenda organised by the TCCM lenses.

LITERATURE REVIEW

Leader–member exchange

The central claim of LMX theory is that leaders do not treat all members of their unit alike but build relationships of different quality with each of them (Graen & Uhl-Bien, 1995). At the low end, the relationship is limited to what the employment contract prescribes. At the high end, it is marked by

mutual trust, liking, respect and a sense of obligation that goes well beyond formal duties. Early research captured relationship quality with a single score, typically through the seven-item LMX-7 instrument (Graen & Uhl-Bien, 1995), while later work argued that the construct has several facets, namely loyalty, affect, professional respect and contribution (Dienesch & Liden, 1986; Liden & Maslyn, 1998). Two properties of the theory are especially relevant for innovation. The relationship is dyadic, so leader and member each hold their own view of it, and these views can diverge (Gerstner & Day, 1997). It is also differentiated, so every member's relationship has a standing relative to those of colleagues in addition to its absolute quality. Meta-analytic evidence associates high-quality relationships with better performance, more citizenship behaviour, stronger commitment and lower intentions to quit (Dulebohn et al., 2012).

Innovative work behaviour and its stages

IWB is commonly understood as an employee's deliberate effort to come up with, champion and put into practice new ideas that benefit the job, the work group or the wider organisation (Janssen, 2000). The concept is broader than creativity. Creativity ends once a novel and useful idea has been produced, whereas IWB also covers the social and political work needed to win support for an idea and to turn it into new routines (Anderson et al., 2014; de Jong & Den Hartog, 2010). The three stages place different demands on the employee. Generating an idea is mostly a cognitive task carried out by the individual. Promoting it requires building coalitions and finding sponsors. Realising it requires time, money and the authority to alter established practices. Because the stages differ in this way, a condition that helps at one stage does not necessarily help at the others.

Why LMX should matter for IWB

Three arguments connect relationship quality to innovation. The first comes from social exchange theory (Blau, 1964): employees who are given support, trust and latitude by their leader feel obliged to give something back, and innovation is one form of discretionary contribution they can offer. The second is motivational. A good relationship is thought to satisfy needs for autonomy and competence and thereby to raise engagement, empowerment and confidence in one's own creative ability, which in turn fuel innovative effort. The third concerns resources. Leaders control information, time, budgets and protection from the consequences of failure, and a high-quality relationship gives an employee privileged access to all of these. The earliest studies already drew on such reasoning: Basu and Green (1997) and Scott and Bruce (1998) found that supervisors judged employees in better relationships to be more innovative. Although the three arguments imply different mechanisms and point to different stages of IWB, empirical studies seldom set them against each other.

Prior reviews and the TCCM lens

Existing syntheses therefore leave the theoretical, contextual and methodological make-up of LMX–IWB research largely unexamined. Reviews of leadership and innovation (Anderson et al., 2014; Hughes et al., 2018) and the meta-analysis by Lee et al. (2020) conclude that leadership focused on relationships tends to go hand in hand with innovation by employees, yet they do not ask how LMX itself has been theorised, placed in context or measured. Reviews of LMX, conversely, mention innovation only in passing (Dulebohn et al., 2012). The closest predecessor is a meta-analysis that quantified the association between LMX and employee voice, creativity and innovative behaviour (Carnevale et al., 2017). It did not examine how this literature theorises the relationship, where it has been studied, how the two constructs are modelled or how design choices shape the estimates, which are the questions this review addresses. The other seven reviews, meta-analyses and conceptual papers in our search corpus deal with neighbouring questions, none of them maps the LMX–IWB literature as a whole, and none combines a bibliometric map of the field with a systematic coding of what its studies contain. The TCCM framework (Paul & Rosado-Serrano, 2019) is well suited to this task. It examines a body of empirical work through four complementary lenses, theory, context, characteristics and methodology, and it translates the weaknesses each lens exposes into a structured agenda for future research. In this article, TCCM is not only a coding scheme but also the organising logic of the argument: each lens produces findings, the findings are linked into a network of gaps, and the gaps are converted into propositions and research priorities.

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METHOD

Research design

The study combines two complementary strands that share a single search and a single PRISMA 2020 flow (Page et al., 2021). The bibliometric strand addresses RQ1 and describes the growth, sources, authors and intellectual and conceptual structure of research on LMX and IWB. The review strand addresses RQ2 to RQ5 by coding the empirical studies with the TCCM framework (Paul & Rosado-Serrano, 2019). The two strands answer different questions. Citation and keyword patterns reveal how a field is organised but say little about what its studies actually test, whereas a coded review reveals what is tested but not how the studies are connected. Using both makes it possible to trace each gap to concrete evidence.

Data source and search strategy

Scopus was used as the only database. It indexes the management, organisational behaviour and applied psychology journals in which LMX–IWB research is published, including many regional journals (Mongeon & Paul-Hus, 2016), and it exports the full metadata and cited references that bibliometric software needs (Aria & Cuccurullo, 2017). Relying on one source also avoids the duplication and merging errors that arise when citation data from several databases are combined. We kept only English-language articles and reviews published in peer-reviewed journals, because conference papers, books and book chapters follow different review standards and provide less consistent metadata.

The search was run on 15 October 2026 on titles, abstracts and keywords. It combined synonyms for LMX with terms for IWB and its stages:

> TITLE-ABS-KEY (("leader-member exchange" OR "leader member exchange" OR lmx OR "vertical dyad linkage") AND ("innovative work behavio*" OR "innovative behavio*" OR "innovation behavio*" OR "employee innovati*" OR "individual innovati*" OR "idea generation" OR "idea promotion" OR "idea championing" OR "idea implementation" OR "idea realization"))

No time limit was imposed, and the oldest indexed study dates from 1997. The query returned 188 records. After 10 records of other document types and one record in another language were removed, 177 records remained. These records form both the bibliometric corpus and the pool for screening.

Study selection

Figure 1 summarises the selection. To enter the TCCM synthesis, a report had to be empirical, be set in a work context, measure both LMX and IWB (or at least one stage of IWB) and treat LMX as an antecedent or a mediator of IWB. Two reviewers examined titles and abstracts and then full texts, and they settled any disagreement through discussion. The title–abstract step removed 23 records and kept 154. Forty-eight of these 154 records lay outside the core of the synthesis: in 30 of them LMX acted only as a moderator, in 10 IWB served as a predictor, a control or a correlate, and eight were reviews, meta-analyses or conceptual papers. They remain part of the bibliometric corpus. Full texts were sought for the remaining 106 reports. Twenty-nine of them could not be obtained, and the full-text assessment of the other 77 excluded five, which left 72 reports for the synthesis. Supplementary Material S2 lists the exclusion codes and each report that could not be retrieved, with the reason.

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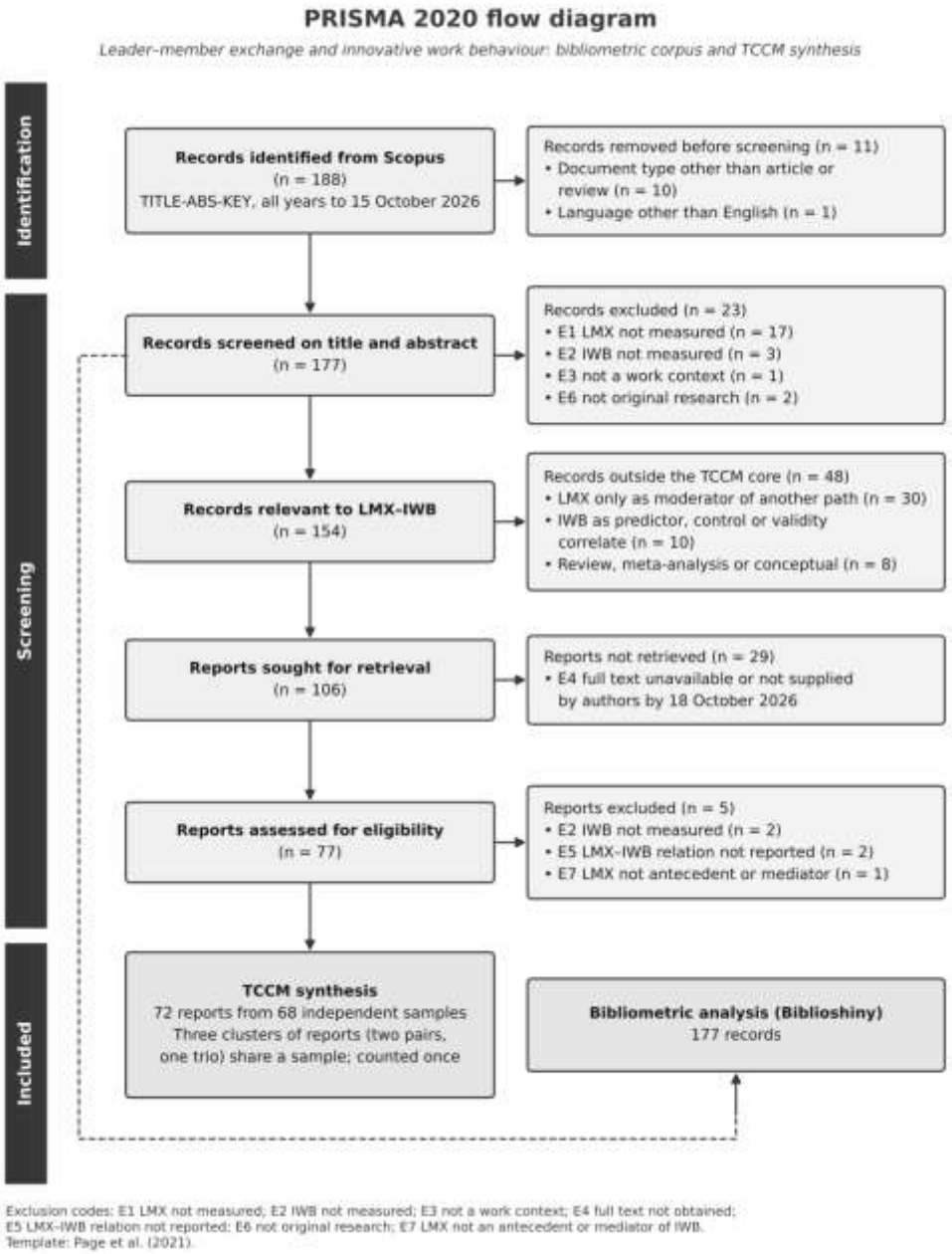


Figure 1: PRISMA 2020 flow diagram for the bibliometric corpus (177 records) and the TCCM synthesis (72 reports from 68 independent samples)

Coding and analysis

Some reports analyse the same data. We therefore compared the sample descriptions and correlation matrices of reports by the same authors and treated the independent sample, rather than the report, as the unit of analysis. Three clusters of reports turned out to share a sample, so the 72 reports correspond to 68 independent samples. Data were extracted with the help of an AI tool and then checked by the first author against each full text, using a written codebook structured by the four TCCM lenses. The theory lens recorded the main and supporting theories and how deeply they were used. The context lens recorded country, cultural cluster, sector, ownership and type of worker. The characteristics lens recorded the form and position of LMX, the mediators and moderators, and whether IWB was treated as one behaviour or as separate stages. The methodology lens recorded the design, the raters of each construct, the level and technique of analysis and the remedies used against common-method bias. Every value with numerical consequences was checked again against the source tables. To assess consistency, the first author later re-coded a random subsample of nine samples (13%) by hand without

seeing the original codes. Agreement reached 70% over 71 coding decisions, from 100% for the position of LMX to 25% for common-method remedies, where most disagreements concerned how strictly procedural remedies should be counted. The codebook and the coded data set are available in Supplementary Material S1.

The 177 records were analysed in Biblioshiny 5.0, the web interface of the bibliometrix package (Aria & Cuccurullo, 2017). Performance analysis covered annual output, sources, authors and citations. Science mapping covered reference co-citation, the co-occurrence of author keywords and a thematic map (Cobo et al., 2011), produced with default settings after keyword variants had been merged. For the TCCM strand we report frequencies for each lens and describe zero-order LMX–IWB correlations by their median and interquartile range, with and without four values above .70. The correlations were not pooled, since meta-analytic estimation was not the aim of this review. The interpretation proceeds in three steps: from the findings for each research question, to a network of related gaps, and from there to a reframing of LMX, a set of propositions and an integrative framework. Analytic settings are documented in Supplementary Material S2.

RESULT AND DISCUSSION

Development and structure of the field (RQ1)

The bibliometric picture is that of a young, scattered and fast-growing literature. Of the 177 records, 126 (71.2%) were published from 2020 onward and they appeared in 120 different sources, while the intellectual foundations of the field still rest on a handful of studies published between 1997 and 2015. Table 1 lists the main performance indicators.

Table 1: Main performance indicators of the bibliometric corpus (177 records)

Indicator	Value
Timespan	1997–2026 (to 15 October 2026)
Documents (articles; reviews)	177 (173; 4)
Sources	120
Authors	518
Single-authored documents	17
Co-authors per document	3.48
Author keywords	468
Cited references	12,410
Mean document age	4.9 years
Citations per document, mean (median)	38.2 (13)

Source: Scopus export analysed in Biblioshiny 5.0.

Output developed in three phases. Only four records appeared between 1997 and 2011, starting with the first study that related LMX to innovative behaviour (Basu & Green, 1997). A consolidation phase from 2012 to 2019 added 47 records, and an expansion phase from 2020 to mid-October 2026 added 126, with a maximum of 25 records in 2025. A logistic life-cycle model fitted to the yearly counts located the peak in 2025, but since 2026 was not complete when the search was run, we do not read this as a sign of saturation. Recent cohorts receive fewer citations per year, which reflects their shorter citation window rather than lower influence.

No journal acts as a home for the topic. Leadership and Organization Development Journal and Sustainability published seven records each, followed by Frontiers in Psychology (six), Management Decision (five), Personnel Review and European Journal of Innovation Management (four each). Applying Bradford's law (Bradford, 1934) yielded a core zone of 17 sources, a middle zone of 45 and an outer zone of 58 (multiplier $k = 1.97$; $R^2 = .92$), but the Kolmogorov–Smirnov test rejected the ideal Bradford distribution ($p = .024$). The knowledge on which the field draws is far more concentrated: the most locally cited sources are established outlets in applied psychology, management and leadership, led by the Journal of Applied Psychology with 650 local citations. Authorship is equally dispersed. Productivity followed Lotka's law (Lotka, 1926) with a steep exponent ($\beta = 4.17$; $R^2 = .95$; Kolmogorov–Smirnov test against $\beta = 2$, $p = .33$), meaning that most authors contributed one record, and only Stoffers (five records) and van Dick (four) exceeded three. Corresponding authors were based

most often in China, then Pakistan, India and the United States, and about one third of the documents (34.5%) involved co-authors from more than one country.

The most cited documents show that the keyword search captures a broader conversation in which LMX is often a borrowed explanation. The two most cited records are the founding test of LMX against transformational leadership (Basu & Green, 1997) and the study in which work engagement carried the effect of LMX on IWB among Indian managers (Agarwal et al., 2012), with 376 and 338 citations. Others use LMX theory to account for the effect of a different leadership construct (Javed et al., 2019), or treat innovative behaviour as one of several outcomes in broader leadership models, for example a meta-analytic test of transformational leadership pathways (Ng, 2017), a study of engagement as a route from transformational leadership to innovation (Aryee et al., 2012) and a cross-national validation of an identity leadership measure (van Dick et al., 2018). Citation counts refer to the Scopus export of 18 October 2026.

Co-citation analysis of the 49 references cited together most often produced three clusters. The first contains the foundations of LMX and social exchange, including the work of Graen and Uhl-Bien (1995), Blau (1964), Dienesch and Liden (1986) and Liden et al. (1997), together with methodological sources on interaction and mediation analysis (Aiken & West, 1991; Preacher & Hayes, 2008). The second gathers instruments for innovative and creative behaviour and for survey validity, around Scott and Bruce (1994), the LMX meta-analysis by Dulebohn et al. (2012), and validity references such as Fornell and Larcker (1981) and Podsakoff et al. (2003). The third connects leadership styles to innovative behaviour and is anchored by Janssen (2000), Janssen and Van Yperen (2004), Basu and Green (1997), de Jong and Den Hartog (2010) and Gumusluoglu and Ilsev (2009). Because some references appear under spelling variants that the software did not merge, the border between the second and third clusters is not sharp.

After cleaning, the author-keyword network is organised around one hub, formed by LMX and IWB, with six clusters around it. The largest brings together mechanisms and leadership styles, such as work engagement, psychological empowerment, creative self-efficacy, psychological safety and authentic, inclusive, servant, authoritarian and digital leadership. A second cluster ties transformational leadership to job attitudes and extra-role outcomes, and four smaller clusters deal with creativity and innovation, psychological capital and digital innovation, job crafting and coworker ostracism, and benevolent leadership and voice.

The thematic map (Figure 2) arranges the cleaned keywords into 14 themes according to their centrality and density (Cobo et al., 2011). The core theme, labelled leader–member exchange, is by far the largest, with 313 keyword occurrences (122 for LMX and 119 for IWB), and it also absorbs perceived organisational support, psychological empowerment, work engagement and several positive leadership styles. It is the most central theme of the field, yet it lies in the basic quadrant: transversal and foundational but internally underdeveloped. Three further basic themes surround it, namely innovation, leadership and creativity (61 occurrences), transformational leadership with citizenship behaviour, commitment and job satisfaction (40), and job performance with job autonomy (8). The only motor theme is a small cluster on job crafting, coworker ostracism, task performance and relative LMX (14 occurrences). Paternalistic, authoritarian and benevolent leadership with voice (14), psychological capital with digital innovative behaviour (19) and transactional leadership (4) form niche themes. Social exchange theory, although it is the most frequently invoked theory in the TCCM synthesis, appears only as a peripheral keyword theme. Themes lying close to the axes should be read as borderline, and theme positions are sensitive to keyword cleaning: before synonyms such as POS were merged, the core theme fell into the motor quadrant.

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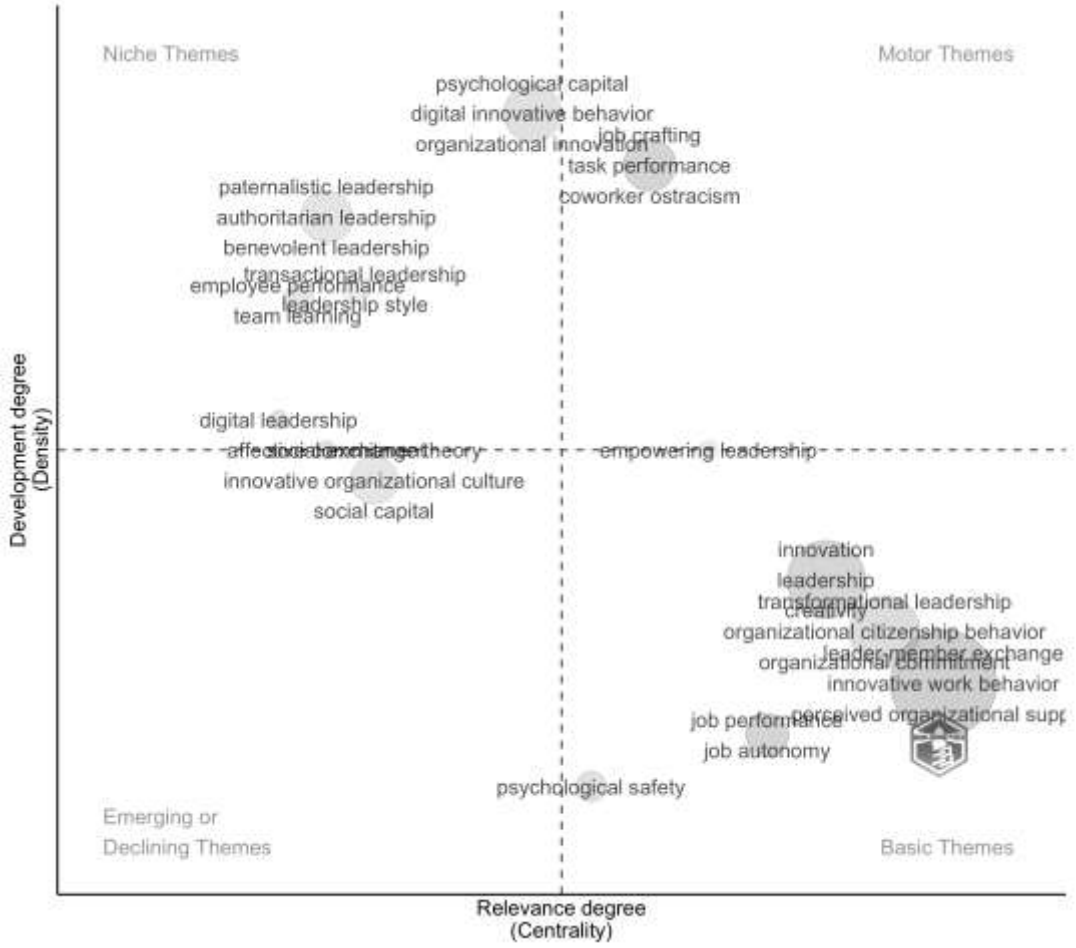


Figure 2: Thematic map of author keywords by centrality (relevance) and density (development)

Read together, these results describe a field that grows by adding studies rather than by building research programmes. Its central theme is shared by almost every study but has not been developed internally, and its most invoked theory hardly shows up in the vocabulary that authors use to describe their own work. The TCCM synthesis explains why.

Profile of the reviewed studies

The 72 reports that entered the synthesis cover almost three decades, from Basu and Green (1997) to studies published in 2026, but two thirds of them (48) appeared from 2020 onward, in line with the acceleration seen in the wider corpus. The great majority are quantitative (68 reports), complemented by three mixed-methods studies and a single qualitative case study (Miller & Miller, 2020). General or mixed employee samples (36 quantitative reports) outnumber professionals and knowledge workers (15), frontline service staff (10), managers (5) and civil servants (2). Sampling is the weakest part of the reporting: 20 quantitative reports relied on convenience samples and 17 did not explain how respondents were chosen, while 12 used a probability procedure and two surveyed a full population. Covariance-based structural equation modelling or path analysis (27 reports) and regression-based approaches including PROCESS (21) were the usual analytic tools, followed by PLS-SEM (13), and only seven reports used multilevel models to account for employees nested within leaders or units.

Read in chronological order, the reports trace a shift from asking whether LMX matters for innovation to asking through which routes it matters. The two founding studies compared LMX with competing explanations and used supervisor ratings of innovation. In a manufacturing plant, LMX predicted innovative behaviour while transformational leadership was negatively related to it in the same model (Basu & Green, 1997), and in two R&D samples LMX predicted innovation alongside subordinates' problem-solving style (Scott & Bruce, 1998), extending an earlier path model in which relations with

the leader shaped individual innovation (Scott & Bruce, 1994). Evidence that relationship quality also predicts creativity (Tierney et al., 1999) completed the founding claim.

A second wave, from 2012 to 2016, brought in motivational and exchange mechanisms. Work engagement fully transmitted LMX's influence on the IWB of Indian service managers (Agarwal et al., 2012), and two companion reports on the same sample examined LMX as a moderator of organisational support (Agarwal, 2014) and as a source of trust through lower contract breach (Agarwal & Bhargava, 2014). Psychological empowerment fully transmitted the effect of LMX on later IWB in a two-wave design (Schermuly et al., 2013), and organisational support did the same among nurses (Xerri, 2013). Some studies of this period already showed that LMX could lose its unique contribution once other resources were modelled. Among Malaysian knowledge workers, LMX correlated with IWB but became non-significant next to a pro-innovation climate (Khar Kheng et al., 2013), and social capital outweighed it in a related report (June & Khar Kheng, 2014). The employability route from LMX to IWB held only in firms seen as high-performing (Stoffers et al., 2014), an employee's standing relative to peers also mattered (H. Li et al., 2014), and later studies extended the antecedents and mechanisms to network ties, ethical leadership, personal initiative and informal relationships (X.-H. Wang et al., 2015; Brunetto et al., 2016; Denti & Hemlin, 2016; Dhar, 2016).

The third and largest wave started around 2017 and gathered pace after 2020. Its studies usually placed LMX between a leadership style or work arrangement and innovative behaviour. The antecedents include inclusive (Javed et al., 2018), authentic (Jung et al., 2021), servant (Khattak et al., 2023), humble (G. Wang et al., 2024), platform (N. Li & Wang, 2025), digital (Cheng, 2026) and sustainable leadership (Iqbal, 2026), as well as enterprise social media (Chi & Yang, 2026) and developmental electronic monitoring (Zhao et al., 2025), while studies of LMX as a direct antecedent continued alongside them (Kim & Koo, 2017). The direction of the reported effects was consistent but their size was not. Path coefficients from LMX to innovative behaviour ranged from about .09 (H. Li et al., 2014) and .10 (Vermeulen et al., 2022) to .76 (L. Wang et al., 2025) and .87 (Farid et al., 2017). In several studies the direct effect disappeared, either because personal resources (Adikara & Soetjipto, 2021), work–life balance (Hafni et al., 2026), team–member exchange (Huynh et al., 2019) or citizenship behaviour (Stoffers et al., 2020) took its place, or because the whole effect ran through a mediator such as proactivity (Park & Jo, 2018), innovative climate (Lecic et al., 2023), mindfulness and engagement (Mulligan et al., 2021) or psychological safety (Dar et al., 2024). This variability stands in contrast to the steady LMX–performance associations found in meta-analyses (Dulebohn et al., 2012) and suggests that innovation is a more conditional outcome of the relationship than routine task performance.

Authors justified their contributions in four ways. Most often they introduced a new antecedent whose influence was expected to pass through LMX, for example ethical leadership (Dhar, 2016), paternalistic and other leader behaviours (Farid et al., 2017), distributed leadership (Evers et al., 2024), leaders' psychological capital (T. Li et al., 2020), leader–follower congruence in psychological capital (Y. Zhu et al., 2025), psychological contracts (Pandey et al., 2025) or leaders' implicit followership (Liang et al., 2022). Such studies widen the nomological network, but they also repeat a pattern long visible in meta-analyses, in which LMX serves as a common carrier for many leader behaviours (Dulebohn et al., 2012). A second group proposed new mechanisms, including happiness (Bani-Melhem et al., 2022), mindfulness (Mulligan et al., 2021), creative self-efficacy (Atitumpong & Badir, 2018), job crafting (Adikara & Soetjipto, 2021), employability (Stoffers et al., 2020), psychological safety and empowerment (Y. Zhu & Tsai, 2024), effort and reward (Desrumaux et al., 2022) and engagement combined with self-efficacy (Mustafa et al., 2023). Since these mechanisms were mostly tested one at a time, the literature cannot yet say which matters most. A third and, in our view, most consequential group reconceptualised one of the focal constructs: relative LMX (H. Li et al., 2014), leader–member alignment (Chaudhry et al., 2021), team-level differentiation (Dwertmann & Park, 2025), social versus economic exchange (van Assen & Caniëls, 2022), informal relationships beyond the hierarchy (Brunetto et al., 2016) and dimension-level analyses (Mascareño et al., 2020). These designs paid off. The leader's view of the relationship predicted innovative performance more strongly than the member's view (Chaudhry et al., 2021), and social exchange was positively related to IWB while economic exchange was not (van Assen & Caniëls, 2022). On the IWB side, studies that separated creativity from implementation found that LMX mattered more for some stages than others (Adams et al., 2025). A

fourth group claimed novelty through context, typically the first test in a country, sector or population (Arshad et al., 2024), but rarely explained why the setting should change the relationship. Two studies stood out by using objective innovation indicators (Denti & Hemlin, 2016) or complete network data (X.-H. Wang et al., 2015).

TCCM synthesis of the independent samples

The TCCM synthesis is the analytical core of this review. Coding the 68 independent samples lens by lens reveals a coherent pattern: LMX and IWB are repeatedly found to go together, but it rests on two exchange-based theories, a small set of Asian contexts, a one-dimensional view of both constructs and self-reported, cross-sectional data. Table 2 summarises the main counts. Unless stated otherwise, percentages use the 68 samples as the base. Forty-seven samples (69.1%) were published from 2020 onward, so the patterns describe a literature that is both young and expanding.

Table 2: Summary of the TCCM synthesis (68 independent samples)

Lens	Dimension	Dominant category	n (%)	Least represented
Theory	Main theory	Social exchange theory	25 (36.8)	15 theories used once or twice
Theory	Depth of use	Used to justify hypotheses	40 (58.8)	Tested or extended: 19 (27.9)
Theory	Theory–mechanism fit	Full fit	36 (52.9)	Partial fit: 30 (44.1)
Context	Economy	Emerging and developing	39 (57.4)	Multi-country: 10 (14.7)
Context	GLOBE cluster	Southern Asia	23 (33.8)	Sub-Saharan Africa, Nordic Europe: 1 each
Context	Ownership	Not reported	27 (39.7)	Public sector: 7 (10.3)
Characteristics	LMX form	Individual LMX quality	60 (88.2)	Relative LMX, differentiation: 1 each
Characteristics	Position of LMX	Antecedent of IWB	43 (63.2)	Mediator: 25 (36.8)
Characteristics	IWB dimensionality	Composite score	62 (91.2)	Stage-specific: 6 (8.8)
Methodology	Design	Cross-sectional	46 (67.6)	Experiment: 1 (1.5)
Methodology	Level of analysis	Individual	53 (77.9)	Team: 1 (1.5)
Methodology	IWB rater	Self	50 (73.5)	Supervisor or leader: 17 (25.0)
Methodology	Common-method bias	None reported	18 (26.5)	Procedural and statistical: 17 (25.0)

Source: authors' coding of 72 reports (68 independent samples).

Theory: two exchange lenses, invoked more than tested (RQ2)

Nearly three out of four samples explain the LMX–IWB link through exchange. Social exchange theory was the main theory in 25 samples (36.8%) and LMX theory or role-making theory in 24 (35.3%). Under the social exchange lens, the chain from relationship to behaviour was usually completed by an attitude or motivational state, such as engagement (Agarwal et al., 2012), organisational support (Nazir et al., 2018), satisfaction with appraisal (Ghazi et al., 2023), commitment and job satisfaction (Lestariningsih et al., 2026), or voice and knowledge sharing (Sharif et al., 2024). Studies rooted in LMX theory more often examined the relationship itself, including its dimensions (T. Li et al., 2020), its social and economic forms (van Assen & Caniëls, 2022), its differentiation within teams (Dwertmann & Park, 2025) and its boundary conditions, for instance personal initiative (Khalili, 2018), career capital and innovation rewards (Hussain et al., 2020), job characteristics (Iqbal, 2026) and error-management climate (N. Li & Wang, 2025).

Other theories were rare but instructive. Under self-determination theory, the effect of LMX on teachers' IWB hardly passed through basic need satisfaction (Evers et al., 2024), and a related study located it in innovative climate instead (Lecic et al., 2023). Conservation of resources theory treated LMX as a social resource that builds self-efficacy (Choi et al., 2021) or psychological safety (Dar et al., 2024), and broaden-and-build theory supported chains through engagement (Pandey et al., 2025) and organisational learning (Khattak et al., 2023). A long tail of theories was used once, among them social cognitive theory (Cheng, 2026), social identity theory (Bracht et al., 2023), job demands–resources (Adikara & Soetjipto, 2021), effort–reward imbalance (Desrumaux et al., 2022), cognitive appraisal (Bani-Melhem et al., 2022), implicit followership (Liang et al., 2022), complementary congruity (G.

Wang et al., 2024), person–supervisor fit (Y. Zhu et al., 2025), self-concept based leadership (Vermeulen et al., 2022), perspective taking (Stoffers et al., 2020), psychological capital (Widiati et al., 2024) and boundary theory (Hafni et al., 2026). Two samples named no explicit theory (Jung et al., 2021; Purwanto et al., 2023). Because each alternative appears only once or twice, none has been tested against the exchange account.

More importantly, theory is cited far more often than it is put to work. Fifty-nine samples (86.8%) referred to two or more theories, yet only 19 (27.9%) tested, compared or extended a theory, for example by deriving and testing a boundary condition (Bracht et al., 2023) or by contrasting social with economic exchange (van Assen & Caniëls, 2022). Forty samples (58.8%) used theory only to justify hypotheses, and nine (13.2%) merely mentioned a theory or used none. The theory invoked fitted the mechanism tested fully in 36 samples (52.9%) and only partly in 30 (44.1%). Partial fit took two typical forms: a motivational or cognitive theory was named while a relational mediator was tested (Cheng, 2026), or exchange theory was invoked while the exchange process itself was never measured (Strugar Jelaca et al., 2025). Counts at the report level (k = 72) differ from the sample-level counts by no more than three percentage points.

Context: concentrated and thinly described (RQ3)

The evidence comes mostly from Asian, emerging-economy settings. China contributed 11 samples and Pakistan eight; India, Indonesia, Malaysia, the Netherlands, South Korea and the United States contributed four each, and ten samples covered several countries. Classified by GLOBE cluster (House et al., 2004), Southern Asia (23 samples, 33.8%) and Confucian Asia (19, 27.9%) dominate, followed by the Anglo cluster (7, 10.3%) and the Middle East (5, 7.4%). Sub-Saharan Africa (Tarkang et al., 2022) and Nordic Europe appear once each, and Latin America not at all. Following the classification of the International Monetary Fund (International Monetary Fund, 2025), 39 samples (57.4%) came from emerging and developing economies and 19 (27.9%) from advanced economies.

Organisational context is often left unreported. About a third of the samples (21, 30.9%) drew on several sectors or did not name one. Among single-sector samples, hospitality and food service (10), manufacturing (9) and ICT, high-tech and R&D (8) were most common, while education (5), health care (3), public administration (3) and banking (3) were rare. Ownership was not stated in 27 samples (39.7%), and only seven (10.3%) came from the public sector (Hussain et al., 2020). The median sample comprised 312 individuals (interquartile range 210–424).

Where context was taken seriously, it changed the story. Several studies used culture as an explanation rather than a backdrop. In Malaysia, paternalistic leadership was included because of its cultural salience, and LMX carried its effect (Farid et al., 2017), while hierarchical distance suppressed both empowerment and IWB (Ding et al., 2025). In Pakistan, authoritarian leadership lowered and moral leadership raised LMX, which then shaped IWB through voice (Nazir et al., 2020). In China, leaders' expectations were argued to carry special weight because hierarchy is widely accepted (Liang et al., 2022), and higher power distance strengthened rather than weakened the LMX–innovation link (Zhao et al., 2025). These results sit uneasily with the common view that hierarchy suppresses upward influence; where hierarchy is accepted, closeness to the leader may be the main legitimate channel for new ideas. A 23-country study built on the GLOBE clusters supports this reading: LMX was the strongest of four leadership predictors overall, but its effect varied between cultural clusters (Bracht et al., 2023). Cross-cultural and demographic settings added further nuance. LMX still predicted supervisor-rated IWB among Pakistani workers reporting to Chinese managers (Arshad et al., 2024), its effect did not differ between migrant and local workers (L. Wang et al., 2025), and self-initiated expatriates innovated more when LMX was combined with job knowledge and innovation rewards (Hussain et al., 2020). In studies of women, LMX empowered female service employees whereas schedule flexibility did not (Rafique et al., 2024), flexible work rather than LMX predicted the IWB of Indonesian women (Hafni et al., 2026), and psychological capital and LMX were linked to digital innovation among women managers in India and Indonesia (Widiati et al., 2024). Qualitative evidence pointed to generational differences, with younger knowledge workers wanting a coach and older workers wanting autonomy (Miller & Miller, 2020).

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Sector also shaped which resources LMX competed with. In frontline service work, the relationship with the leader mattered most when the service climate was weak (Bani-Melhem et al., 2022), and strong ties within the work group weakened the effect of LMX (X.-H. Wang et al., 2015), both signs of substitution. Public-sector evidence is thin and mixed: LMX had no direct effect among Indonesian civil servants (Adikara & Soetjipto, 2021) or Korean education officials (Park & Jo, 2018), but it strengthened the link between job involvement and innovation among Taiwanese public librarians (Peng, 2020), and public and private professionals differed in how they secured resources for innovation (Brunetto et al., 2016).

Characteristics: one relationship, one behaviour, motivational mechanisms (RQ4)

How LMX is conceptualised. Sixty samples (88.2%) treated LMX as the quality of a single member's relationship with the leader. Only eight took a different view: four modelled leader–member agreement or congruence (Chaudhry et al., 2021), and one each examined relative LMX, LMX differentiation (Dwertmann & Park, 2025), social versus economic LMX (van Assen & Caniëls, 2022) and a qualitative account of relationship quality (Miller & Miller, 2020). Although 16 samples used the multidimensional LMX-MDM instrument, only two analysed its dimensions separately (T. Li et al., 2020).

Where LMX sits in the model. LMX was an antecedent of IWB in 43 samples (63.2%) and a mediator in 25 (36.8%). Mediator models almost always carried a leadership style into IWB: 19 of the 25 started from a leader behaviour, most often transformational leadership (Sharif et al., 2024), followed by authentic, servant, humble, inclusive, ethical, paternalistic, digital, sustainable and platform leadership. The other six started from follower characteristics or work arrangements, such as psychological capital (Widiati et al., 2024), psychological contracts (Pandey et al., 2025), network ties (X.-H. Wang et al., 2015), enterprise social media use (Chi & Yang, 2026) or openness to experience (Adams et al., 2025).

Mechanisms. Among the 43 antecedent samples, 13 tested only a direct path, 15 tested direct and indirect paths and 15 tested indirect paths only. Motivational mechanisms dominated (18 samples, 41.9%), led by work engagement (Agarwal et al., 2012), psychological empowerment (Ding et al., 2025), self-efficacy (Choi et al., 2021) and proactivity (Park & Jo, 2018). Cognitive (8), relational (7) and affective (6) mechanisms were less common, and 11 antecedent samples tested no mechanism at all. Relational processes beyond LMX itself, such as psychological safety (Dar et al., 2024) or identification with the leader (M. M. Khan et al., 2021), remain rare.

Boundary conditions. Twenty-five samples (36.8%) tested a moderator, and 16 placed it on a path leading into or out of LMX. Personal and job resources strengthened the LMX–IWB link, including job autonomy (Dhar, 2016), personal initiative (Khalili, 2018), job knowledge and innovation rewards (Hussain et al., 2020), core self-evaluation (G. Wang et al., 2024), digital self-efficacy (Cheng, 2026) and organisational learning culture (Jung et al., 2021). Two findings point to substitution rather than amplification: strong ties inside the work group weakened the effect of LMX (X.-H. Wang et al., 2015), and social LMX predicted IWB only among employees low in paradox mindset (van Assen & Caniëls, 2022). Only two samples modelled cultural values as moderators, power distance on the LMX–IWB path (Zhao et al., 2025) and cluster-level collectivism and power distance on leadership effects (Bracht et al., 2023), even though most samples come from high power-distance settings.

How IWB is treated. Sixty-two samples (91.2%) merged idea generation, promotion and realisation into one score. The six that kept the stages apart did not agree on where LMX matters most. One found the strongest effect at the generation stage (Sürücü et al., 2021), another found that LMX reached promotion and realisation only through generation (Mascareño et al., 2020), a third found stronger effects on creativity than on innovation (Khalili, 2018), and two others found effects only at the realisation or implementation stage (Adams et al., 2025; van Assen & Caniëls, 2022).

Results and effect sizes. A significant positive direct effect was reported in 44 samples (64.7%) and an exclusively indirect effect in 14 (20.6%). Three samples (4.4%) found no effect (Adikara & Soetjipto, 2021), and four (5.9%) found effects that depended on the form or dimension of LMX; for instance, LMX differentiation was negatively related to team idea generation while mean LMX was positively related (Dwertmann & Park, 2025). Purely indirect effects appeared when engagement (Agarwal et al., 2012), empowerment (Schermuly et al., 2013), psychological safety (Dar et al., 2024), creative self-efficacy (Atitumpong & Badir, 2018), personal initiative (Denti & Hemlin, 2016), organisational

support (Xerri, 2013), voice (Nazir et al., 2020), proactivity (Park & Jo, 2018), innovative climate (Lecic et al., 2023), creativity (Mascareño et al., 2020) or employability (Stoffers et al., 2014) entered the model. Some hypothesised mediators did not carry the effect at all, for example commitment (Arshad et al., 2024), job satisfaction (Lestariningsih et al., 2026), work rewards (Desrumaux et al., 2022), need satisfaction (Evers et al., 2024), intrinsic motivation (Denti & Hemlin, 2016) and psychological contract fulfilment (H. Li et al., 2014). In models with several predictors, LMX was outperformed by social capital (June & Khar Kheng, 2014), affective commitment (Nazir et al., 2018), identification with the leader (M. M. Khan et al., 2021), organisational learning (Khattak et al., 2023), knowledge sharing (Sharif et al., 2024) and voice (Strugar Jelaca et al., 2025). Some reports were internally inconsistent; in one, the abstract and the tables disagreed on whether mediation through LMX was significant (Iqbal, 2026).

Table 3 summarises the zero-order correlations. The median correlation was .39 across 44 samples, but it fell to .23 when supervisors rated IWB and to .26 when LMX and IWB were measured at different points in time. All four correlations above .70 came from self-rated, cross-sectional studies.

Table 3: Zero-order LMX–IWB correlations by subset

Subset	k	Median r	Interquartile range	Range
All samples	44	.39	.24–.52	.13–.84
All samples, excluding r > .70	40	.37	.23–.46	.13–.62
IWB self-rated	34	.41	.26–.53	.13–.84
IWB supervisor-rated	9	.23	.21–.38	.20–.46
Cross-sectional design	29	.43	.35–.55	.16–.84
Time-lagged design	13	.26	.20–.38	.13–.62

k = number of independent samples reporting a zero-order correlation. Values are descriptive and were not pooled.

Methodology: single-source evidence that inflates the association (RQ5)

The evidence rests on surveys that collect both constructs from one source at one time. Sixty-five samples (95.6%) were quantitative, two used mixed methods and one was a qualitative case study (Miller & Miller, 2020). Forty-six samples (67.6%) were cross-sectional, 18 (26.5%) time-lagged and two (2.9%) longitudinal, and one paired a vignette experiment with field data (Dwertmann & Park, 2025). Analyses were run at the individual level in 53 samples (77.9%), at the dyad level in eight, across levels in six and at the team level in one. Five samples collected data from employees nested within supervisors but ignored the nesting in the analysis (Dar et al., 2024).

Measurement choices narrow what the evidence can show. The member alone rated LMX in 65 samples (95.6%), and only three also obtained the leader's view (Chaudhry et al., 2021). The LMX-7 family was used in 42 samples (61.8%) and LMX-MDM in 16 (23.5%). IWB was usually measured with the instruments of Scott and Bruce (1994) or Janssen (2000), while 16 samples used adapted or unspecified items, and employees rated their own IWB in 50 samples (73.5%). Covariance-based SEM or path analysis was used in 26 samples (38.2%), regression or PROCESS in 20 (29.4%), PLS-SEM in 14 (20.6%) and multilevel modelling in seven (10.3%).

Protection against common-method bias was uneven. Eighteen samples (26.5%) reported no remedy, 11 (16.2%) relied on statistical checks alone and four (5.9%) on Harman's single-factor test alone, a test widely regarded as insensitive (Podsakoff et al., 2003). Seventeen samples (25.0%) combined procedural and statistical remedies. Design and measurement have also moved in opposite directions over time. The share of time-lagged or longitudinal designs rose from 4 of 21 samples published before 2020 (19.0%) to 16 of 47 published since (34.0%), but the share using supervisor-rated IWB fell from 10 of 21 (47.6%) to 7 of 47 (14.9%). Notable exceptions show what better designs can deliver: dyadic data analysed with polynomial regression and response surfaces (Chaudhry et al., 2021), cross-level models (N. Li & Wang, 2025), an experiment combined with a field study (Dwertmann & Park, 2025) and repeated measures over a year or more (Mulligan et al., 2021).

A thematic network of research gaps

Reading the bibliometric and TCCM results side by side yields eight gaps. They are not separate problems but a network in which one weakness sustains another. A narrow theoretical base (G1) makes

a one-dimensional treatment of both constructs acceptable (G3, G4), and that treatment in turn fits the single-source surveys that dominate the field (G7). Table 4 links each gap to its evidence and to the gaps it reinforces. The gaps are our interpretation of the patterns reported above.

Table 4: Thematic network of research gaps

Gap	Core evidence	Reinforces
G1 Exchange monoculture and shallow theory use	Social exchange and LMX theory frame 72.1% of samples; 27.9% test or extend a theory; 44.1% show only partial theory–mechanism fit	G2, G3, G5
G2 LMX as an all-purpose conduit for leadership styles	19 of 25 mediator models start from a leadership style; leadership–LMX correlations as high as .82	G3, G7
G3 A member-only, unidimensional view of LMX	88.2% model individual LMX quality; 95.6% use member ratings only; 2 samples analyse LMX dimensions	G4, G7
G4 IWB treated as a single behaviour	91.2% use a composite score; the 6 stage-specific samples disagree on where LMX matters	G5
G5 Mechanisms skewed toward motivation	Motivational mediators in 41.9% of antecedent samples; 11 test no mechanism; relational mechanisms beyond LMX rare	G1
G6 Narrow and under-described contexts	61.8% of samples from Southern or Confucian Asia; 10.3% public sector; ownership unreported in 39.7%; 2 samples model culture	G1, G7
G7 Single-source, cross-sectional evidence that inflates effects	73.5% self-rated IWB; 67.6% cross-sectional; median r .41 for self-rated vs .23 for supervisor-rated IWB; 26.5% report no CMB remedy	G2, G3
G8 A dispersed field without motor themes	120 sources; Bradford distribution rejected; most authors publish once; no developed motor theme; social exchange theory peripheral as a keyword theme	G1, G6

Source: authors' synthesis of the bibliometric and TCCM results.

Exchange monoculture and shallow theory use (G1). Social exchange and LMX theory frame 49 of the 68 samples, and they are mostly used to justify a positive path rather than to explain when and why exchange turns into innovation. Reciprocity predicts that employees repay their leader, yet IWB is a risky, extra-role behaviour that may disturb the leader's own routines. Few studies ask why an employee would repay a leader with something the leader may not want, a tension that identity, self-determination or resource theories could help to resolve.

LMX as an all-purpose conduit (G2). In mediator models, LMX transmits the effect of nearly every positive leadership style examined, from transformational, authentic and servant to humble, inclusive, ethical, digital, sustainable and platform leadership. When one relational variable explains so many styles, either the styles share a common relational core or LMX is acting as a proxy for a general liking of the leader. Correlations between some leadership measures and LMX as high as .82 (Jung et al., 2021) point to an overlap of constructs that the field has not yet confronted.

A member-only, unidimensional view of LMX (G3). LMX is theorised as dyadic and differentiated, yet almost every sample measured one member's perception of an undivided quality. The few designs that captured agreement between leader and member, relative standing or differentiation (Chaudhry et al., 2021; Dwertmann & Park, 2025) produced the most informative results, including negative effects of differentiation on team idea generation.

IWB treated as a single behaviour (G4). The three stages of IWB rely on different resources. Generation needs psychological safety and freedom to think, promotion needs sponsorship and voice, and realisation needs time, resources and legitimacy. Composite scores, used in 91.2% of samples, cannot show which of these LMX supplies, and the six stage-specific samples point in different directions.

Mechanisms skewed toward motivation (G5). Engagement, empowerment and self-efficacy dominate the mediators. The relational processes that LMX theory itself implies, such as voice, trust, sponsorship and access to resources and information, are rarely modelled, and one in four antecedent samples tested no mechanism at all.

Narrow and under-described contexts (G6). The evidence is concentrated in collectivist, high power-distance settings, yet only two samples measured cultural values. Public organisations, Latin America

and Africa are almost absent, and many studies omit basic features of the organisation such as ownership or sector.

Single-source, cross-sectional evidence (G7). The typical design collects LMX and IWB from one respondent at one point in time. Our descriptive comparison suggests that this design nearly doubles the observed association, and the rise of time-lagged designs since 2020 has been offset by a decline in supervisor-rated IWB. Nesting within supervisors is common but seldom modelled.

A dispersed field without motor themes (G8). Publication is spread over 120 sources without a core journal, most authors appear once, and the thematic map shows a basic but underdeveloped core with only one small motor theme. The field accumulates replications faster than it builds cumulative research programmes.

From findings to framing: LMX as relational infrastructure

The eight gaps share a root. The field treats LMX as a trigger of reciprocity, a good relationship that obliges the employee to repay the leader with innovative effort. We propose instead to treat LMX as relational infrastructure for innovation: a differentiated, dyadic and team-embedded relationship that governs an employee's access to the psychological safety, sponsorship, resources and legitimacy that each stage of innovation requires. Unlike the preceding sections, which report what the corpus contains, this section advances theoretical claims for future testing.

The reframing changes three assumptions. First, it moves the explanatory weight from obligation to access. Exchange reasoning explains why employees wish to repay a leader but not why repayment should take the form of risky and possibly disruptive innovation. An access logic explains instead why a high-quality relationship enables innovation: the leader controls the time, information, protection from failure and organisational standing that new ideas depend on (Graen & Uhl-Bien, 1995). Second, it treats IWB as a sequence of stages with distinct relational requirements rather than as one behaviour (Janssen, 2000). Third, it places LMX within a team and a culture, because an employee's relationship is judged against those of peers and interpreted through norms about hierarchy. Seven propositions follow from this view.

Stage specificity (G4). Producing ideas requires confidence that mistakes will not be punished, whereas championing and implementing them requires a sponsor who can allocate resources and lend legitimacy. A strong relationship can supply both, but the second depends more directly on the leader's formal position. *Proposition 1: LMX is more strongly related to idea promotion and idea realisation than to idea generation.*

Relational mechanisms (G1, G5). If LMX matters because it regulates access, then mechanisms that capture access, such as voice, sponsorship and the adequacy of information and resources, should account for variance that motivational states leave unexplained. *Proposition 2: Relational and resource-access mechanisms mediate the LMX–IWB relationship over and above motivational mechanisms such as work engagement and psychological empowerment.*

When reciprocity backfires (G1). Exchange logic implies that employees innovate in the ways their leader values. When a leader prefers stability, a close relationship may instead reward loyal conformity. *Proposition 3: The LMX–IWB relationship is stronger where employees believe their leader expects and welcomes innovation, and weaker or even negative where innovation threatens the leader's established routines.*

Differentiation and relative standing (G3). Employees compare their own relationship with those of their colleagues, and teams respond to how unequal relationships are. *Proposition 4a: Relative LMX predicts individual IWB beyond absolute LMX quality. Proposition 4b: LMX differentiation reduces team-level innovation through its effect on team climate, even when individual relationships are of high quality.*

Construct distinctiveness (G2). If many leadership styles reach IWB through LMX, their indirect effects may reflect a shared relational core rather than anything specific to each style. *Proposition 5: After a common relational-leadership factor is controlled for, the indirect effects of individual leadership styles on IWB via LMX shrink considerably.*

Cultural contingency (G6). In high power-distance settings, legitimacy and resources flow through the leader, which should make LMX more important for advancing and implementing ideas but less important for, or even inhibiting, the voicing of ideas that challenge the leader. *Proposition 6: Power distance amplifies the association of LMX with idea realisation and dampens its association with idea generation.*

Method as a boundary condition (G7). The descriptive comparison of correlations indicates that the size of the LMX–IWB association depends on how it is measured. *Proposition 7: The LMX–IWB association is smaller when IWB is rated by supervisors or measured objectively, and when the two constructs are measured at different times, than when both are self-reported at a single point in time.*

Figure 3 organises the propositions into an integrative framework with four layers. The antecedent layer contains leader behaviours, follower characteristics and features of the dyad. The relational layer represents LMX in four forms: individual quality, leader–member agreement, relative standing and team differentiation. The mechanism layer distinguishes motivational, cognitive, affective and relational or resource-access pathways, and the outcome layer separates idea generation, promotion and realisation. Moderators act at the level of the job and the individual (autonomy, self-efficacy, paradox mindset), the team (strong ties, climate), the organisation (learning culture, support for innovation) and the culture (power distance, collectivism). A methodological layer cuts across the whole framework, because the rater, the timing of measurement and the level of analysis shape the estimate that any test of a path will produce.

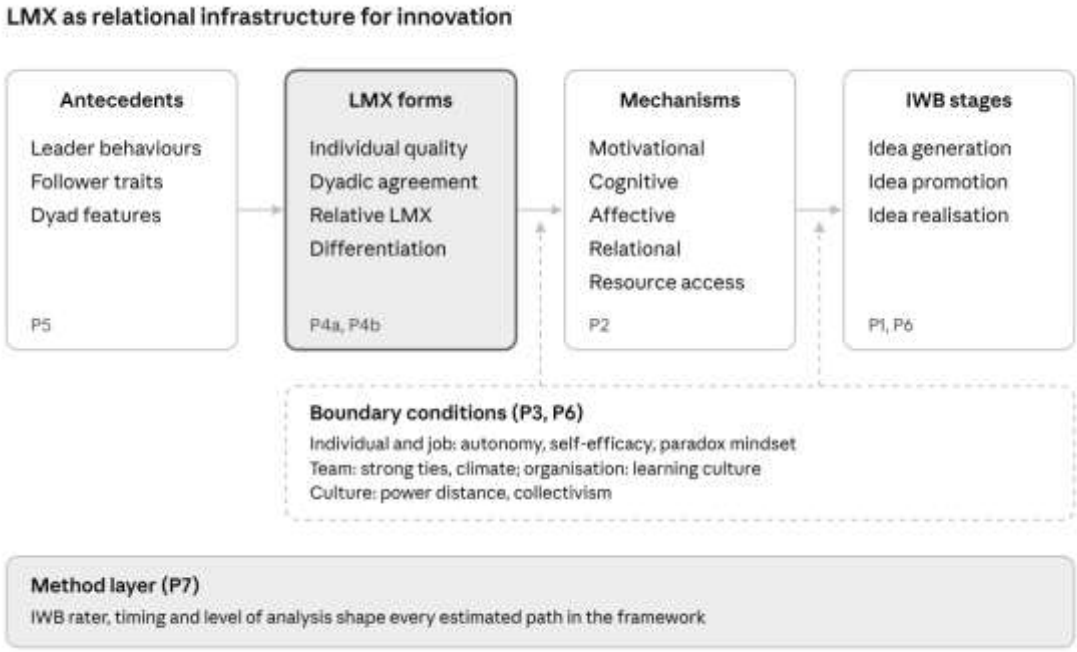


Figure 3: Integrative framework with propositions P1–P7; dashed lines mark boundary conditions and the method layer conditions every estimate

Research agenda

Table 5 turns the gaps and propositions into an agenda organised by the TCCM lenses, pairing priority questions with the approaches best suited to answer them.

Table 5: Research agenda by TCCM lens

Lens	Priority questions	Suggested approaches
Theory	Why would employees repay a leader with risky innovation? When does exchange encourage conformity rather than innovation?	Competing-theory tests of exchange, identity, self-determination and resource-access explanations; tests of Propositions 2, 3 and 5
Context	Does the LMX–IWB link differ in public organisations, SMEs, Latin America and Africa,	Comparative multi-country samples with measured cultural values; public-sector and SME

Lens	Priority questions	Suggested approaches
	and in hybrid or digital work? How do cultural values shape it?	samples; consistent reporting of sector, ownership and job type
Characteristics	Which LMX forms matter for which IWB stages? Which mechanisms are relational rather than motivational?	Relative LMX, differentiation and leader–member agreement; stage-specific IWB measures; voice, sponsorship and resource-access mediators; tests of Propositions 1, 4 and 6
Methodology	How large is the LMX–IWB effect once method variance is removed?	Supervisor-rated and objective innovation outcomes; time-lagged, experience-sampling and experimental designs; multilevel models for nested data; procedural CMB remedies; preregistration; a meta-analysis that codes rater and design as moderators (Proposition 7)

Source: authors' synthesis.

Theoretical and practical implications

The review contributes to theory in three ways. It shows that the LMX–IWB literature has grown through replication more than through theoretical development: its core theme is basic but underdeveloped, two exchange theories dominate, and fewer than three in ten samples test or extend a theory. It identifies the double role of LMX, as a relationship that produces innovation and as an almost universal conduit for leadership styles, and argues that this role raises a problem of construct distinctiveness that has been discussed for other leadership constructs but not yet for LMX in the innovation domain. And by reframing LMX as relational infrastructure, it offers testable propositions that link particular forms of LMX to particular stages of IWB through access-based mechanisms, under cultural and methodological boundary conditions.

For managers, the evidence supports building good relationships with every member of the team rather than with a favoured few, because differentiation can damage team idea generation even when individual relationships are strong (Dwertmann & Park, 2025). Leaders can make their relationships more useful for innovation by acting as sponsors: giving employees time and resources to try out ideas, carrying promising proposals upward and shielding people from the costs of failure. For human resource development units, including public-sector training agencies, the findings imply that leadership programmes should train relationship quality and sponsorship skills explicitly instead of assuming that a positive leadership style will translate into innovation by itself. In the Indonesian civil service, for example, such programmes could pair relationship-building modules with opportunities for staff to test service improvements under a supervisor's sponsorship. Because public organisations are nearly absent from the evidence base, these programmes should evaluate their effects with supervisor-rated or objective innovation outcomes rather than self-reports.

CONCLUSION

This review asked how research on LMX and IWB has developed and how it theorises, contextualises and tests their relationship. The answer is a field that knows the link exists far better than it knows why. The bibliometric analysis shows a young literature spread over 120 sources, whose central theme is shared by almost every study but remains internally underdeveloped. The TCCM synthesis shows that most samples report a positive direct or indirect effect of LMX, yet this agreement rests on a narrow base: two exchange theories, LMX understood as one member's judgement of one relationship, IWB measured as a single composite, samples drawn mostly from South and East Asia, and ratings gathered from one employee at one moment. When supervisors rather than employees judge innovation, the association becomes much weaker, so part of what the field has treated as a leadership effect may in fact be a measurement effect.

The review brings the intellectual structure of the field and the content of its primary studies into a single picture, so that each gap is traced to evidence instead of being asserted. It shows that the gaps reinforce one another, which helps to explain why replication has yielded little theoretical progress. And it reframes LMX as relational infrastructure for innovation, a relationship whose value lies in the access it gives employees to safety, sponsorship, resources and legitimacy at every phase of innovating, with seven propositions that make this view testable. For practice, leaders support innovation less

through general closeness than by opening specific doors at specific moments, for the whole team rather than a favoured few. For research, the priorities are stage-specific measures of IWB, relational and differentiation-based forms of LMX, settings beyond Asia and the private sector, and designs that separate the source of LMX ratings from the source of innovation ratings.

The review has limitations. The search covered Scopus alone and was restricted to English-language publications, so studies indexed elsewhere or written in other languages are missing. The keyword search captured records that mention LMX and IWB in their titles, abstracts or keywords and may have missed studies that report the relationship only in their tables. Twenty-nine of the 106 reports sought could not be obtained; they were less cited and less often open access than the assessed reports, although they did not differ in publication year or source. Data extraction was assisted by AI and verified by a single author, and a blind manual re-coding of 13% of the samples reached 70% agreement, with the lowest agreement for common-method remedies and depth of theory use, so findings on these two variables call for extra caution. Keyword maps are sensitive to cleaning and parameter choices, and because 2026 was incomplete at the time of the search, trends at the end of the series should be read carefully. Finally, the comparison of correlations by rater and design is descriptive: it uses medians from 44 samples, does not weight by sample size and cannot separate method effects from other differences between studies. Studies that address these points would move the field from confirming the LMX–IWB link to explaining it.

DECLARATION OF GENERATIVE AI USE

While preparing this article, the authors used Claude (Anthropic) to support the extraction of data from the reviewed studies. The authors checked all extracted data against the full texts, independently re-coded a random subsample, revised the entire manuscript and accept full responsibility for its content.

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