

Contracting and managerial decision-making: a bibliometric mapping of the field and the place of Morocco

Faissal EDDAOUDI 

Research Laboratory in Commerce and Management (LARCOGE), National School of Business and Management, Ibn Tofail University, Kénitra, Morocco.

Mohamed BAAJJI 

Research Laboratory in Commerce and Management (LARCOGE), National School of Business and Management, Ibn Tofail University, Kénitra, Morocco.

Abstract. Contracts are now regarded as a major coordination instrument in organizations, and their influence on managerial decision-making constitutes an active yet dispersed research field. To the best of our knowledge, no previous bibliometric study has provided an integrated mapping of research on contracting and managerial decision-making while simultaneously examining the Moroccan context. Following a PRISMA-compliant selection protocol applied to Scopus and Web of Science, a corpus of 533 articles published between 1984 and 2026 (partial year) was assembled, including 171 related to the Moroccan and North African context, and analyzed with VOSviewer and Python. The results reveal a fast-growing field, structured into seven thematic clusters mirroring two distinct theoretical paradigms, namely the contract as a control device and the contract as a social relationship, and driven by a three-wave temporal dynamic. Most notably, they highlight a structural disconnection between the Moroccan cluster, centred on corporate governance in emerging markets, and the decision-making and behavioural clusters, with trust appearing as the only bridging concept between these sets. The article thereby documents a precise literature gap and derives a research agenda for studying the link between contracting and managerial decision behaviour in Moroccan firms.

Keywords: *bibliometric analysis; VOSviewer; PRISMA; contracting; managerial decision-making; Morocco.*

1. Introduction

Since the seminal contributions of Jensen and Meckling (1976) and Williamson (1985), the firm has largely been analysed as a "nexus of contracts", and contracting, understood as the formalisation of reciprocal commitments within and between organizations, has spread throughout managerial practice: performance agreements, pay-for-performance schemes, outsourcing and alliances. In parallel, a growing stream of research examines what these contractual devices do to decision-makers. The literature on relational contracts (Macneil, 1980; Poppo and Zenger, 2002), on the psychological contract (Rousseau, 1995) and on the coordination functions of contracts (Schepker, Oh, Martynov and Poppo, 2014) has shifted the analysis from contractual structure towards actor behaviour, and recent meta-analytic work confirms the empirical vitality of this stream (Crosno, Dahlstrom, Liu and Tong, 2021). Located at the intersection of organizational economics, strategy and organizational behaviour, this field has developed in a scattered manner, across varied journals and disciplinary traditions, without, to the best of our knowledge, any systematic mapping of its structure, nor any examination of the place occupied within it by emerging contexts such as Morocco.

Such a mapping serves a twofold purpose. For the academic community, it objectifies the intellectual structure of a fragmented field and identifies its dense areas and its blind spots. For Moroccan management research, currently expanding rapidly, it locates national scholarly production within the international landscape and provides an empirical foundation for future research agendas.

Bibliometric analysis is the appropriate tool for this purpose: by combining performance analysis (volumes, citations, outlets) with science mapping (co-occurrence networks), it offers a reading of a corpus that is simultaneously quantitative and structural (Zupic and Čater, 2015; Donthu, Kumar, Mukherjee, Pandey and Lim, 2021).

Existing literature reviews in this area remain partial: they have focused on the psychological contract (Rousseau, 1995), on the coordination and adaptation functions of contracts (Schepker et al., 2014), or on contractual and relational governance in exchange relationships (Crosno et al., 2021), but none provides an integrated bibliometric mapping jointly covering contracting, managerial decision-making, the intellectual structure of the field and the Moroccan context. Moreover, narrative reviews are ill-suited to a field scattered across 406 distinct journals and four theoretical traditions, since they cannot objectify its structure, measure the distance between its communities or track its emerging fronts. Consequently, despite the growing number of empirical studies, the intellectual structure of this research field remains fragmented, and no previous bibliometric study has provided an integrated mapping of its evolution, thematic organization and emerging research fronts while simultaneously examining the Moroccan context. This is precisely the gap the present study addresses.

The research question addressed in this article is therefore simple and descriptive: what is the structure of research devoted to the link between contracting and managerial decision-making, and what place does the Moroccan context occupy within it? It is broken down into four sub-questions: (RQ1) how has scholarly production in the field evolved over time? (RQ2) what are its publication outlets and its structuring references? (RQ3) what is the thematic structure of the field and how is it changing? (RQ4) where and how does Morocco appear in this mapping?

This study makes three contributions. On the theoretical level, it provides, to the best of our knowledge, the first integrated bibliometric mapping of the intellectual structure of the contracting/decision-making field jointly examining the Moroccan context, shows that it is organized around two paradigms, namely the contract as a control device and the contract as a social relationship, and identifies trust as the sole bridging concept between them. On the methodological level, it combines a PRISMA selection protocol, the joint use of Scopus and Web of Science, VOSviewer mapping and an independent Python replication, thereby offering a transparent and reproducible design with explicit cross-validation of its results. On the contextual level, it objectifies the peripheral position of Morocco within this literature, documents its disconnection from the decisional and behavioural clusters, and derives a concrete research agenda for the national management research community.

The remainder of the article is organized in four sections: the theoretical foundations of the field under study (section 2), the methodology of corpus construction and analysis (section 3), the bibliometric results (section 4), and the discussion of findings, implications, limitations and the resulting research agenda (section 5).

2. Theoretical foundations: two paradigms of the contract

Research on the link between contracts and managerial decision-making has developed around two paradigms which, although they share a common object, rest on opposing conceptions of the nature of the contract and of the decision-maker. The first views the contract as a control device intended to discipline an agent assumed to be opportunistic; the second conceives it as the support of a social relationship grounded in reciprocity and trust. This division, set out here on theoretical grounds, will be empirically confirmed by the mapping (section 4).

a. The contract as a control device

Agency theory (Jensen and Meckling, 1976) constitutes the foundation of this first paradigm. It conceives the firm as a nexus of contracts and makes the contract the central mechanism for disciplining decisions: because the interests of principal and agent diverge and information is

asymmetric, the contract, through incentive compensation, accountability obligations and monitoring devices, aims to align managerial decisions with organizational objectives.

Transaction cost economics (Williamson, 1985) extends this logic by situating the contract at two levels of decision reasoning: upstream, the choice of governance structure is itself a major decision, arbitrated according to asset specificity and uncertainty; downstream, the contractual form adopted shapes subsequent decisions. Bounded rationality (Simon, 1947) renders every contract incomplete, and opportunism makes that incompleteness hazardous.

Incomplete contract theory (Grossman and Hart, 1986; Hart and Moore, 1990) radicalizes this insight: since no contract can anticipate every contingency, the decisive question becomes the allocation of residual decision rights. The manager's effective decision power is therefore measured not by what the contract explicitly grants, but by what it leaves open.

This paradigm has fostered a substantial stream of analytical modelling, drawing on game theory and contract design to determine optimal incentive structures. As the bibliometric analysis will show, this stream constitutes one of the largest components of the contemporary field.

b. The contract as a social relationship

A second paradigm shifts attention from contractual structure towards the relationship and the psychology of the decision-maker, breaking with the assumption of generalized opportunism.

Macneil (1978, 1980) shows that every exchange lies on a continuum ranging from the discrete contract, a one-off and fully specified transaction, to the relational contract, a durable and incompletely specified relationship governed by shared norms of reciprocity, flexibility and solidarity. From this perspective, it is relational norms, rather than written clauses, that govern day-to-day decisional adjustments.

Social exchange theory (Blau, 1964) provides the micro-sociological foundation of this reading: unlike economic exchange, governed by explicit and simultaneous obligations, social exchange rests on diffuse and unspecified obligations deferred over time, whose fulfilment depends on trust between the parties. Cropanzano and Mitchell (2005), whose review ranks among the most cited works in the corpus analysed here, demonstrate the fruitfulness of this framework for understanding employment relationships and organizational behaviour.

It is on this basis that Rousseau (1989, 1995) conceptualizes the psychological contract: the set of individual beliefs regarding reciprocal obligations between the employee or the manager and the organization, beliefs that appear in no document yet powerfully shape behaviour. Perceived breach of these implicit promises erodes commitment and steers decisions towards withdrawal or defensive caution.

Trust constitutes the transversal concept of this paradigm. Mayer, Davis and Schoorman (1995) propose its benchmark integrative model, defining trust as the willingness to accept vulnerability based on positive expectations of another party's behaviour, and identifying three antecedents: perceived ability, benevolence and integrity. Fulmer and Gelfand (2012) subsequently systematize its multilevel analysis. Within contractual relationships, trust operates as a partial substitute for formal safeguards, but also as a condition of their effectiveness.

c. An emerging dialogue, a dispersed literature

These two paradigms are not entirely unaware of one another. Poppo and Zenger (2002) establish that formal contracts and relational governance function as complements rather than substitutes, a finding validated on a large scale by the meta-analysis of Cao and Lumineau (2015), covering 149 studies and more than thirty thousand interorganizational relationships. Schepker, Oh, Martynov and Poppo (2014), for their part, document a shift in the field, from the contract conceived as safeguard towards

the contract conceived as an instrument of coordination and adaptation, that is, as a support for the joint decision-making process of the parties.

Such integrative work nonetheless remains a minority. Developed within distinct disciplines, whether financial economics, organizational economics, microeconomic theory or organizational behaviour, and published in separate journals, the two paradigms rely on largely incommensurable methods: analytical modelling on one side, survey research and case studies on the other. This dispersion makes the state of the field difficult to grasp through conventional review methods and justifies recourse to bibliometric analysis, which alone can objectify the structure of these communities, their connections and their blind spots.

3. Research methodology

a. Corpus construction: a PRISMA-compliant protocol

Corpus construction follows the PRISMA 2020 guidelines (Page et al., 2021), adapted to a bibliometric purpose. Two complementary corpora were assembled: a core corpus targeting the intersection of contractual concepts (contractual governance, relational, psychological, incomplete and formal contracts) and decisional concepts (managerial decision-making, decision autonomy and rights, managerial discretion), and a contextual corpus covering Morocco and North Africa. Queries were executed in Scopus and Web of Science Core Collection; data for 2026 are therefore partial and must be interpreted as such in the temporal analyses. Regarding the contextual corpus, publications were retained where Morocco, the Maghreb or the North Africa region constituted the main empirical setting or an explicit object of the study, with a business management dimension (governance, decision-making, contracting, organization); works belonging to other fields (natural resources, education, migration, sectoral public policy) were excluded. The complete queries, as executed, are reproduced in Appendix 1 for reproducibility purposes. Table 1 summarizes the protocol.

Scopus and Web of Science were selected as they are the two reference databases for bibliometric research in management. Scopus offers the broadest coverage of business and management journals, while Web of Science, the historical citation index, is known for its selectivity and the quality of its metadata. Using them jointly widens coverage, reduces the source bias inherent in relying on a single database, and follows the recommendations of Zupic and Čater (2015) and Donthu et al. (2021). Records common to both databases were subsequently identified and removed during deduplication, as described below.

Table 1: Corpus construction protocol

Parameter	Specification
Databases	Scopus; Web of Science Core Collection
Period covered	1975–2026 (earliest article retained: 1984)
Fields searched	Title, abstract, keywords (TITLE-ABS-KEY / TS)
Keywords relating to contracts	"contractual governance", "relational contract", "psychological contract", "contract design", "incomplete contract", "formal contract", "contractualization/contractualisation"
Keywords relating to decision-making	"managerial decision*", "decision-making", "managerial discretion", "decision autonomy", "decision rights"
Contextual corpus	("contract*" OR "governance") AND ("decision" OR "management") AND ("Morocco" OR "Maghreb" OR "North Africa")
Document types	Peer-reviewed articles and review articles
Languages	English, French
Identification	1,299 records (core: Scopus 191, WoS 425; contextual: Scopus 245, WoS 438)
Deduplication	220 duplicates removed (DOI then normalized titles) → 1,079 records
Screening	Examination of titles, abstracts and keywords; 546 exclusions under ten traceable criteria (outside management scope, ineligible document types, technical literatures: construction, health, agriculture, analytical supply chain models, blockchain, financial contracts)
Final corpus	533 articles (core corpus: 362; Moroccan contextual corpus: 171)

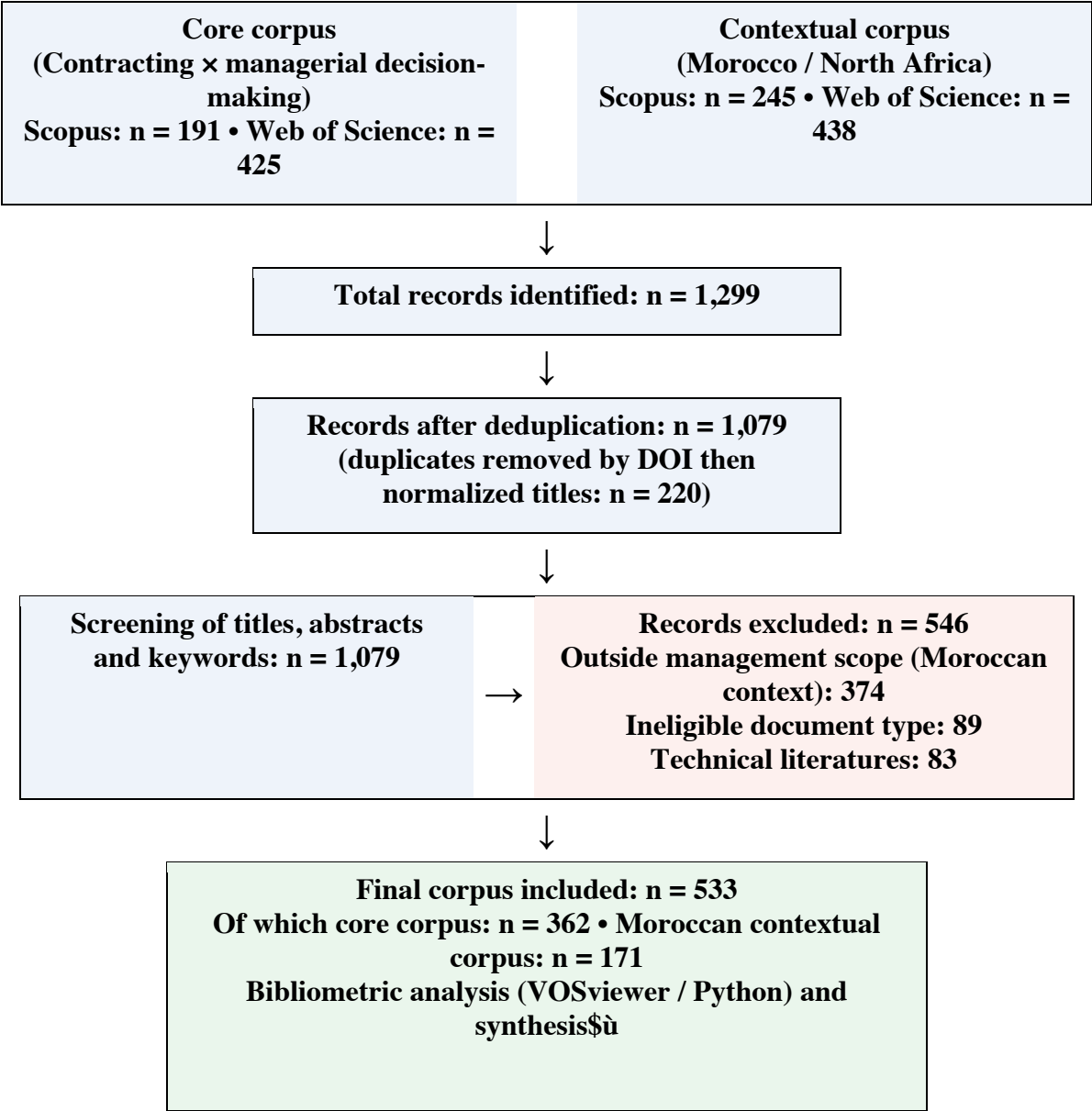
Source: Authors.

It should be noted that a preliminary broader query, including the generic term "contract*", returned 3,148 documents in Scopus, overwhelmingly from technical fields (construction, energy markets, logistics optimization); narrowing to precise contractual concepts reduced this volume to 191 documents. This gap is itself a first finding: the literature genuinely bridging contracts and managerial decision-making is a narrow subset within an ocean of technical work on contracts. The choice of a narrower query built on established contractual concepts reflects a deliberate trade-off between precision and exhaustiveness, whose terms can be quantified. Even after narrowing, 7.7% of the records retained by the query still belonged to technical literatures and had to be discarded at screening: the noise rate of the broader query, extrapolated from this proportion and from the composition of the top results, would have exceeded three quarters of the corpus. Conversely, the risk of excluding relevant work remains circumscribed, since the concepts retained cover the theoretical families that the co-citation analysis subsequently identifies as structuring (section 4.c): no major theoretical corpus of the field is therefore absent from the query. This trade-off, verified through a sensitivity test, is discussed in section 5.e.

Treatment strategy for the two corpora. Constructing two distinct corpora and then analysing them jointly calls for explicit justification. Three reasons underpin this choice. First, the aim of the study is not merely to describe the international field, but to position Moroccan production relative to it: a relative positioning can only be established by projecting both sets into a shared co-occurrence space, since separate analyses would produce two non-comparable maps. Second, merging the corpora is precisely what allows the connection hypothesis to be tested: had Moroccan work mobilized the concepts of the contract/decision field, its keywords would link to those of the core corpus and the

two sets would form intertwined clusters; it is the observed absence of such links that constitutes the finding. Third, this strategy is reversible and controlled: separate analyses were conducted in parallel and are reported in section 4.g, allowing verification that the merger creates no artefact. Table 4 presents these results, which confirm the robustness of the approach: the two sub-corpora share only eight frequent keywords out of eighty-nine, none of which belongs to the contractual or decisional domain.

Figure 1: PRISMA flow diagram of corpus construction



Source: Authors, following the PRISMA 2020 guidelines (Page et al., 2021).

b. Bibliometric methods and tools

Following the recommendations of Donthu et al. (2021), the analysis combines two families of techniques. Performance analysis describes the field's output: annual evolution, publication outlets, most cited articles. Science mapping reveals its intellectual structure through author keyword co-occurrence analysis, which identifies themes and their proximities: two keywords frequently appearing in the same articles are considered thematically linked, and clustering algorithms group strongly connected keywords into thematic communities.

Mapping was performed with VOSviewer (van Eck and Waltman, 2010), using the following parameters: unit of analysis = author keywords; counting method = full counting; minimum occurrence threshold = 4; application of a normalization thesaurus merging lexical variants (singular/plural, synonyms, MENA geographical variants); clustering resolution = 1.00. For triangulation purposes, the same analysis was replicated in Python (pandas and networkx libraries, community detection through modularity maximization): the convergence of the structures obtained with both tools strengthens the robustness of the identified clusters. Data exported from Scopus and Web of Science were harmonized into a common schema prior to analysis. Duplicates across databases were removed in two successive passes, first on DOIs, then on normalized titles (removal of case, accents and punctuation). Lexical variants of keywords, whether singular and plural forms, competing spellings, acronyms or synonyms (for instance "MENA", "MENA countries" and "Middle East and North Africa"), were merged using a manually constructed thesaurus, in order to improve the quality and legibility of co-occurrence networks (Mukherjee, Lim, Kumar and Donthu, 2022). VOSviewer's temporal overlay visualization, which colors each keyword according to the average publication year of the articles using it, was finally employed to analyse the field's dynamics, and cluster interpretation follows the sensemaking approach recommended by Lim and Kumar (2024). Overall, combining a PRISMA selection protocol, VOSviewer mapping and an independent Python replication provides the analysis with a threefold guarantee of transparency, reproducibility and robustness, each processing step being documented and verifiable; the normalization thesaurus, the processing scripts and the list of the 533 references in the final corpus are available from the authors upon request.

4. Results

Table 2 presents the general characteristics of the corpus analyzed.

Table 2: Descriptive statistics of the corpus

Indicator	Value
Number of articles	533 (core corpus: 362; Moroccan contextual corpus: 171)
Period covered	1984–2026 (2026 data partial)
Distinct journals	406
Distinct authors	1,411
Citations per article (mean / median)	57.7 / 9.0
Distinct author keywords (before thesaurus)	1,832
Articles reporting author keywords	468 (87.8%)
Total citations received	30,757
h-index of the corpus	76
Never-cited articles	84 (15.8%)
Authors per article (mean)	2.78
Single-authored articles	17.6%
Articles with three or more authors	53.7%

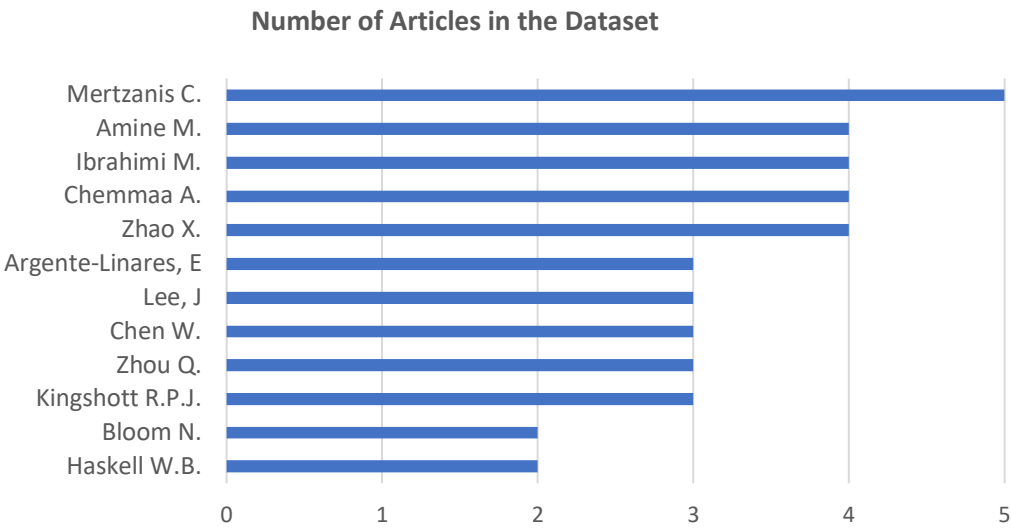
Source: Authors, based on Scopus/Web of Science exports.

The wide gap between mean (57.7) and median (9.0) citations reflects a highly skewed distribution, typical of bibliometric corpora: a few heavily cited references coexist with a majority of recent, still

lightly cited articles, 15.8% of which have received no citation at all. The corpus h-index of 76 nonetheless attests to a core of firmly established work. The collaboration regime is predominantly collective, with 2.78 authors per article on average and 53.7% of articles signed by three or more authors, against only 17.6% single-authored contributions, which indicates a field where research is organized in teams, often interdisciplinary. Finally, the dispersion across 406 distinct journals for 533 articles, a ratio of 1.3 articles per journal, confirms the strongly distributed character of this intersecting domain.

In terms of individual productivity, no author dominates the field: the most prolific contributor signs five articles, and only ten authors sign three or more (figure 2). This absence of a tutelary figure, consistent with the dispersion of outlets, characterizes an intersecting field where contributions come from authors trained in different specialties rather than from an established school. Notably, several researchers working on the Moroccan and North African context rank among the most prolific authors, an indication of the vitality of this national community.

Figure 2: Most prolific authors in the corpus

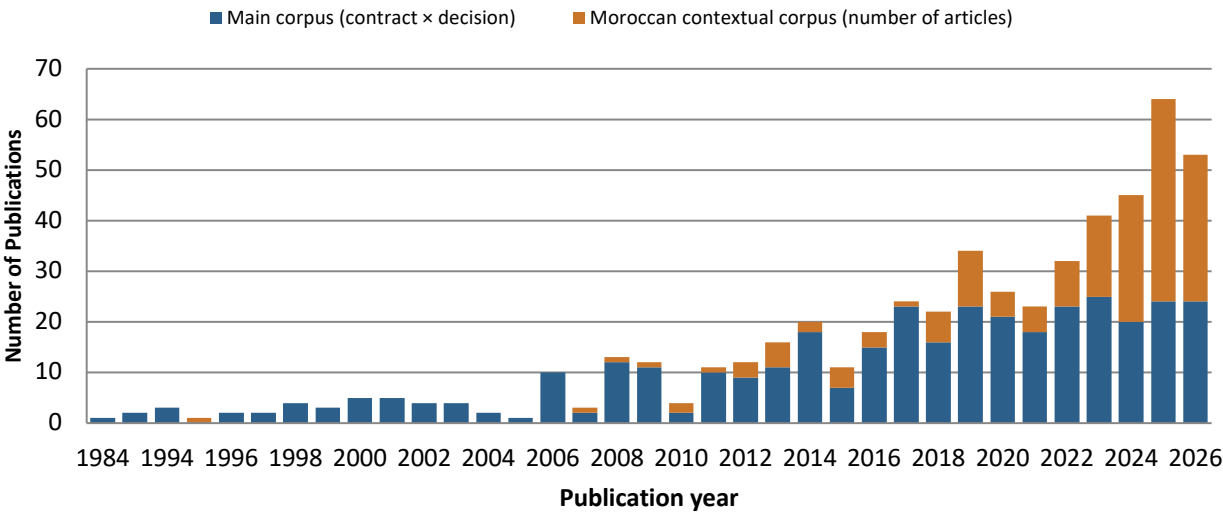


Source: Authors, based on Scopus/Web of Science exports.

a. Strong and predominantly recent growth (RQ1)

The corpus spans 1984 to 2026, but its temporal distribution is highly asymmetric: 73.7% of articles were published after 2015 and 53.3% after 2020 (figure 3). The field thus experiences a twofold impetus: steady growth from the mid-2000s, driven by the consolidation of work on the complementarity between contractual and relational governance (Poppo and Zenger, 2002; Cao and Lumineau, 2015), followed by marked acceleration after 2018, to which the Moroccan and North African contextual corpus contributes increasingly. Moroccan literature in this field is almost entirely posterior to 2015: it is a young literature in a phase of rapid expansion.

Figure 3: Annual evolution of corpus publications (n = 533)

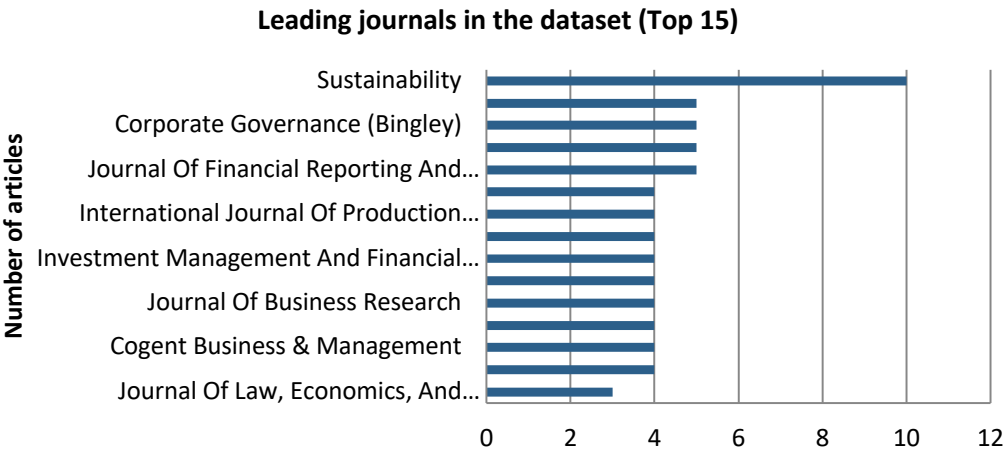


Source: Authors, based on Scopus/Web of Science exports.

b. Publication outlets and structuring references (RQ2)

The corpus's publication outlets attest to the field's disciplinary fragmentation (figure 4): they include generalist management journals (Journal of Management, Management Science, Journal of Business Research), governance journals (Corporate Governance; Journal of Financial Reporting and Accounting), journals in economics and the law of organizations (Journal of Law, Economics, and Organization) and outlets oriented towards emerging markets (Emerald Emerging Markets Case Studies, Problems and Perspectives in Management). No journal concentrates more than a dozen articles from the corpus: the field has no "home journal", which is characteristic of an intersecting domain still in the process of institutionalization.

Figure 4: Leading journals in the corpus (top 15)



Source: Authors, based on Scopus/Web of Science exports.

Analysis of the most cited articles (table 5) confirms the field's dual ancestry. It includes, on the one hand, the transversal theoretical anchors of social exchange (Cropanzano and Mitchell, 2005), organizational trust (Fulmer and Gelfand, 2012) and governance (Tirole, 2001), and, on the other, the foundational works of the contract/decision intersection itself: Mustakallio, Autio and Zahra (2002)

on the joint effects of contractual and relational governance on strategic decision-making in family firms, and Schepker et al. (2014) on the coordination and adaptation functions of contracts. The presence of these two articles among the most cited in the corpus validates the relevance of the intersection under study while underlining its relative age: the structuring references of the contract/decision crossover date from the 2000s and 2010s, without any successor of comparable stature having yet emerged.

Table 5: The ten most cited articles in the corpus

First author (year)	Abbreviated title	Journal	Citations
Cropanzano (2005)	Social exchange theory: An interdisciplinary review	Journal of Management	9,398
Fulmer (2012)	At what level (and in whom) we trust	Journal of Management	953
Ford (2008)	Resistance to change: The rest of the story	Academy of Management Review	946
Tirole (2001)	Corporate governance	Econometrica	832
Janssen (2017)	Factors influencing big data decision-making quality	Journal of Business Research	666
Korobkin (2000)	Law and behavioral science	California Law Review	612
Mustakallio (2002)	Relational and contractual governance in family firms	Family Business Review	424
Bochner (1994)	Power distance, individualism-collectivism and job attitudes	J. of Cross-Cultural Psychology	393
Schepker (2014)	The many futures of contracts	Journal of Management	359
De George (2016)	A review of the IFRS adoption literature	Review of Accounting Studies	330

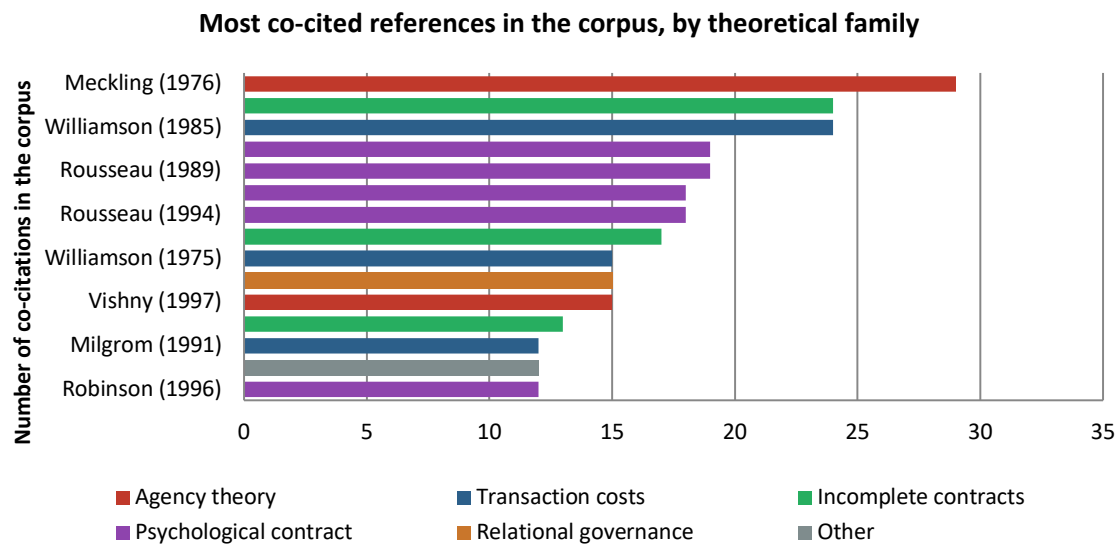
Source: Scopus/WoS data, corpus of the study.

c. Intellectual foundations: co-citation analysis (RQ2)

Alongside keyword co-occurrence analysis, which reveals the current thematic structure, a reference co-citation analysis brings to light the intellectual foundations on which the field has been built. Two references co-cited within the same article are considered intellectually linked; the frequency of such co-citations identifies structuring works. This analysis covered the 256 corpus articles whose cited references were exploitable in the exports.

The results (figure 5) are unambiguous: the most co-cited references are Jensen and Meckling (1976) with 29 co-citations, Grossman and Hart (1986) and Williamson (1985) with 24 each, Rousseau (1989, 1994, 1995) accumulating 55 co-citations across her three major contributions, Robinson (1996, 1997) on psychological contract breach, Hart and Moore (1990) with 17, Williamson (1975) with 15 and Poppo and Zenger (2002) with 15.

Figure 5: Most co-cited references in the corpus, by theoretical family



Source: Authors, based on cited references from Scopus/Web of Science exports.

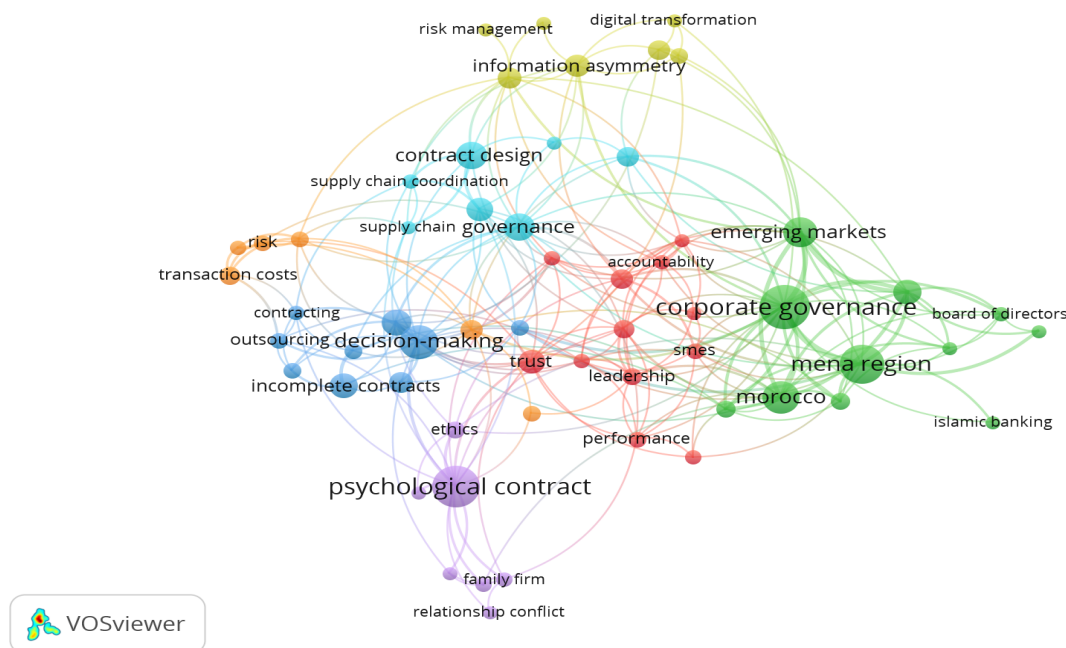
This result is of twofold interest. In validation terms, it empirically confirms the division set out in section 2. References belonging to the control paradigm, namely Jensen and Meckling, Williamson, Grossman and Hart as well as Hart and Moore, and those belonging to the social relationship paradigm, namely Rousseau, Robinson and Macneil, appear with comparable weights, without any other major theoretical corpus emerging. Notably, these two sets of references are rarely co-cited with one another: articles drawing on Jensen and Meckling seldom cite Rousseau, and vice versa, which objectifies at the level of intellectual foundations the separation observed at the level of keywords. In structural terms, it reveals that these foundations are old: apart from Poppo and Zenger (2002), all structuring references date from 1976 to 1997. The field therefore rests on a stable theoretical base but has produced no new unifying reference for a quarter of a century, which sheds light on its current fragmentation and lends particular interest to recent integration attempts (Schepker et al., 2014; Cao and Lumineau, 2015).

d. A thematic structure in seven clusters (RQ3)

The author keyword co-occurrence map (figure 6) reveals seven clearly differentiated thematic clusters, whose composition faithfully mirrors the major theoretical families of contract research.

Cluster 1, "governance in emerging markets" (corporate governance, MENA region, Morocco, emerging markets, board of directors, islamic banking), is the largest; it gathers literature examining corporate governance, boards and finance in emerging economies. Cluster 2, "decision-making and incomplete contracts" (decision-making, incomplete contracts, contracting, outsourcing), constitutes the theoretical core of the contract/decision link, in the lineage of incomplete contract theory. Cluster 3, "psychological and relational contract" (psychological contract, ethics, family firm), is organized around the most frequent node on the entire map, the psychological contract, and carries the behavioural side of the field. Cluster 4, "trust, leadership and performance" (trust, leadership, accountability, SMEs, performance), aggregates work on the relational drivers of performance. The last three clusters are more specialized: cluster 5, "analytical contract design" (contract design, supply chain coordination), cluster 6, "transaction costs" (transaction costs, risk), and cluster 7, "information asymmetry and digital transformation" (information asymmetry, risk management, digital transformation).

Figure 6: Author keyword co-occurrence map (n = 533) / color: thematic cluster



Source: Authors, using VOSviewer.

Table 3 summarizes the composition and interpretation of the seven clusters.

Table 3: Summary of the field's thematic clusters

Cluster	Theme	Main keywords	Interpretation / theoretical family
1	Governance in emerging markets	corporate governance, Morocco, MENA region, emerging markets, board of directors, Islamic banking	Corporate governance and finance in emerging economies
2	Decision-making and incomplete contracts	decision-making, incomplete contracts, contracting, outsourcing	Incomplete contract theory and decision rights
3	Psychological and relational contract	psychological contract, ethics, family firm	Behavioural approach to contracting
4	Trust, leadership and performance	trust, leadership, accountability, SMEs, performance	Relational drivers of performance
5	Analytical contract design	contract design, game theory, supply chain coordination	Economic modelling of contract design
6	Transaction costs	transaction costs, risk, uncertainty	Transaction cost economics
7	Information asymmetry and digital	information asymmetry, risk management, digital transformation	Agency theory and digital transformation

Source: VOSviewer/Python analysis, prepared by the authors.

Beyond cluster composition, the network's structural properties carry a substantial share of the information. The network comprises 49 nodes and 65 edges, for a density of 0.055, which means that

only 5.5% of possible links are realized and signals a thematically fragmented field. The modularity of the partition reaches 0.564, well above the 0.3 threshold conventionally taken as evidence of a significant community structure: the clusters are therefore not algorithmic artefacts but genuine communities. Finally, the distance between clusters in the projection space is revealing: the Moroccan cluster and the behavioural cluster occupy diametrically opposed positions, spatial distance here reflecting thematic distance.

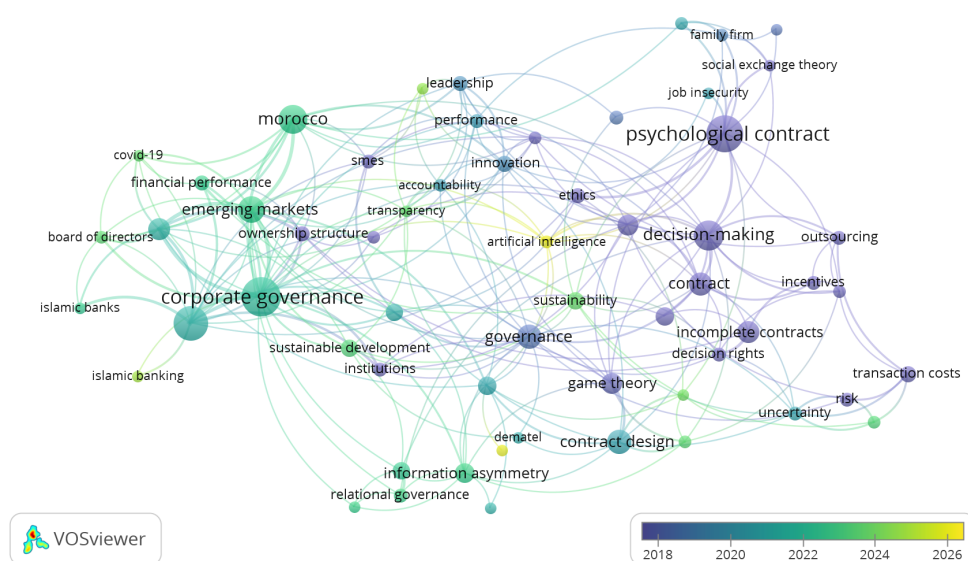
The betweenness centrality analysis, detailed in Appendix 2, refines these observations: the node "morocco", despite its high occurrence, displays very low betweenness (0.067): it is richly connected, but only within its own cluster. This measure quantitatively objectifies the article's central diagnosis.

This mapping yields two structural insights. First, the classical theoretical families of contract research, whether agency and information asymmetry, transaction costs, incomplete contracts or relational and psychological approaches, are all represented by a distinct cluster: the field's empirical structure mirrors its theoretical structure. Second, node positions reveal the field's articulations: the node "trust" occupies an interface position, midway between the contract/decision bloc (clusters 2 and 3) and the emerging-markets governance bloc (cluster 1). It constitutes the sole bridging concept, a point whose implications are drawn out in the discussion.

e. A three-wave dynamic (RQ3)

The temporal visualization (figure 7) orders these clusters into three successive waves. The first wave (average year $\approx$ 2018–2019) corresponds to the field's established base: psychological contract, decision-making, incomplete contracts and transaction costs, that is, the founding concepts, whose activity remains sustained but whose position is now consolidated. The second wave ($\approx$ 2021–2022) is that of the "governance in emerging markets" cluster, led by Morocco and the MENA region: it is the youngest and most dynamic part of the corpus. The third wave ($\approx$ 2023–2025) outlines emerging research fronts: artificial intelligence, digital transformation, islamic finance and risk management, themes only beginning to be connected to contractual and decisional concerns, even though digital technologies are already transforming contractual objects themselves, as illustrated by blockchain-based smart contracts (Wang, Lumineau and Schilke, 2022).

Figure 7: Temporal overlay of keywords / color: average publication year



Source: Authors, using VOSviewer.

f. Robustness: VOSviewer / Python cross-validation

Convergence between the two analytical tools was verified explicitly rather than asserted. The independent Python replication, conducted on the same normalized data (weighted co-occurrence network, community detection through modularity maximization using the Clauset-Newman-Moore greedy algorithm), produces the following indicators: 49 nodes, 65 edges, density of 0.055, modularity of 0.564 and nine detected communities, for an average degree of 2.65.

The detailed comparison of partitions, reported in Appendix 2, establishes a high level of correspondence: the seven VOSviewer clusters are found in full within the Python partition, the latter simply isolating two additional micro-communities of two terms each ("contractual governance / relational governance" and "accountability / transparency"), which VOSviewer's resolution merges into neighbouring clusters. No term is assigned to a thematically incoherent cluster across the two tools. This stability of the partition under two distinct clustering algorithms, applied with independent parameterizations, constitutes a validation of the identified structure. Above all, the study's central result, namely the separation between the Moroccan cluster and the decisional and behavioural clusters, is reproduced identically by both tools, which rules out the hypothesis of an algorithmic artefact.

g. The place of Morocco: growing presence, peripheral positioning (RQ4)

The Moroccan and North African contextual corpus (171 articles) attests to an active national research community, several Moroccan authors ranking among the most prolific in the entire corpus, and to rapid growth, notably on the governance of family firms and its informal, relational dimension (Ouhadi and Ouzaka, 2021). Yet the mapping reveals its positioning: the node "Morocco" is structurally anchored within the "governance in emerging markets" cluster, strongly linked to corporate governance, emerging markets and MENA region, and devoid of any direct link with the nodes "decision-making" and "psychological contract". In other words, in the indexed literature, Morocco is studied as a setting for governance, finance and compliance research, never at the intersection of contracting and managerial decision behaviour. This diagnosis is confirmed by the separate analysis of the two sub-corpora (table 4), conducted as a control on the merging strategy. Their lexical profiles are almost disjoint: the core corpus is structured by "psychological contract" (36 occurrences), "decision-making" (25) and "contract design" (18), whereas the Moroccan corpus is structured by "corporate governance" (44), "MENA region" (24) and "Morocco" (24). Out of 89 frequent keywords in total, only eight are common to both sets, and none belongs to the contractual or decisional domain: they are transversal, generic terms (governance, innovation, leadership, sustainability, CSR, information asymmetry, supply chain). The separate analysis therefore reaches the same conclusion as the merged analysis, ruling out any effect of the corpus construction strategy.

Table 4: Comparative lexical profiles of the two sub-corpora

Indicator	Core corpus (n = 362)	Moroccan contextual corpus (n = 171)
Dominant keywords	psychological contract (36); decision-making (25); contract design (18); contracts (13); game theory (13); trust (12); incomplete contracts (11)	corporate governance (44); MENA region (24); Morocco (24); earnings management (14); emerging markets (14); financial performance (7); ownership structure (6)
Frequent keywords (≥ 3 occurrences)	56	41
Keywords common to both corpora	8 (governance, innovation, leadership, CSR, sustainability, sustainable development, information asymmetry, supply chain)	
Shared terms from the contract/decision domain	none	

Source: Authors, based on Scopus/Web of Science exports.

This result, convergent across VOSviewer, the Python replication and the separate sub-corpus analysis, is the study's principal empirical contribution: it transforms an intuition ("Moroccan literature on this topic is scarce") into an objectified bibliometric fact, located on the map of the field, within the limits, specified in section 5.e, of the coverage of the databases used.

5. Discussion

a. Why these separations? Three theoretical explanations

The structural finding calls for explanation. Three non-exclusive mechanisms may be advanced.

Why do the two paradigms remain separate? Co-citation analysis provides a first answer: the field's foundations are old and disciplinarily heterogeneous. Jensen and Meckling write in financial economics, Williamson in organizational economics, Hart and Moore in formal microeconomic theory, Rousseau in organizational behaviour. These traditions mobilize incommensurable methods, analytical modelling on one side and survey research on the other, and publish in distinct journals, as confirmed by the dispersion across the corpus's 406 outlets. The observed separation is therefore no bibliometric accident but the expression of a durably entrenched scientific division of labour, which no unifying reference posterior to 2002 has come to overcome.

Why is trust the only bridge? The singular betweenness position of the node "trust" is explained by its hybrid epistemological status. Trust is the only concept in the field that is simultaneously a variable in economic models (it reduces transaction costs and the need for contractual safeguards) and a psychological variable measurable at the individual level (it pertains to the perceptions and attitudes of decision-makers). This dual belonging makes it an operator of translation between the two languages: it enables relational scholars to engage with contract economists without abandoning their instruments. The work of Poppo and Zenger (2002), then Cao and Lumineau (2015) and Lumineau (2017), exploits precisely this property, which explains their position as pivotal references within the corpus.

Why does Morocco remain peripheral? Three factors converge. An agenda effect first: Moroccan management research became structured recently, almost the entire sub-corpus postdating 2015, around the priorities of its institutional environment (corporate governance, accounting standardization, access to finance), which call for work on boards of directors rather than on individual decision processes. A method effect next: behavioural questions require costly field-access

arrangements that are difficult to negotiate within a fabric of family SMEs with limited openness to research, whereas governance data are publicly available. A visibility effect finally: French-language qualitative work on Moroccan decision practices appears predominantly in national journals not indexed in Scopus and Web of Science, and therefore remains invisible to a mapping based on these databases.

b. The Moroccan gap and the research agenda

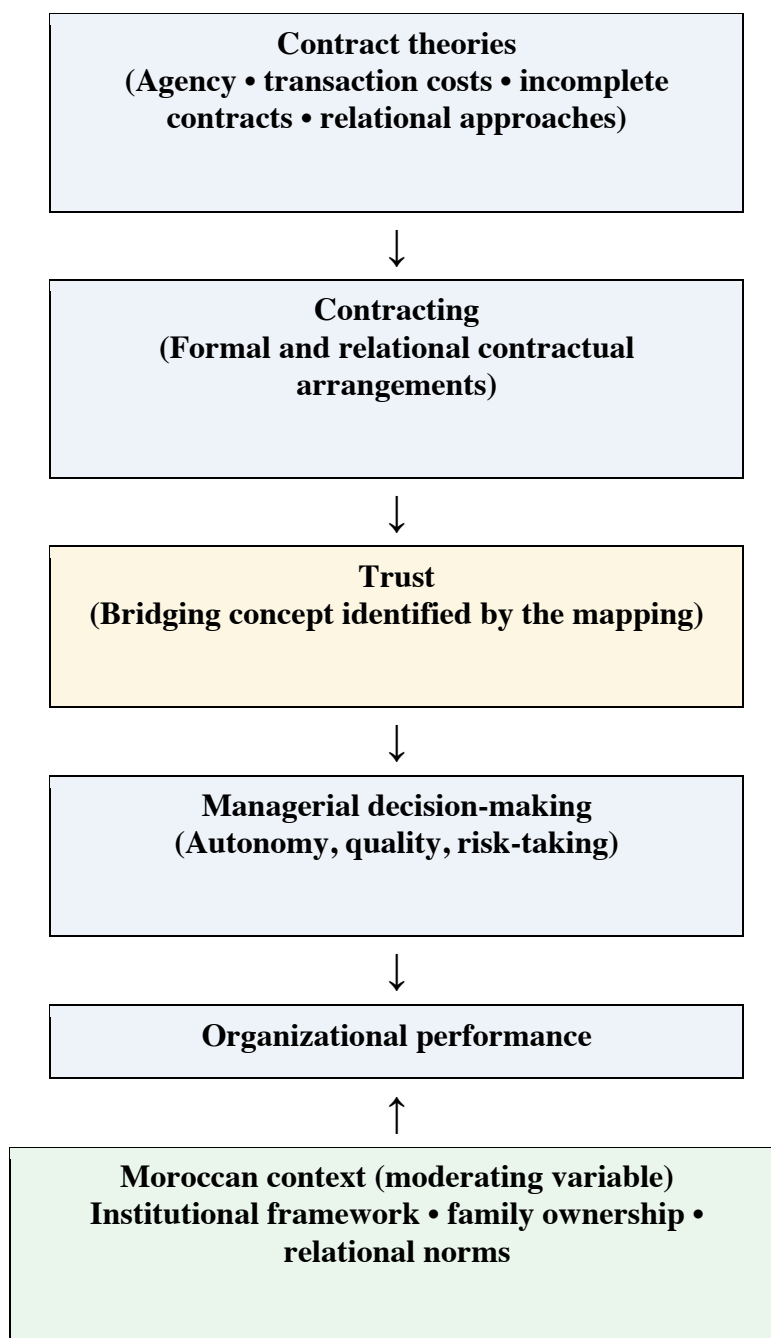
The disconnection of the Moroccan node from the decisional and behavioural clusters outlines, in negative, a research agenda for the Moroccan management research community. Four avenues follow directly. The first consists in importing the concepts of the behavioural cluster into the Moroccan setting, by studying the psychological contract and its breaches among managers of Moroccan firms, particularly family firms, where the employment relationship blends formal registers with personal loyalties. The second aims to exploit the bridging concept identified by the map, by analysing the role of trust in managers' arbitration between formal contractual mechanisms and relational arrangements, in the lineage of work conducted in other emerging economies (Zhou and Poppo, 2010). The third proposes replicating in the Moroccan context the field's foundational research designs, foremost among them that of Mustakallio et al. (2002) on the joint effects of contractual and relational governance on strategic decision-making in family firms. The fourth calls for connecting the emerging fronts of the third wave, namely digitalization and artificial intelligence, to Moroccan contractual and decisional questions.

c. Theoretical implications

Beyond the diagnosis, the mapping enriches our understanding of how contract theories articulate with one another. First, it establishes empirically that the field's social structure mirrors the theoretical division into two paradigms: the contract as a control device on the one hand, the contract as a social relationship on the other, each forming distinct research communities. These theories therefore function less as competing paradigms than as parallel research programmes, with differentiated objects and methods. Second, the interface position of trust suggests the path towards their integration: it is through trust that formal approaches (incentives, decision rights) and relational approaches (psychological contract, norms) can be articulated, extending the complementarity thesis (Poppo and Zenger, 2002; Cao and Lumineau, 2015) to the level of the field's very structure. Third, the disconnection of the emerging-markets cluster indicates that this integration remains to be contextualized: contract theories appear here mapped as largely a-contextual, while their validity in different institutional environments remains under-explored.

These insights can be synthesized into a sequential conceptual model (figure 8), derived directly from the mapping: contract theories underpin contracting arrangements; these act on managerial decision-making only as mediated by trust, the bridging concept identified, and decisions translate into organizational performance; the Moroccan context is likely to moderate the entire chain.

Figure 8: Conceptual model derived from the bibliometric mapping



Source: Authors, based on the mapping results

d. Managerial and institutional implications

Beyond the academic community, this mapping offers guidance to four categories of actors. For executives and managers, the international knowledge most relevant to their contractual practices, whether the effects of contracts on autonomy, motivation or decision quality, exists but has not been validated in the Moroccan context, which calls for caution in importing tools designed elsewhere. For board members, the centrality of trust is a reminder that formal governance mechanisms produce their effects only when underpinned by the relational quality of executive teams. For human resource managers, the vitality of the "psychological contract" cluster signals a reservoir of tools still little exploited, notably the management of implicit promises and the prevention of perceived breaches. For policymakers, finally, the scarcity of work linking national contractual reforms to firms' decision behaviour argues for developing arrangements to evaluate such reforms.

These general orientations can be translated into concrete recommendations for each category of actor.

For firms and managers: integrate explicit relational clauses (review meetings, joint problem-solving procedures, renegotiation mechanisms) alongside formal terms; put in place trust-building routines with key partners; train managers to recognize and manage psychological contract expectations and breaches; deliberately balance control and autonomy in delegation; and, in family firms, design contracts that account for the coexistence of formal rules and personal loyalties.

For boards of directors: use contracts as strategic alignment instruments rather than mere control devices, and develop simple indicators of relational quality and trust within executive teams to complement financial and compliance metrics.

For human resource managers: measure the state of the psychological contract at regular intervals through employee surveys, set up early detection of perceived breaches, and incorporate trust and relational competencies into the evaluation of managers.

For public decision-makers: promote governance guidelines tailored to Moroccan SMEs and family firms; fund research on managerial decision-making in the national context; embed behavioural dimensions (trust, psychological contract) into corporate governance reforms rather than focusing solely on formal compliance; and encourage university-industry partnerships to give researchers access to firms.

e. Limitations

This study has six limitations. First, the corpus is restricted to Scopus and Web of Science: part of French-language Moroccan production, published in non-indexed national journals, escapes the analysis, which may underestimate the volume of local output without calling into question the finding regarding its positioning. Second, selection through examination of titles and abstracts involves an element of judgement. Third, the analysis depends on author keywords: 12.2% of articles report none, declarative practices vary with editorial policies, and authors sometimes favour the most visible terms; the thesaurus mitigates these biases without eliminating them. Fourth, despite the sensitivity test conducted, publications using alternative vocabulary may not have been identified. Fifth, since data collection took place in July 2026, figures for that year are partial. Sixth, bibliometrics describes the structure of a field without substituting for content analysis: this mapping calls for its complement, a qualitative systematic review developed in separate work.

f. Contribution of the study

In sum, this study makes three contributions. Methodologically, it proposes a complete, transparent and reproducible protocol, articulating PRISMA selection, VOSviewer mapping, independent Python replication and publication of the queries in appendix, that may serve as a model for bibliometric analyses in management research in Morocco. Theoretically, it provides, to the best of our knowledge, the first integrated bibliometric mapping of the field located at the intersection of contracting and managerial decision-making, jointly examining the Moroccan context, demonstrates that its communities mirror the theoretical families of contract research, identifies trust as their bridging concept, and derives from this a conceptual model (figure 8) available for future research. Contextually, it establishes the peripheral position of the Moroccan context within this literature, present in the field of emerging-market governance but absent from its decisional side, and derives from it a concrete research agenda.

6. Conclusion

This article has proposed, to the best of our knowledge, the first integrated bibliometric mapping of research on the link between contracting and managerial decision-making jointly examining the Moroccan context, based on a corpus of 533 articles selected under a PRISMA protocol and analysed

with VOSviewer and Python. The results establish a rapidly growing field, structured into seven clusters mirroring the theoretical families of contract research, driven by a three-wave dynamic, and traversed by a fault line: Moroccan literature, young and expanding, remains confined to the emerging-markets governance cluster, without connection to the decisional and behavioural clusters, trust constituting the sole bridging concept between these sets. For Moroccan management research, the map therefore indicates both the void to be filled and the path towards it: investing the intersection of contracting and managerial decision behaviour, mobilizing trust as the pivotal concept and family firms as the privileged setting. These results open several research perspectives on the mechanisms through which contracting influences decision behaviour in Moroccan firms.

7. References

- Blau, P. M. (1964). *Exchange and Power in Social Life*. Wiley.
- Cao, Z., & Lumineau, F. (2015). Revisiting the interplay between contractual and relational governance: A qualitative and meta-analytic investigation. *Journal of Operations Management*, 33–34, 15–42.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900
- Crosno, J. L., Dahlstrom, R., Liu, Y., & Tong, P. Y. (2021). Effectiveness of contracts in marketing exchange relationships: A meta-analytic review. *Industrial Marketing Management*, 92, 122–139.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296.
- Fulmer, C. A., & Gelfand, M. J. (2012). At what level (and in whom) we trust: Trust across multiple organizational levels. *Journal of Management*, 38(4), 1167–1230.
- Grossman, S. J., & Hart, O. D. (1986). The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy*, 94(4), 691–719.
- Hart, O., & Moore, J. (1990). Property rights and the nature of the firm. *Journal of Political Economy*, 98(6), 1119–1158.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Lim, W. M., & Kumar, S. (2024). Guidelines for interpreting the results of bibliometric analysis: A sensemaking approach. *Global Business and Organizational Excellence*, 43(2), 17–26.
- Macneil, I. R. (1978). Contracts: Adjustment of long-term economic relations under classical, neoclassical, and relational contract law. *Northwestern University Law Review*, 72(6), 854–905.
- Macneil, I. R. (1980). *The New Social Contract: An Inquiry into Modern Contractual Relations*. Yale University Press.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734.
- Mukherjee, D., Lim, W. M., Kumar, S., & Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *Journal of Business Research*, 148, 101–115.
- Mustakallio, M., Autio, E., & Zahra, S. A. (2002). Relational and contractual governance in family firms: Effects on strategic decision making. *Family Business Review*, 15(3), 205–222.
- Ouhadi, S., & Ouzaka, B. (2021). Les mécanismes de gouvernance de la famille et la transmission intergénérationnelle d'une PME marocaine : une étude exploratoire. *Moroccan Journal of Entrepreneurship, Innovation and Management*, 6(1), 24–44.

- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71.
- Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements? *Strategic Management Journal*, 23(8), 707–725.
- Rousseau, D. M. (1995). *Psychological Contracts in Organizations: Understanding Written and Unwritten Agreements*. Sage.
- Schepker, D. J., Oh, W.-Y., Martynov, A., & Poppo, L. (2014). The many futures of contracts: Moving beyond structure and safeguarding to coordination and adaptation. *Journal of Management*, 40(1), 193–225.
- Simon, H. A. (1947). *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization*. Macmillan.
- Tirole, J. (2001). Corporate governance. *Econometrica*, 69(1), 1–35.
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Wang, W., Lumineau, F., & Schilke, O. (2022). *Blockchains: Strategic Implications for Contracting, Trust, and Organizational Design*. Cambridge University Press.
- Williamson, O. E. (1985). *The Economic Institutions of Capitalism*. Free Press.
- Zhou, K. Z., & Poppo, L. (2010). Exchange hazards, relational reliability, and contracts in China: The contingent role of legal enforceability. *Journal of International Business Studies*, 41(5), 861–882.
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429–472.

Appendix 1. Bibliographic queries as executed

Query 1a. Core corpus, Scopus (191 documents):

TITLE-ABS-KEY (("contractual governance" OR "relational contract" OR "psychological contract" OR "contract design" OR "incomplete contract" OR "formal contract" OR "contractualization" OR "contractualisation") AND ("managerial decision*" OR "decision-making" OR "decision making" OR "managerial discretion" OR "decision autonomy" OR "decision rights")) AND PUBYEAR > 1974 AND PUBYEAR < 2027 AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "re")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON")) AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "French"))

Query 1b. Core corpus, Web of Science (425 documents):

TS=(("contractual governance" OR "relational contract" OR "psychological contract" OR "contract design" OR "incomplete contract" OR "formal contract" OR "contractualization" OR "contractualisation") AND ("managerial decision*" OR "decision-making" OR "decision making" OR "managerial discretion" OR "decision autonomy" OR "decision rights")) ; filtres : Document Types = Article, Review Article ; Categories = Management, Business, Economics ; Languages = English, French ; 1975–2026.

Query 2a. Contextual corpus, Scopus (245 documents):

TITLE-ABS-KEY (("contract*" OR "governance") AND ("decision" OR "management") AND ("Morocco" OR "Moroccan" OR "Maghreb" OR "North Africa")) AND (LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON"))

Query 2b. Contextual corpus, Web of Science (438 documents):

TS=("contract*" OR "governance") AND ("decision" OR "management") AND ("Morocco" OR "Moroccan" OR "Maghreb" OR "North Africa")); mêmes filtres que la requête 1b.

Note: a preliminary broader query for the core corpus, including the generic term "contract", returned 3,148 documents in Scopus; it was narrowed to precise contractual concepts in order to eliminate noise from technical literatures.*

Appendix 2. Details of the VOSviewer / Python cross-validation

The independent Python replication (weighted co-occurrence network, community detection through modularity maximization using the Clauset-Newman-Moore greedy algorithm) produces the following indicators: 49 nodes, 65 edges, density of 0.055, modularity of 0.564, nine detected communities and an average degree of 2.65. Table A2 maps the partitions obtained by the two tools.

Table A2: Comparison of VOSviewer and Python partitions

VOSviewer cluster	Python community	Representative terms	Correspondence
1. Governance in emerging markets	C1 (15 terms)	corporate governance, MENA region, Morocco, emerging markets	Complete
2. Decision-making and incomplete contracts	C2 (partial) + C5 (3 terms)	decision-making, incomplete contracts, incentives, decision rights	Complete
3. Psychological and relational contract	C2 (partial)	psychological contract, trust, contracts	Complete
4. Trust, leadership and performance	C6 (2 terms) + C2	leadership, innovation, trust	High
5. Analytical contract design	C3 (5 terms)	contract design, game theory, supply chain coordination	Complete
6. Transaction costs	C4 (4 terms)	transaction costs, risk, uncertainty, entrepreneurship	Complete
7. Information asymmetry and digital	C9 (2 terms) + isolated terms	accountability, transparency, information asymmetry	High

Source: Authors, based on the VOSviewer/Python analysis.

Betweenness centrality measures complete this control. The highest values are those of "corporate governance" (0.352), "contracts" (0.290) and "decision-making" (0.243). The node "trust" displays modest frequency yet connects communities that no other term links, a profile typical of a bridging concept. Conversely, the node "morocco", of high occurrence (weighted degree of 19), records a betweenness of only 0.067: it is richly connected, but only within its own cluster.