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A Bibliometric Analysis of Earnings Management

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ABSTRACT

Earnings management remains one of the most extensively investigated phenomena in accounting and corporate governance research, reflecting persistent scholarly concern over the reliability of financial reporting. This study conducts a bibliometric analysis to map the intellectual structure, research trends, influential publications, and collaboration patterns within earnings management scholarship indexed in the Scopus database. Data were analyzed using VOSviewer to perform keyword co-occurrence analysis, overlay and density visualization, citation analysis, co-authorship analysis, institutional collaboration mapping, and country-level distribution mapping. The results reveal three major thematic clusters: a methodological and demographic cluster associated with empirical research design, a financial-economic cluster centered on earnings, investment, and decision making, and a governance cluster dominated by earnings management, corporate governance, accruals, and agency theory. Citation analysis identifies foundational works on discretionary accrual measurement and real activities manipulation as the most influential contributions shaping the field. Co-authorship and institutional mapping reveal relatively fragmented research communities anchored by prolific scholars, while country-level analysis indicates pronounced dominance of United States-based institutions with limited international collaboration density. This study contributes a structured overview of earnings management research development and identifies research gaps concerning governance mechanisms, real activities manipulation, and cross-country institutional context for future scholarship.

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1. INTRODUCTION

Financial reporting quality has long occupied a central position in accounting and corporate governance research, largely because reported earnings serve as the primary signal that shareholders, creditors, and regulators rely upon when evaluating firm performance. Earnings management the deliberate use of managerial discretion within or around accounting standards to influence reported earnings for particular purposes represents one of the most persistent and controversial concerns confronting financial reporting research and practice.

Scholarly interest in earnings management intensified as researchers sought to reconcile divergent perspectives among accounting academics, practitioners, and regulators regarding whether such practices constitute efficient signaling or opportunistic manipulation [1]. Two principal mechanisms dominate the empirical literature: accrual-based earnings management, typically captured through discretionary accrual models that separate normal from abnormal accounting adjustments [2], and real activities manipulation, in which managers alter the timing or structure of operating, investing, or financing decisions to achieve reporting targets [3]. Both mechanisms have generated substantial and continuously expanding bodies of empirical evidence spanning several decades.

Corporate governance research has developed in close parallel with earnings management scholarship, motivated by the recognition that board composition, audit committee characteristics, and monitoring structures materially constrain managerial reporting discretion [4]. Board independence, financial expertise, and audit committee diligence have repeatedly been identified as significant determinants of the extent to which firms engage in aggressive earnings management practices [5], establishing corporate governance as one of the dominant theoretical lenses through which earnings management is examined.

Beyond governance mechanisms, earnings management research has expanded to examine capital market consequences, cross-country institutional variation, and managerial incentives underlying reporting choices. Survey-based evidence indicates that corporate executives themselves acknowledge sacrificing long-term economic value to meet short-term earnings benchmarks [6], while comparative international studies demonstrate that investor protection regimes, legal enforcement, and ownership concentration substantially shape earnings management practices across countriesle [7]. This growing diversity of theoretical framings, methodological approaches, and institutional contexts has produced an extensive but fragmented literature.

Despite the substantial volume of research addressing earnings management from accrual measurement, governance, disclosure, and cross-country perspectives, systematic bibliometric mapping of the field's intellectual structure, influential contributions, collaboration patterns, and thematic evolution remains limited. Understanding how this research domain has developed, which works and scholars have shaped its trajectory, and where research gaps persist is essential for guiding future scholarship.

To address this gap, this study conducts a comprehensive bibliometric analysis of earnings management literature indexed in the Scopus database. Using VOSviewer for network visualization, the study examines keyword co-occurrence patterns, temporal thematic evolution, citation structures, co-authorship networks, institutional collaboration, and country-level research distribution. The findings provide a structured overview of the earnings management research landscape and identify opportunities for future theoretical and empirical contribution.

2. METHODS

This study employs a bibliometric research design to examine the scientific literature on earnings management. Bibliometric analysis provides a systematic, quantitative method for mapping knowledge structures, tracing intellectual evolution, and identifying influential publications and authors within a research domain without relying on subjective interpretation of individual studies.

The bibliometric approach was selected because it offers several advantages relative to conventional narrative literature reviews. It generates objective, quantifiable evidence of research patterns; enables systematic analysis of large publication volumes that would be impractical to review manually; reveals intellectual and thematic linkages through network visualization that are not readily apparent through conventional reading; and provides a structured foundation for identifying underexplored research areas.

Bibliographic data were retrieved from the Scopus database, selected for its extensive coverage of peer-reviewed accounting, finance, and corporate governance journals. The search strategy applied the keyword “earnings management” to article titles, abstracts, and keywords, supplemented with related terms including “discretionary accruals,” “real activities manipulation,” and “corporate governance” to capture the breadth of the research domain. Boolean operators were applied to refine the search and ensure comprehensive document retrieval.

Document selection followed defined inclusion and exclusion criteria. Inclusion criteria comprised: (1) peer-reviewed journal articles and conference proceedings, (2) publications explicitly addressing earnings management, discretionary accruals, or related governance mechanisms, and (3) publications written in English. Exclusion criteria eliminated non-peer-reviewed sources, publications referring to “earnings” in contexts unrelated to financial reporting, and editorial or commentary pieces lacking empirical or theoretical substance.

Data analysis and network visualization were performed using VOSviewer software. VOSviewer constructs bibliometric networks in which nodes represent research elements such as keywords, authors, institutions, or countries, while connecting lines represent relationships including co-occurrence, co-authorship, or collaboration; node size reflects frequency or productivity, and line thickness reflects relationship strength. This study applied five complementary analyses: keyword co-occurrence analysis to identify major research themes, overlay visualization to capture temporal thematic evolution, density visualization to examine research concentration, co-authorship together with institutional and country collaboration analysis to map the scholarly community, and citation analysis to identify the most influential publications shaping the field.

3. RESULTS AND DISCUSSION

3.1 Keyword Co-Occurrence Network

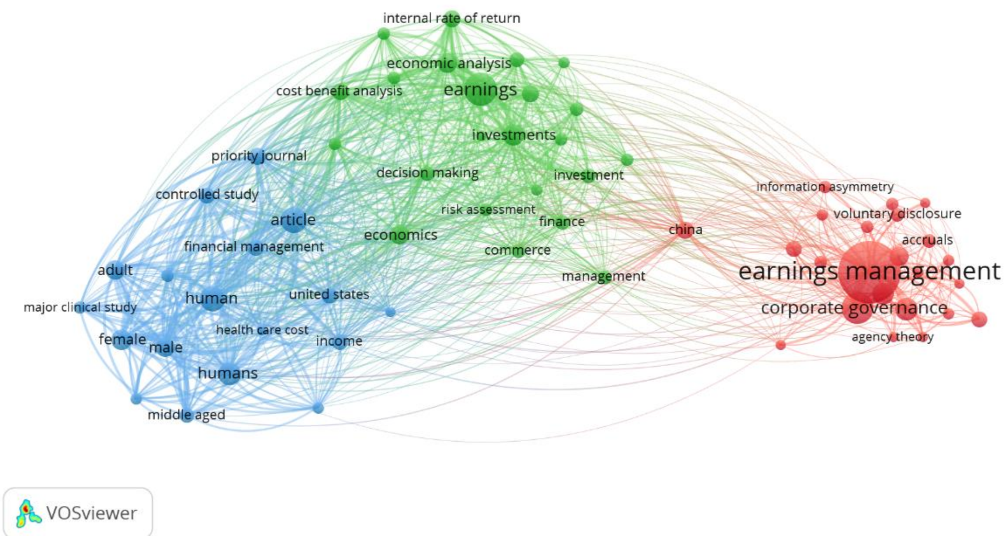

Figure 1. Network Visualization
Source: Data Analysis Result, 2026

The keyword co-occurrence network of earnings management research is presented in Figure 1. In this VOSviewer map, node size reflects the frequency with which a keyword occurs across the indexed publications, while the thickness of connecting lines reflects the strength of co-occurrence between two keywords – that is, how often they appear together in the same title, abstract, or keyword list. Three distinct clusters emerge from the network.

The first cluster (blue, left side of the map) is composed of methodological and demographic descriptors – human, humans, male, female, middle aged, adult, controlled study, major clinical study, priority journal, article – together with financial management, income, health care cost, and united states. This cluster reflects the empirical and human-subject-oriented indexing conventions attached to a substantial share of the underlying documents, indicating that a considerable portion of earnings-management scholarship in this dataset is empirically grounded, United States-related, and reported using standardized methodological terminology.

The second cluster (green, upper-middle area) centers on economic and investment-decision concepts earnings, investments, investment, internal rate of return, economic analysis, cost benefit analysis, decision making, risk assessment, finance, and commerce. This cluster represents the financial-economic dimension of earnings management research, connecting reported earnings to valuation, capital budgeting, and investment decision making, and bridging corporate finance with financial reporting research.

The third cluster (red, right side of the map) is anchored by the largest node in the entire network, earnings management, closely linked to corporate governance, accruals, agency theory, voluntary disclosure, information asymmetry, and china. This is the core theoretical cluster of the domain: it confirms that corporate governance constitutes the principal explanatory framework applied to earnings management [4], [5], that accruals remain the dominant empirical construct used to measure it [2], and that china has become a prominent country-level research context within the field.

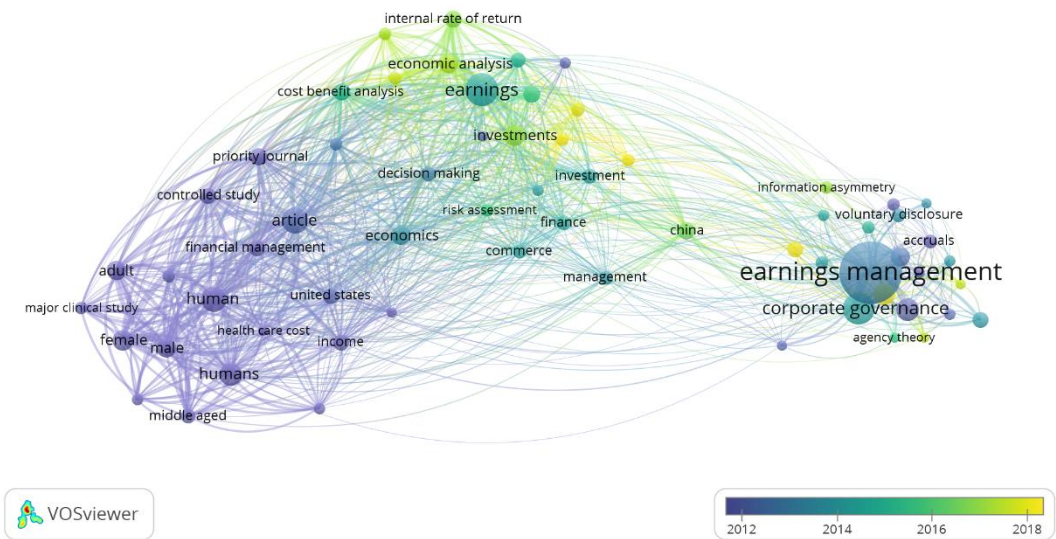

Figure 2. Overlay Visualization

Source: Data Analysis Result, 2026

Figure 2 presents the overlay visualization produced in VOSviewer, which represents the temporal development of keywords within earnings management research through a color-coded gradient corresponding to each keyword's average year of publication. The gradient ranges from dark purple, denoting earlier publications (approximately 2012), through teal-blue (2013–2014) and green (2015–2016), to yellow, denoting the most recent publications (approximately 2018). This visualization thus enables the identification of the field's conceptual evolution over time, complementing the structural information provided by node size and linkage strength in Figure 1.

Keywords positioned at the earlier end of the temporal spectrum, indicated by purple and teal-blue coloring, correspond to the theoretical foundations of the discipline, namely *earnings management*, *corporate governance*, *agency theory*, *accruals*, and *voluntary disclosure*, in addition to methodological descriptors such as *human*, *article*, and *financial management*. The sustained prominence of these terms throughout the observation period indicates that the governance- and disclosure-based paradigm continues to constitute the theoretical foundation of the field, notwithstanding subsequent developments in the surrounding literature.

By contrast, keywords positioned toward the more recent end of the spectrum, indicated by green and yellow coloring, reflect an expansion of research focus toward economic and investment-related dimensions. These include *economic analysis*, *cost benefit analysis*, *risk assessment*, *internal rate of return*, *investments*, and *investment*, together with an increasing emphasis on *china* as a geographic context of investigation. This pattern suggests that recent scholarship has extended, rather than supplanted, the field's established theoretical foundations by incorporating an investment-decision perspective into the analysis of earnings management.

This temporal shift carries a meaningful theoretical implication. It suggests that earnings management has increasingly been conceptualized not solely as a matter of corporate governance or reporting quality, but as a factor with direct implications for corporate investment behavior and capital allocation efficiency. The concentration of investment-related keywords within the most recent temporal layer further indicates that scholarly attention in this field tends to align with the practical and economic significance of the phenomenon under study, particularly with respect to the consequences of earnings-management practices for investment decisions in emerging-market contexts such as Chin

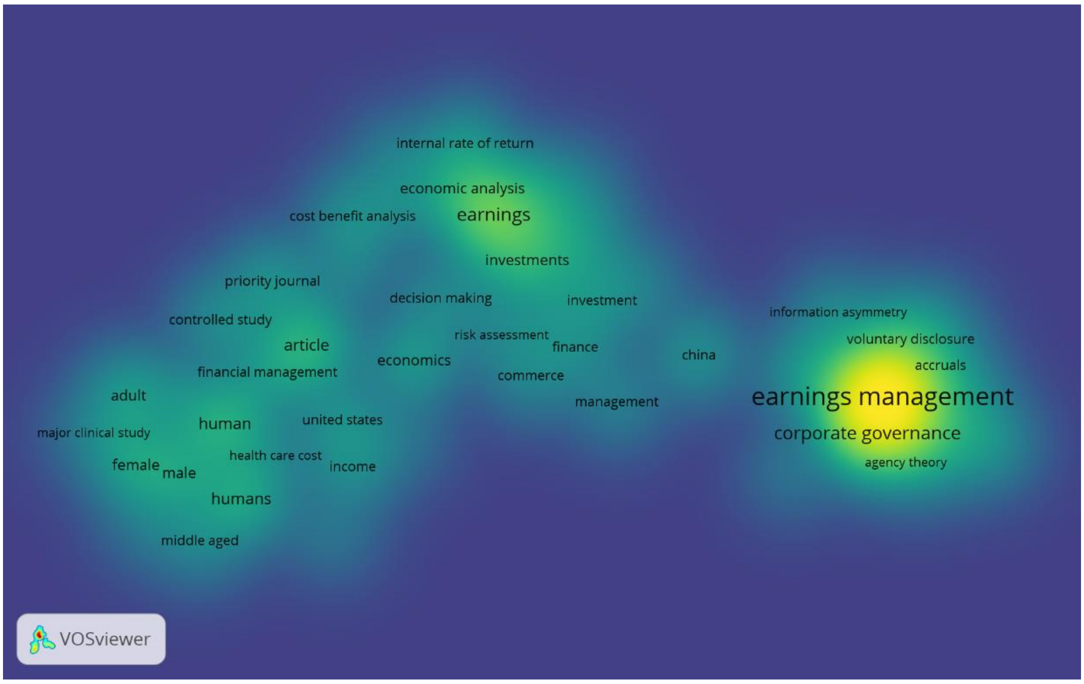

Figure 3. Density Visualization
Source: Data Analysis Result, 2026

Figure 3 presents the density visualization generated in VOSviewer, which illustrates the concentration and intensity of research attention devoted to particular themes within earnings management scholarship. In this visualization, color intensity functions as an indicator of research density: brighter yellow regions denote areas of high keyword occurrence and co-occurrence, whereas cooler green and blue tones denote progressively lower levels of research concentration. Density in this context is derived not merely from the frequency of individual keyword occurrence, but from the aggregate strength of co-occurrence relationships surrounding each term.

The most intense yellow region in the map is concentrated almost exclusively around the term *earnings management* itself, which stands as the single brightest point in the entire visualization. This finding confirms that earnings management constitutes not only the conceptual core of the discipline, as established in the network visualization in Figure 1, but also the most extensively and consistently examined construct within the literature as a whole. The concentration of density at this single node indicates that the substantial majority of publications in the dataset engage directly with earnings management as their primary analytical focus, rather than addressing it as a peripheral or secondary construct.

Moderate-density regions, rendered in green, surround terms such as *corporate governance*, *earnings*, *economic analysis*, *decision making*, and the cluster of methodological descriptors (*article*, *human*, *financial management*). These terms represent well-established secondary themes that are frequently examined in conjunction with earnings management, yet do not individually approach the density concentrated in the core construct. Their consistent, moderate-intensity presence suggests that governance mechanisms and decision-analytic considerations function as recurrent, though not singularly dominant, lines of inquiry within the field.

By contrast, terms such as *accruals*, *agency theory*, *voluntary disclosure*, *information asymmetry*, *internal rate of return*, and *china* exhibit comparatively low density despite occupying visually prominent and well-connected positions in the network visualization in Figure 1. This divergence between structural centrality and density intensity is theoretically significant: it indicates that although these constructs are conceptually linked to earnings management, they have not yet been subjected to the same depth or volume of sustained empirical investigation. This gap points to a meaningful research opportunity, particularly with respect to underexplored dimensions such as the information-asymmetry mechanisms underlying earnings management, the disclosure-agency-theoretic interface, and its manifestation within specific institutional contexts such as China areas that appear structurally important yet remain comparatively underdeveloped in terms of accumulated scholarly depth.

3.2 Co-Authorship Analysis

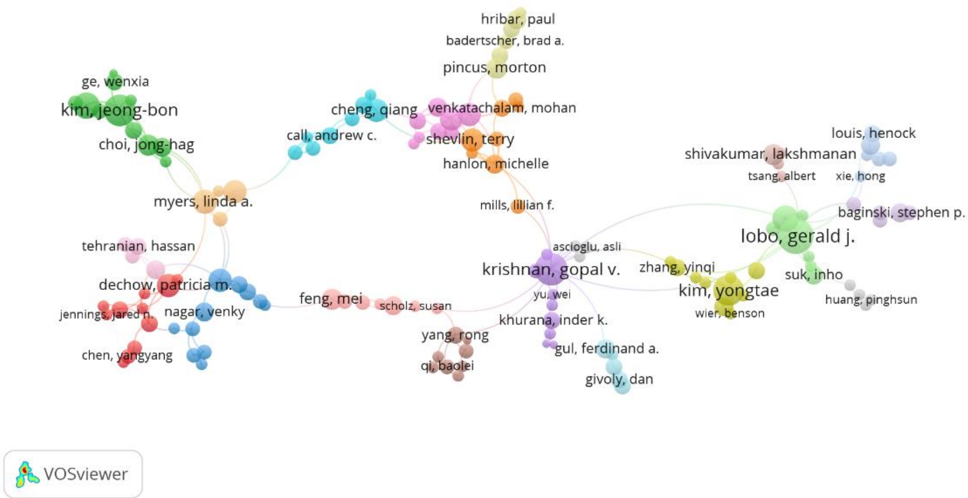

Figure 4. Author Visualization
Source: Data Analysis Result, 2026

Figure 4 illustrates the co-authorship network among researchers contributing to earnings management scholarship. Node size represents each author's publication volume, and line thickness represents the frequency of co-authored collaboration. The largest node in the network, Lobo, Gerald J., anchors a cluster connected to Baginski, Stephen P., Tsang, Albert, Xie, Hong, Louis, Henock, and an adjacent group comprising Kim, Yongtae, Zhang, Yinqi, Suk, Inho, and Wier, Benson, indicating a highly prolific and well-connected research community.

Several additional clusters operate largely independently of one another. Kim, Jeong-Bon forms a cluster with Choi, Jong-Hag, Ge, Wenxia, and Myers, Linda A.; Krishnan, Gopal V. serves as a central hub connecting Khurana, Inder K., Yu, Wei, Gul, Ferdinand A., Givoly, Dan, and Ascioglu, Asli, and bridges – through Feng, Mei and Scholz, Susan – toward Dechow, Patricia M., Nagar, Venky, Jennings, Jared N., and Chen, Yangyang; while Cheng, Qiang and Call, Andrew C. connect to Shevlin, Terry, Venkatachalam, Mohan, Hanlon, Michelle, Pincus, Morton, Hribar, Paul, and Badertscher, Brad A. This structure of multiple, only loosely interconnected clusters indicates that co-authorship in earnings management research remains relatively fragmented, organized around a small number of prolific senior scholars rather than a single, densely integrated research community

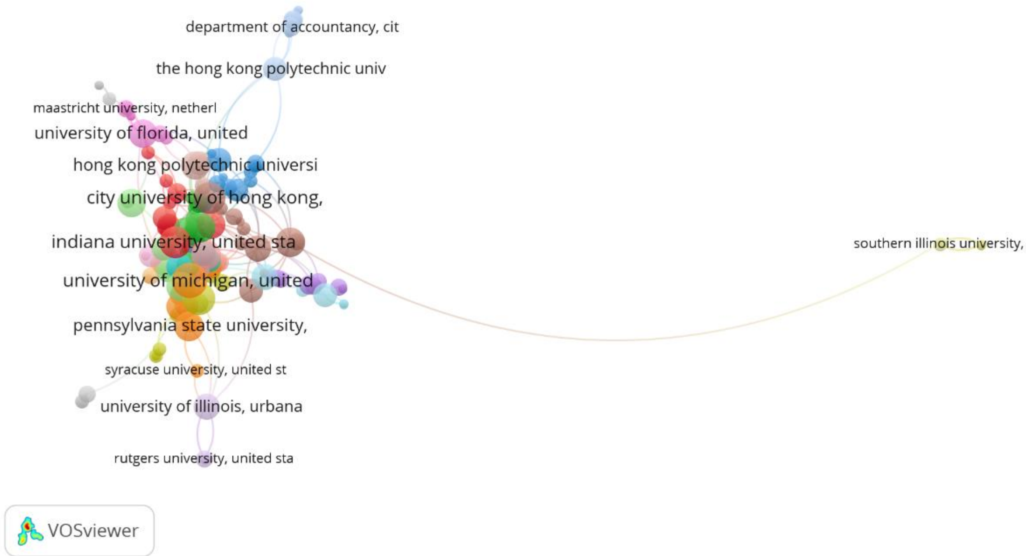

Figure 5. Institution Visualization
Source: Data Analysis Result, 2026

Figure 5 illustrates the institutional collaboration network among universities and research organizations contributing to earnings management scholarship. Node size reflects each institution's publication volume, with larger nodes representing institutions that have produced a greater number of publications on earnings management topics, while the connecting lines represent collaborative relationships evidenced through co-authored publications involving researchers affiliated with different institutions.

The institutional network reveals a research landscape that is both concentrated and hierarchically organized. North American research universities including Indiana University, the University of Michigan, Pennsylvania State University, the University of Florida, Syracuse University, the University of Illinois at Urbana, and Rutgers University occupy the most prominent positions in the network, forming a densely interconnected core. The strength and frequency of these ties suggest that earnings management research is substantially coordinated through sustained institutional partnerships among a relatively small set of leading North American universities, rather than being distributed evenly across a broad range of institutions.

Beyond this core, a secondary cluster comprising the Hong Kong Polytechnic University and the City University of Hong Kong appears alongside a smaller connection to Maastricht University in the Netherlands, indicating that earnings management scholarship, while dominated by North American institutions, is not entirely confined to a single geographic region. By contrast, Southern Illinois University appears as an isolated node linked to the main network through only a single, thin connection. This configuration suggests that institutional participation in the field is uneven: while a core group of universities collaborates densely and repeatedly, several contributing institutions remain only weakly integrated into the broader collaborative structure — a pattern that may constrain the diffusion of methodological innovation and cross-institutional perspectives within the field.

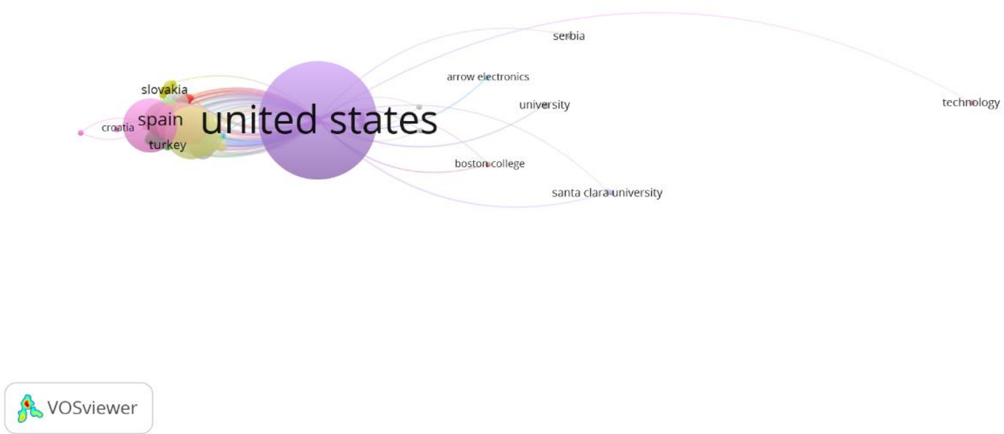

Figure 6. Country Visualization
Source: Data Analysis Result, 2026

Figure 6 presents the country-level collaboration network, mapping the global distribution and cooperation patterns underlying earnings management research. Node size represents each country's research contribution volume, with larger nodes indicating greater publication output, while the connecting lines represent international collaboration evidenced through co-authored publications involving researchers from different countries, with line thickness reflecting collaboration frequency.

The geographic analysis reveals a landscape of pronounced concentration rather than broad international distribution. The network is overwhelmingly dominated by a single, very large node representing the United States, connected to a small set of considerably smaller nodes Spain, Croatia, Slovakia, and Turkey together with a few isolated, thinly connected affiliations such as Serbia, Boston College, and Santa Clara University. This configuration indicates that international co-authorship in earnings management research remains limited and largely bilateral, with the United States functioning less as a hub embedded within a dense multinational network and more as an isolated center of gravity around which a small number of peripheral ties are loosely arranged.

A particularly noteworthy finding emerges when this country-level pattern is read alongside the keyword network in Figure 1. Although *china* appears as a prominent and well-connected research theme in the keyword co-occurrence map, China does not emerge as a major hub in the country collaboration network. This divergence suggests that Chinese-context earnings management studies [8], [9] are more frequently produced through single-country research teams than through extensive international co-authorship, indicating that thematic relevance and collaborative visibility do not necessarily move in tandem within this field.

A comparable pattern is evident for governance-based earnings quality research originating from Korea [10], which is represented in the broader literature but does not appear as a distinct collaboration hub within the country network. Taken together with the China finding, this points to a structural imbalance between where earnings management research is substantively conducted and where it is internationally co-authored a distinction that the keyword and citation networks alone would not reveal.

More broadly, the country network highlights a significant geographic imbalance in the field's international collaborative structure, with contributions from Latin America, Africa, and much of Asia beyond China largely absent from the visible network. This concentration suggests that, despite the global relevance of financial reporting practices and earnings management as economic phenomena, the international co-authorship infrastructure supporting this research remains anchored predominantly in North American and, to a lesser extent, selected European institutions leaving considerable scope for future research to expand cross-country collaborative ties beyond this narrow institutional core.

3.3 Citation Analysis

Table 1. Top Cited Research

Citations	Authors and year	Title
4883	[2]	Performance matched discretionary accrual measures
4323	[6]	The economic implications of corporate financial reporting
3338	[3]	Earnings management through real activities manipulation
3336	[7]	Earnings management and investor protection: An international comparison
2834	[5]	Audit committee, board of director characteristics, and earnings management
2317	[11]	Understanding earnings quality: A review of the proxies, their determinants and their consequences
2076	[12]	Opaque financial reports, R2, and crash risk
2038	[13]	Real and accrual-based earnings management in the pre- and post-sarbanes-oxley periods
1989	[14]	Climate change and food systems
1879	[15]	The market pricing of accruals quality

Source: Scopus, 2026

Table 1 presents the most-cited publications in earnings management research, identifying the works that have most substantially shaped the intellectual development of the field. Unlike research domains oriented toward emerging digital technologies, the prominence of methodological and governance-oriented publications among the top citations demonstrates that earnings management scholarship remains anchored primarily in measurement techniques and institutional explanations of managerial reporting discretion.

The highest-cited work [2] introduced the performance-matched discretionary accrual model. Its exceptional citation standing reflects the field's sustained reliance on this model as the dominant methodological approach for isolating abnormal accruals from normal operating adjustments, underscoring the extent to which measurement innovation rather than a single substantive finding has driven the discipline's citation impact. The second most-cited work [6] offers survey-based evidence on how corporate executives themselves perceive earnings management trade-offs, indicating that the field's influence extends beyond academic measurement debates to encompass practitioner-oriented insight into managerial decision-making.

The third-ranked work [3] established the real activities manipulation framework, which now functions alongside accrual-based measures as a core methodological pillar of the discipline. Its continued prominence suggests that scholarly attention has progressively expanded beyond accounting-based manipulation toward operational and strategic forms of earnings management embedded in real business decisions.

Governance-oriented contributions likewise occupy prominent positions in the citation ranking. The study examining investor protection across countries [7] and the analysis of audit committee and board characteristics [5] confirm that both cross-country institutional variation and internal governance mechanisms are treated as central explanatory factors for earnings management behavior [4]. This pattern indicates that the field has consistently framed earnings management not merely as a technical accounting phenomenon, but as one shaped by the institutional and governance environment in which reporting decisions are made.

The remaining top-cited works address earnings quality more broadly, encompassing a comprehensive review of earnings-quality proxies [11], the relationship between opaque reporting and stock price crash risk [12], the comparison of accrual- and real-activities-based manipulation surrounding the Sarbanes-Oxley Act [13], and the market pricing of accruals quality [15]. Collectively, these works indicate that the field has matured from establishing foundational measurement techniques toward examining the capital-market and governance consequences of reporting choices a progression consistent with the temporal patterns observed in the keyword evolution documented in Figure 2.

Beyond the ten most-cited works, citation momentum in the broader corpus continues to build around the trade-off between accrual-based and real activities manipulation [16], the use of real activities manipulation around seasoned equity offerings [17], and the effect of international accounting standards on accounting quality [18]. Parallel streams of research increasingly connect earnings quality to corporate social responsibility [19], executive compensation incentives [20], and accounting conservatism [21], suggesting that the second wave of influential earnings-management scholarship is progressively interdisciplinary linking financial reporting choices to incentive structures, sustainability considerations, and institutional accounting frameworks rather than remaining confined to measurement and governance concerns alone.

4. CONCLUSION

This bibliometric analysis maps earnings management research as a field organized around three interconnected clusters: a methodological and demographic cluster, a financial-economic cluster linking earnings to investment and decision-making, and a core governance cluster centered on earnings management, corporate governance, accruals, and agency theory. The temporal evolution traced in Figure 2 shows the field's focus progressively extending from governance and disclosure toward economic-analysis and investment-decision framing, without displacing its earlier theoretical foundations reflecting a maturing, genuinely interdisciplinary research agenda.

The co-authorship, institutional, and country-level analyses reveal a research community that collaborates densely within identifiable clusters but only loosely across them, with institutional and international ties concentrated heavily around North American universities. This concentration stands in contrast to the prominence of *china* as a keyword-level theme and to governance-based Korean scholarship, both of which appear substantively in the literature without a corresponding collaboration footprint indicating a gap between where earnings management is studied and where it is internationally co-authored.

Citation analysis confirms that the field's intellectual foundation rests on discretionary accrual measurement [2] and real activities manipulation [3], complemented by governance-focused explanations of managerial discretion [4], [5] while growing citation momentum around accounting standards, corporate social responsibility, and executive incentives signals a broadening beyond the field's original measurement-oriented core. The density visualization reinforces this picture: constructs such as accruals, agency theory, voluntary disclosure, and information asymmetry remain structurally central yet comparatively underexplored in empirical depth, marking clear opportunities for future research.

Overall, this study offers researchers, journal editors, and doctoral students a structured reference point for situating new contributions within the field's intellectual landscape. Future scholarship would benefit from integrating accrual-based and real activities measures within single research designs, extending governance explanations to emerging-market contexts, and strengthening international co-authorship particularly with Asian, Latin American, and African research communities to complement the currently US-centered literature.

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