

Evolution of Earnings Management Practices in Public Companies

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ABSTRACT

This bibliometric analysis explores the extensive body of literature on earnings management, highlighting its evolution and the current state of research globally. Utilizing data extracted from Scopus and analyzed through VOSviewer, this study maps out the interconnected themes and identifies significant contributions from various countries, with a focus on the role of corporate governance, audit quality, and financial reporting standards. The analysis reveals a growth in research volume over the years, reflecting increasing complexity and relevance. Key trends indicate a shift from traditional theoretical frameworks to more practical concerns, such as the implications of earnings management on financial stability and market perception. The study also underscores the importance of international collaboration and the impact of regulatory environments on earnings management practices. Findings from this study suggest directions for future research, emphasizing the need for advanced detection techniques and a deeper understanding of cross-cultural dynamics in earnings management.

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1. INTRODUCTION

Earnings management is a topic of critical importance in the field of corporate finance and accounting. It involves the strategic manipulation of financial statements to meet certain pre-set targets. These practices can be legal and compliant with generally accepted accounting principles (GAAP), but they can also be fraudulent and misleading [1]. Over the years, earnings management has evolved as regulatory environments, corporate governance structures, and market expectations have changed. The motivations

behind earnings management are multifaceted. Managers may engage in these practices to meet or exceed analyst forecasts, influence stock prices, secure bonuses, or negotiate better terms on contracts and financing [2]. Such motivations highlight the inherent conflicts of interest and pressures that managers face, making earnings management a significant risk factor for investors and stakeholders alike.

Techniques of earnings management have also evolved. Initially, much of the manipulation involved simple methods like

premature revenue recognition or deferring expense recognition. However, as detection methods have improved and regulations have tightened, more sophisticated techniques have emerged, such as the use of derivatives, special purpose entities, or real activities manipulation [2], [3]. This sophistication in earnings manipulation techniques complicates the detection process, posing challenges for auditors, regulators, and investors.

The landscape of earnings management has been significantly shaped by regulatory responses such as the Sarbanes-Oxley Act of 2002 in the United States, which was implemented following major accounting scandals. These regulations were intended to improve transparency, strengthen corporate governance, and restore investor confidence. However, despite these regulations, earnings management continues to be a pervasive element of corporate financial reporting, suggesting that this issue is not just regulatory but deeply embedded in corporate culture and financial practices [1], [2], [4].

Despite rigorous standards and enhanced regulatory scrutiny, earnings management remains a prevalent and evolving issue. This prevalence points to systemic gaps in both the regulatory framework and corporate governance practices that fail to curb the manipulation of financial statements effectively. The problem is exacerbated by the evolving nature of earnings management techniques, which are increasingly sophisticated and harder to detect. This ongoing issue undermines the reliability of financial reporting and poses significant risks to stakeholders, potentially leading to financial misstatements that affect investors' decisions and market integrity.

The objective of this study is to explore the evolution of earnings management practices in public companies from both a historical and regulatory perspective. This study aims to identify the key drivers behind these practices, examine the changes in techniques over time, and assess the effectiveness of regulatory interventions in mitigating such practices. By

understanding these dynamics, the research seeks to contribute to the broader discourse on enhancing financial reporting transparency and strengthening mechanisms to deter financial statement manipulation.

Theoretical Framework of Earnings Management

Earnings management is conceptually understood through the lens of agency theory, which explores the conflicts of interest between managers and shareholders. Managers, acting as agents, may manipulate earnings to either signal their performance or mask the true economic condition of the company [5]. The Positive Accounting Theory further explicates this by suggesting that managers undertake earnings management to maximize their own utility, which may not necessarily align with the shareholders' interests [6]. This theoretical underpinning is crucial for understanding why earnings management is a persistent issue despite regulatory efforts.

Motivations for Earnings Management

Research has consistently pointed out various motivations behind earnings management. [7] identifies that managers manipulate earnings to maximize their bonus payouts, which are often tied to financial performance metrics. Another motivation, according to [8], is to influence stock price, especially when companies face significant external financing needs. Moreover, managers might engage in earnings management to influence the perceptions of analysts and investors, maintaining a positive trajectory in stock prices [4]. These motivations highlight the strategic financial reporting decisions driven by different stakeholder pressures.

Techniques and Approaches

The techniques of earnings management have been broadly categorized into accrual-based and real earnings management. Accrual-based methods involve altering accounting estimates and assumptions to sway reported earnings, such as changing depreciation methods or bad debt provisions [3]. On the other hand, real earnings management involves actual

manipulation of business operations, like cutting research and development costs to improve short-term earnings [9]. Each method has different implications for the company's financial health and operational efficiency.

Impacts of Regulatory Interventions

The role of regulatory frameworks like the Sarbanes-Oxley Act (SOX) in curbing earnings management has been a significant focus of academic literature. [10] suggest that SOX has had a considerable impact in reducing accrual-based earnings management due to its stringent requirements for internal controls and the certification of financial statements by CEOs and CFOs. However, studies such as that by [11] indicate a shift towards more subtle and less detectable methods of earnings management post-SOX, suggesting an adaptive response by managers to regulatory environments.

Evolution of Earnings Management Over Time

The evolution of earnings management practices is evident from historical data. Prior to major accounting reforms, many companies engaged in aggressive earnings management tactics, which were often exposed during financial crises or corporate scandals. Post-regulatory reforms, a trend towards more sophisticated and less obvious forms of earnings manipulation has been observed [12]. This evolution is consistent with the adaptive nature of managerial behavior in response to changes in the regulatory landscape.

Detection and Technological Advancements

Advancements in technology and data analytics have played a pivotal role in detecting earnings management. Tools such as Benford's Law and forensic accounting techniques have become more sophisticated, allowing auditors and regulators to identify anomalies in financial reports more effectively [13]. However, as technology evolves, so do the methods of concealing manipulative practices, creating an ongoing cat-and-mouse game between regulators and corporate managers.

2. METHODS

This study utilizes a bibliometric analysis focusing exclusively on literature sourced from the Scopus database to investigate the evolution and trends in earnings management research. The analysis covers publications from the year 1990 to 2024, employing a targeted keyword search strategy that includes terms such as "earnings management," "financial manipulation," "accruals," and "corporate governance." The extraction of relevant data involves utilizing the advanced search capabilities of Scopus to ensure comprehensive coverage of the subject matter. For the bibliometric visualization and analysis, VOSviewer software is employed to construct and examine networks of keywords, citations, and co-authorships. This methodology allows for the identification of the most cited works, influential authors, and prevailing research themes within the field. Additionally, the study analyzes shifts in research focus and methodology over time, particularly in response to changes in regulatory environments.

3. RESULTS AND DISCUSSION

3.1 Descriptive Analysis

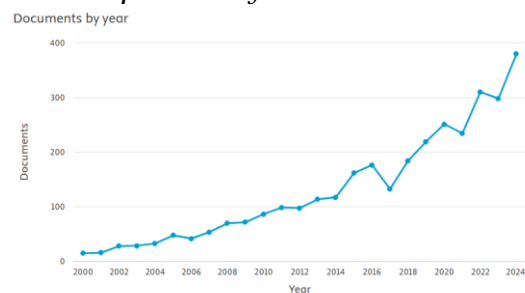


Figure 1. Documents by Year

Source: Scopus, 2024

The line graph depicts a clear upward trend in the number of documents published on the topic of earnings management from the year 2000 to 2024. Initially, the publications increased gradually, starting from fewer than 50 documents in 2000 and rising to just over 100 by 2006. The growth in publications continued at a steady pace through 2012. From 2012 onwards, there was a more pronounced increase, with the number of

documents surpassing 200 by 2018. The sharpest rise is observed after 2020, where the documents increased significantly from around 250 in 2020 to nearly 350 in 2022, and the trend appears to continue rising sharply as it approaches 2024. This suggests a growing academic and possibly practical interest in the field of earnings management, possibly influenced by evolving corporate governance standards, regulatory changes, and heightened awareness of financial transparency issues.

Documents by affiliation
Compare the document counts for up to 15 affiliations.

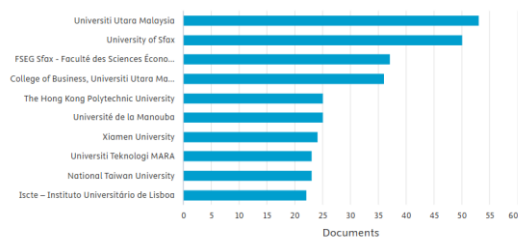


Figure 2. Documents by Affiliation
Source: Scopus, 2024

The bar graph provides a comparative view of document production related to earnings management by affiliation, highlighting the contributions of various educational institutions. Universiti Utara Malaysia leads significantly in document production, with nearly 60 documents, indicating a strong focus on research in earnings management at this university. It is followed by the University of Sfax and FSEG Sfax - Faculté des Sciences Économiques, each with just above and below 50 documents, respectively, suggesting a robust interest in this area of study within these Tunisian institutions. The College of Business at Universiti Utara Malaysia also shows notable output, further underscoring the university's emphasis on this research field. Other institutions like The Hong Kong Polytechnic University, Université de la Manouba, Xiamen University, Universiti Teknologi MARA, National Taiwan University, and Iscte – Instituto Universitário de Lisboa contribute between 15 and 25 documents each. This spread indicates a diverse international interest in earnings management studies, with contributions

coming from Asia, Europe, and Africa, reflecting the global relevance of this research area.

Documents by type

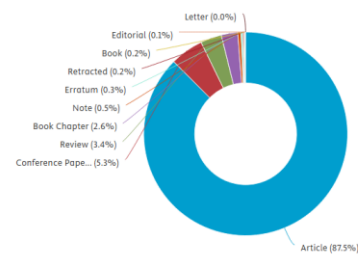


Figure 3. Documents by Type
Source: Scopus, 2024

The pie chart categorizes the types of documents produced on the topic of earnings management, with a dominant share of 87.5% being journal articles. This significant proportion indicates that the primary mode of scholarly communication in this field is through detailed, peer-reviewed articles, which are central to disseminating research findings and theoretical advancements. Conference papers also make a notable contribution, accounting for 5.3% of the documents, reflecting active discussions and ongoing research exchanges at scholarly conferences. Reviews and book chapters, which respectively constitute 3.4% and 2.6% of the outputs, play a critical role in synthesizing existing research and offering comprehensive perspectives on earnings management. Lesser contributions come from notes, errata, retracted documents, and books, highlighting the diverse yet focused nature of academic outputs in this area. Notably, there are no letters, emphasizing that brief communications are not a common method for discussing earnings management in academic settings. This distribution showcases a robust and dynamic field where most of the discourse is through in-depth analysis provided in articles, supplemented by insights shared through other scholarly mediums.

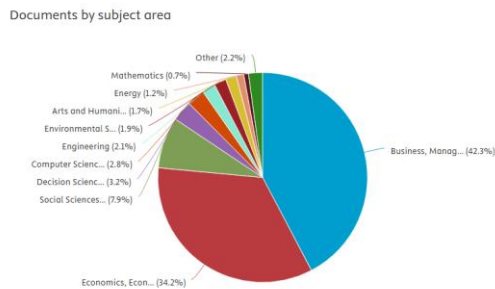


Figure 4. Documents by Subject

Source: Scopus, 2024

The pie chart illustrates the distribution of documents on earnings management across various subject areas, indicating a predominant focus in the fields of Business, Management, and Accounting (42.3%) and Economics, Econometrics and Finance (34.2%). This reflects the inherent connection of earnings management to financial reporting, corporate governance, and economic theories, which are central themes in these disciplines. A smaller yet significant portion of the documents falls under the Social Sciences category (7.9%), suggesting interdisciplinary research involving aspects like organizational behavior, ethics, and sociological impacts of financial practices. Other fields such as Decision Sciences, Computer Science, Engineering, Environmental Science, Arts and Humanities, Energy, and Mathematics also contribute to the body of research, each ranging from 0.7% to 3.2%. These contributions indicate that earnings management is also analyzed from technical, environmental, and even cultural

perspectives, highlighting the multifaceted nature of the topic. The small segment labeled 'Other' (2.2%) likely encompasses niche areas that integrate various interdisciplinary insights into the study of earnings management.

3.2 Keyword Co-Occurrence Network

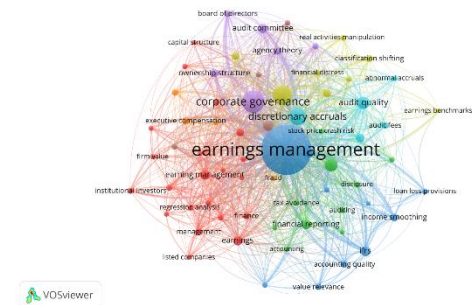


Figure 5. Network Visualization

Source: Data Analysis, 2024

The VOSviewer visualization presented above provides a comprehensive overview of the research landscape surrounding the topic of earnings management. Central to the network is "earnings management" itself, indicating its core relevance and interconnection with various associated terms. Surrounding it are clusters of terms that reflect the diverse aspects of earnings management research. These include "corporate governance," "audit quality," and "financial reporting," among others, highlighting the multifaceted nature of this field. Each cluster represents a thematic focus area, demonstrating how earnings management is intertwined with numerous disciplines within business and finance.

Table 1. Cluster Composition

Cluster	Item	Description
Blue	Earnings management, loan loss provisions, income smoothing, ifrs, accounting quality, value relevance	Focuses on the core aspects of how companies manage reported earnings, compliance with international standards, and the implications for financial transparency.
Light Blue	Discretionary accruals, audit fees, audit quality, abnormal accruals	Centers on auditing practices, including the costs associated with audits and the impact of audit quality on detecting and managing earnings manipulation.
Red	Finance, earnings, listed companies, management,	Examines the financial frameworks, investor influences, and the broader economic factors that

	isntitutional investor, firm value, capital structure	affect corporate earnings and valuation in publicly traded companies.
Green	Financial reporting, tax avoidance, accounting, disclosure, stock price crash risk	Explores the relationships between accounting practices, disclosure quality, and their risks, particularly how they relate to corporate transparency and market perceptions.
Yellow	Financial distress, classification shifting, real activities manipulation, earning benchmarks	Investigates strategies used by firms in distress or under performance pressure, including manipulative practices beyond typical accrual-based methods.
Purple	Corporate governance, ownership structure, agency theory, borad of directors	Discusses the influence of company leadership and governance structures on financial decisions and ethical considerations within corporate finance.
Orange	Executive compensation, fraud	Analyzes how executive rewards are tied to financial performance metrics and the potential for fraudulent activities to meet or enhance compensation targets.

Source: Data Analysis, 2024

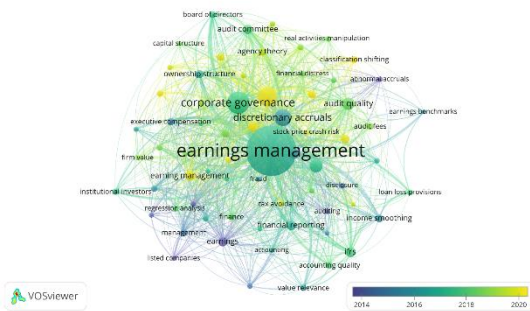


Figure 6. Overlay Visualization

Source: Data Analysis, 2024

The VOSviewer visualization presented illustrates the intellectual landscape and key thematic areas within the field of earnings management research from 2014 to 2020. The nodes, representing various concepts related to earnings management, are interconnected, demonstrating the complex relationships between different research topics. Central to the visualization is "earnings management," which acts as a hub connecting to major themes like "corporate governance," "financial reporting," and "audit quality." These connections underscore the intricate ways in which earnings management practices are influenced by and impact corporate governance policies and the quality of financial reporting.

The time overlay represented by the color gradient from yellow to blue indicates

the evolution of research focus over the years. Earlier research themes around 2014, highlighted in yellow, such as "agency theory" and "ownership structure," suggest an initial emphasis on theoretical frameworks and corporate structure's influence on earnings management. As the gradient shifts towards green and blue towards 2020, there is a noticeable transition towards more practical implications and regulatory aspects like "IFRS" (International Financial Reporting Standards) and "audit fees." This shift reflects a growing academic and practical interest in how international standards and auditing practices can mitigate or obscure earnings management activities.

Moreover, the density and clustering of terms related to "audit quality," "discretionary accruals," and "financial distress" in later years highlight an increasing concern with the mechanisms of detecting and regulating earnings management. The presence of terms like "stock price crash risk" and "loan loss provisions" in more recent years indicates a response to economic conditions and financial crises, where the risks associated with earnings management become particularly pronounced. This evolution in research themes not only maps out the academic response to regulatory and economic changes but also suggests a

proactive approach towards understanding and addressing the complexities of earnings management in a changing financial landscape.



Figure 7. Density Visualization
Source: Data Analysis, 2024

The VOSviewer network visualization encapsulates a broad array of interconnected themes central to earnings management research, organized around core concepts such as "earnings management," "corporate governance," and "financial reporting." The dense concentration of nodes around "earnings management" at the center indicates it as the pivotal focus of the network, linking various elements that influence or are impacted by the management of earnings. Surrounding it are significant nodes like

"corporate governance" and "audit quality," which highlight the critical role of oversight and audit practices in mitigating or facilitating earnings management. This visualization underscores the complex interactions between organizational controls, financial reporting accuracy, and regulatory standards in shaping practices around earnings management.

The diversity of linked terms, such as "fraud," "tax avoidance," "income smoothing," and "loan loss provisions," reflects the various strategies and implications associated with earnings management. Terms like "stock price crash risk" and "financial distress" suggest a research focus on the consequences of earnings management, particularly its impact on financial stability and market perception. Additionally, the presence of terms related to specific practices and standards, such as "IFRS" (International Financial Reporting Standards) and "accounting quality," points to a global and quality-focused discourse within the academic community. This map effectively highlights the breadth of earnings management research, encompassing theoretical, practical, and ethical dimensions within the field.

3.3 Citation Analysis

Table 1. Top Cited Literature

Citation	Author	Title
2991	[14]	Earnings management and investor protection: An international comparison
2686	[1]	Earnings management through real activities manipulation
2550	[4]	Audit committee, board of director characteristics, and earnings management
2528	[15]	A review of the earnings management literature and its implications for standard setting
2016	[16]	Earnings management to avoid earnings decreases and losses
1862	[17]	The effect of audit quality on earnings management
1714	[11]	Real and accrual-based earnings management in the pre- and post-sarbanes-oxley periods
1514	[18]	Earnings management and corporate governance: The role of the board and the audit committee
1326	[8]	Earnings management to exceed thresholds
1311	[9]	Accrual-based and real earnings management activities around seasoned equity offerings

3.4 Co-Authorship Network

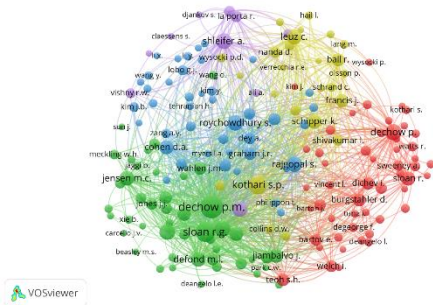


Figure 8. Author Visualization
Source: Data Analysis, 2024

This VOSviewer visualization maps the network of influential researchers in the field of earnings management, illustrating the connections between various scholars based on their collaborative and citation relationships. The network is color-coded to distinguish different clusters, each potentially representing distinct subfields or methodological approaches within earnings management research. Key scholars such as Dechow, Sloan, and Watts, who appear prominently in the visualization, are central nodes in their respective clusters, indicating their significant influence through highly cited works or substantial contributions to the literature. The size of each node reflects the scholar's impact, with larger nodes such as Dechow and Jensen indicating higher citation counts or central roles in the academic discourse. The lines connecting the researchers signify collaborative ties or intellectual influences, suggesting a rich tapestry of academic dialogue and development within the field. This network not only highlights the foundational authors and current thought leaders but also illustrates the dynamic nature of scholarly communication, with newer researchers linked to established ones, continually evolving the discourse on earnings management.

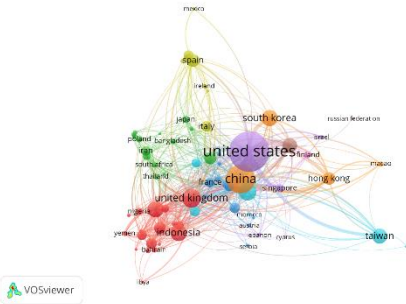


Figure 9. Country Visualization
Source: Data Analysis, 2024

The VOSviewer map visualizes the global collaboration and research focus in the field of earnings management, highlighting significant contributions from various countries. Prominently, the United States and China appear as the largest nodes, indicating their major role in the volume of research produced and their central position in the global network, suggesting extensive international collaborations and influence. The colors likely represent different continents or regions, reflecting how countries within the same region or with cultural or economic similarities collaborate on research in this field. For instance, European countries like the United Kingdom, France, and Germany are closely interconnected, as are Asian economies such as South Korea, Japan, and Taiwan. The network lines, which connect these nodes, illustrate the extent of scholarly connections across these nations, indicating active cross-border academic exchanges and the dissemination of knowledge in earnings management across the globe.

DISCUSSION

The extensive bibliometric analysis conducted on earnings management literature from various global databases underscores the significant international attention this subject has garnered over the years. As evidenced by the data, there has been a consistent increase in publications on this topic, reflecting its growing importance in academic and practical realms. The clustering of themes around corporate governance, auditing standards, financial reporting quality, and regulatory frameworks indicates

the multidimensional aspects of earnings management.

Global Research Contributions and Collaborations

From the network visualization of countries contributing to earnings management research, it is evident that the United States and China dominate the field in terms of publication volume and influence. This may be attributed to the robust financial markets and complex corporate structures prevalent in these countries, which provide a fertile ground for earnings management practices and subsequently for academic investigation. Moreover, the interconnected nature of European and Asian countries highlights a strong regional collaboration, which may be driven by the regional policies and economic ties that influence corporate governance practices similarly across neighboring countries.

Evolution of Research Themes

Initially, research in earnings management was heavily centered on understanding its mechanisms and impacts within the framework of agency theory. Over time, the focus has shifted towards more nuanced areas like the role of international financial reporting standards (IFRS) and real activities manipulation. The recent trends indicate a surge in studies examining the consequences of earnings management, such as financial distress and stock price volatility, which points to a broader understanding of its economic implications.

Interdisciplinary and Methodological Insights

The involvement of diverse disciplines such as finance, accounting, and economics in earnings management research is indicative of its interdisciplinary nature. Methodological advancements have also been highlighted, with regression analysis and other quantitative methods being prominently used to dissect the complexities of earnings manipulation. The shift from basic theoretical explorations to employing sophisticated statistical tools reflects the evolution of research methodologies adapting

to the intricate nature of modern corporate finance.

Implications for Policy and Practice

The findings from this bibliometric study have significant implications for policymakers and practitioners. The persistent focus on audit quality and regulatory frameworks in the literature suggests that enhancing these areas could be crucial in mitigating earnings management practices. Furthermore, the global discourse around earnings management emphasizes the need for international cooperation in standardizing reporting and governance practices to curb such activities effectively.

Challenges in Research

Despite the comprehensive research, there are evident challenges. The adaptability of earnings management techniques in response to new regulations poses a continual challenge for researchers and regulators alike. This dynamic necessitates ongoing research to keep up with evolving practices. Additionally, the variability in reporting standards across different countries complicates the comparability of studies and the generalization of findings, highlighting the need for more harmonized global reporting standards.

Future Research Directions

Future studies should explore the impact of technological advancements such as big data analytics and artificial intelligence on detecting and preventing earnings management. Research could also extend into understanding the psychological and cultural factors that motivate individuals to engage in earnings management, providing a deeper insight into behavioral finance. Furthermore, comparative studies between regions with different legal and corporate environments could yield insights into how contextual factors influence earnings management practices.

4. CONCLUSION

This bibliometric analysis of earnings management literature highlights the expansive and evolving nature of research

within this field, underscoring its significance across different global contexts. The study revealed a broad geographical spread in research contributions, with significant outputs from the United States and China, and substantial collaborations within Europe and Asia. Thematic trends shifted from traditional agency theory towards more contemporary issues such as the impacts of international financial reporting standards and the consequences of earnings manipulations like stock price crashes and financial distress. The dense interconnections between various disciplines and methodologies reflect the complexity and

multidimensional aspects of earnings management. This research not only synthesizes the current state of knowledge but also points to the necessity for continued interdisciplinary efforts and international cooperation to effectively address and regulate earnings management practices. Future research should focus on leveraging technological advances for better detection and prevention methods, examining cultural and behavioral aspects driving these practices, and striving for harmonization in global financial reporting standards to enhance comparability and regulatory effectiveness.

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