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Exploring the Sticky Costs Theory: Trends, Challenges, and Insights

Abstract

Over recent decades, scientific literature on accounting has expanded significantly, with publications driving advancements in the field. Accounting systems, comprising financial and management accounting, serve external and internal users, respectively. Traditional cost behaviour models categorise costs as fixed or variable, assuming a linear and symmetric relationship between costs and activity levels. However, recent research in management accounting reveals the concept of "sticky costs", which increase more with rising activity than they decrease with falling activity. This asymmetry complicates cost management, as these costs do not adjust proportionately to changes in activity, impacting earnings predictability and financial stability. Studies highlight factors influencing sticky costs, such as managerial expectations, corporate governance, and CEO behaviour. Despite the importance of understanding cost behaviour, knowledge of sticky costs remains limited in higher education curricula. This study aims to overview sticky cost research, compare it with traditional cost behaviour studies, and examine its presence in higher education. By analysing articles from well-respected journals over 20 years, this study contributes to academia and industry by enhancing understanding and management of sticky costs, promoting quality education, and sustainable economic growth in alignment with the United Nations Sustainable Development Goals.

Keywords*: Agenda for Sustainable Development of the United Nations, Cost management, Fixed costs, Sticky Costs, Variable costs*

1 Introduction

Over the past few decades, there has been a remarkable growth in the body of scientific literature on accounting. The sharing of research findings through publications stands as a crucial driver in propelling the field of accounting forward. These publications play a vital role in delivering new perspectives and breakthroughs to researchers, accounting professionals, managers, and a wider global audience.

In international practice, the accounting system consists of financial and management accounting. Financial accounting is a subsystem that provides data to external information users in the form of financial statements. On the other hand, management accounting is a subsystem that delivers useful information to internal information users, to help them to make decisions (Abdurahimovna & Sultanbekovna, 2022).

This concept is in line with Hlaciuc et al. (2017), who state that financial accounting is mostly designed for external users, such as state institutions, banks, suppliers, or customers. As managers request more detailed information about important internal issues, such as the production process, labour productivity, activity reports, or cost behaviour, the role of management accounting is to provide that information. It helps to substantiate the decision-making process.

Many companies' managers, and even accountants, follow the management accounting traditional theories, which divide costs only into fixed and variable. The proper management of a company depends on the knowledge of the business by the administrators/managers, but also on the financial information transmitted to them and used in making their rational decisions.

Traditional models of cost behaviour consider a linear relationship between activities and costs. Costs are described as fixed or variable concerning changes in activity volume (Anderson et al., 2003; Zanella et al., 2015). According to these models, total costs are fixed costs plus variable costs, and the latter are unit variable costs multiplied by the activity volume (Balakrishnan & Gruca, 2008). These models assume that the cost behaviour states that the amount of costs incurred depends on the volume of realised activity only in the current period, meaning, the level of costs and activity in the previous period does not affect the costs incurred in the current period. In this sequence, it also means that there is a fundamental assumption that the relation between costs and volume is symmetric for volume increases and decreases (Anderson et al., 2003).

Variable costs depend on the company's activity, that is, they are more easily controlled, since, when the volume of activity increases, these costs also increase proportionally, but it also becomes easier to reduce in case the activity of the company decreases. On the contrary, fixed costs do not depend on the company's activity, but on structural costs, and tend to vary only with structural changes in the company and are therefore fixed in the short term.

Thus, to properly manage a company's costs, it is essential to understand why they vary and how fixed costs and variable costs behave (Özkaya, 2021). Indeed, and as mentioned above, traditional theories divide costs into fixed and variable, depending on whether they vary according to the level of activity of the company.

However, recent research in management accounting has questioned this fundamental assumption, that cost behaviour is symmetric for increases and decreases in activity (Özkaya, 2021). Emerging research in this domain indicates that costs exhibit asymmetric responses to changes in activity (Anderson et al., 2003; Balakrishnan et al., 2014; Dan Weiss, 2010; Shust & Weiss, 2014; Zanella et al., 2015).

Actually, research in management accounting offers several novel insights into firms' cost behaviour. Recent studies show evidence of the existence of "sticky costs". These costs are different because they increase more when the activity increases than they decrease when the activity decreases (Anderson et al., 2003; Balakrishnan et al., 2014; Dan Weiss, 2010; Shust & Weiss, 2014; Zanella et al., 2015). They should, for this reason, be carefully studied before incurring them, since, in the event of a reduction in the company's activity, its results will be more compromised than they were before the increase in activity.

Anderson et al. (2003) is the first study to empirically demonstrate asymmetric cost behaviour by using revenue information as a proxy for the level of activity (Dan Weiss, 2010; Zanella et al., 2015). It indicates that sticky costs refer to expenses that do not decrease proportionally with reduced activity levels, as much as they increase with increased activity. In simpler terms, when a company's operations slow down, these costs do not decrease as much as they should, leading to a disproportionate impact on earnings. This phenomenon makes earnings predictions less accurate and can significantly affect a company's financial stability. Essentially,

companies with stickier costs experience more pronounced fluctuations in earnings due to their inability to adjust costs adequately to changes in activity levels.

Anderson et al. (2003) and Zanella et al. (2015) summarise that costs are "sticky" when they increase more when activity rises than they decrease when activity falls by an equivalent amount. Specifically, costs are sticky if the magnitude of the increase in costs associated with an increase in volume is greater than the magnitude of the decrease in costs associated with an equivalent decrease in volume. J. V. Chen et al. (2019) gives the example of the hiring and firing of employees or the acquisition of equipment that will continue to have depreciation if the company does not sell it when it stops needing it. The vanishing of these costs becomes difficult for managers, on the one hand, because of the hope that activity will increase again and that they will be needed again, and, on the other hand, some of these costs generate new costs for cease-to-exist, as is the case with compensation for redundancies.

Unlikely the fixed/variable model of cost behaviour, the sticky costs model recognises that the costs incurred in a period depend to some degree on the costs incurred in the previous period. That is, both the level of activity in the current period and the level of costs and activity in the previous period affect the costs incurred in the current period (Balakrishnan & Gruca, 2008).

Banker & Byzalov (2014) observe that asymmetric costs arise due to adjustment costs, managerial expectations regarding future demand, the direction of prior period sales change, and managerial incentives and agency considerations. Other studies identify evidence of characteristics that have an impact on cost stickiness, like corporate governance (C. X. Chen et al., 2012), labour market (Banker et al., 2013; Banker & Chen, 2007), and cost structure (Balakrishnan et al., 2014). Also, considering the hubris theory, CEOs with overconfidence or optimistic bidding tendencies tend to induce higher levels of cost stickiness through their strong and irrational self-beliefs compared to optimistic CEOs who are not involved in bidding (C. X. Chen et al., 2013; Yang, 2015).

According to Zanella et al. (2015), the classical understanding of cost stickiness, whether present or absent, is regarded as an indicator of a firm's management skills in navigating the upward and downward trends of the market, which can ultimately impact the firm's performance. Also, as managers provide voluntary disclosures such as earnings forecasts to satisfy information demand by investors and financial analysts, companies with sticky costs tend to have greater forecast errors. Indeed, if managers do not perfectly predict the negative implications of cost stickiness on earnings, they will overestimate earnings, generating distrust among investors and financial analysts. Literature indicates that cost stickiness has adverse implications for earnings as well as that earnings tend to be more unpredictable for firms with sticky costs, leading to larger errors in earnings forecasts (Ciftci & Salama, 2018).

The information on sticky costs is of paramount importance for managers, who must take this type of cost into account in their daily management. They are also dangerous costs because they are often incurred due to the enthusiasm for increased activity, but later, if activity decreases, they are costs that the company is unlikely to be able to get rid of as quickly.

In the research field, the adoption of the sticky costs models quickly influenced the studies, catalysing a new and expanding body of literature on the subject. However, the available literature remains relatively sparse (Zanella et al., 2015).

Krisnadewi & Soewarno (2021) states that if managers possess insights into future capacity demand and can forecast potential future revenue, they are likely to factor this information into resource management decisions. Furthermore, to truly optimise such decisions, understanding the nature of adjustment costs associated with increasing or decreasing leased capacity is crucial. These adjustment costs can significantly influence the company's future performance, such as its earnings performance. Making decisions without accounting for these costs can detrimentally affect the company's overall value.

Although the study of costs is an essential content in higher education courses, particularly in the areas of accounting and management, studies on the existence of these contents in higher education are scarce. The study Novák et al. (2018), carried out in industrial companies, concludes that cost specialists are aware of and know how to manage traditional fixed and variable costs, however, it states that even senior managers are unaware of sticky costs and their behaviour.

Krisnadewi & Soewarno's (2021) study focused on higher education accounting students in their fifth semester, and it expected them to be ready to enter the workforce and to be more mature. To confirm participants' comprehension of cost behaviour, the researchers included at first questions on this topic, and all participants successfully passed this test. Despite this, when presented with a scenario concerning sales prospects and information on profit-based incentives, the findings of the study indicated otherwise. Also, the authors discovered that only 7.04% of the participants were familiar with the concept of cost stickiness, and they reported acquiring this knowledge from journals accessed through the Internet, and not from the degree curriculum.

The connection between research and teaching is a significant topic in educational literature (Giraud & Saulpic, 2019). Nonetheless, despite the recognition that this issue varies across different disciplines, it is not often discussed in management accounting literature. This connection presents different challenges depending on the perspectives and approaches adopted by management accounting scholars in their research.

The study of a company's costs is part of the management accounting curricular units, in courses in accounting, management, economics, and more. However, despite the existing literature regarding the several types of costs, it is our belief that the specific topic of sticky costs is not yet part of the programs of those curricular units.

Given the great interest in cost behavior to management, including not only the traditional theories but also the recent research on cost stickiness, this study's goals are: (1) to overview the evolution of the research on sticky costs; (2) to compare research on sticky costs and cost behavior; and (3) to analyse the subjects in research on cost behavior in higher education.

To accomplish the goals, this study consists of a bibliometric study on journals identified using Scimago Journal & Country Rank. Articles from accounting and education well-respected journals were the primary pieces of analysis, during the period from 2003 to 2024.

This investigation's contributions are to both academia and industry. In academia, research on sticky costs advances knowledge by developing new theories and models to understand their behaviour and impact on business management. Integration of sticky cost concepts into accounting and management curricula enhances education at the tertiary level, particularly in higher education institutions, and contributes to the achievement of United Nations

Sustainable Development Goal 4: Quality Education. By preparing future professionals with relevant knowledge and practical skills, including those related to sticky costs, academia fosters equitable access to quality education, promoting inclusive and lifelong learning opportunities for all. Collaboration among academic institutions, businesses, and governmental organisations fosters knowledge sharing and innovation in sticky cost management. In industry, recognising and managing sticky costs improves decision-making processes and promotes long-term financial sustainability, aligning with the United Nations Sustainable Development Goal 8: Decent Work and Economic Growth. Implementing flexible management practices to address sticky costs enhances operational efficiency and resilience, creating an environment conducive to sustainable economic growth and the generation of decent work opportunities.

This study presents a traditional scientific article structure: the remainder is divided into three more sections. The next section presents the research methodology. In the third section, the findings are provided. The article ends with conclusions and limitations.

2 Methodology

According to Pritchard & Wittig (1981), bibliometrics encompasses all studies that use or discuss the statistical analysis of data related to printed communication. This includes citation studies, analyses of abstract journals, publication counts, certain circulation studies that can yield similar results to citation studies, and examinations of individual elements within papers, such as acknowledgements of research sponsorship. Also, a bibliometric study is a quantitative method used to identify trends in publications, primarily utilised in libraries to characterise collections of written publications (Aparicio et al., 2014).

This article presents a bibliometric study examining trends in research related to cost behaviour, with a particular focus on sticky costs. Furthermore, it explores the extent to which these concepts are integrated into higher education, specifically within management accounting curricula.

The framework outlined in the introduction guides our research question: "To what extent are sticky costs accounted for in cost behaviour within higher education?" To address this question, we formulated the following research objectives: (1) to provide an overview of the evolution of research on sticky costs; (2) to compare research on sticky costs with cost behaviour studies; and (3) to analyse topics explored in research on cost behaviour within higher education.

To achieve these goals, the study conducted a comprehensive review of articles published between 2003 and 2024, prompted by Anderson et al. (2003) pioneering work, which in 2003 was the first to empirically explore asymmetric cost behaviour. The selection of journals was meticulously conducted through the Scimago Journal & Country Rank (SJCR) platform, applying stringent criteria: journals bearing the term "Accounting" in their title. Subsequently, for each chosen journal, articles were identified using the keywords "sticky costs" or "cost stickiness", and "cost behaviour" or "cost behaviour". These articles were meticulously retrieved from the B-On database, ensuring they were written in English, peer-reviewed, and available in full text.

The SJCR platform was selected for its esteemed reputation and meticulous indexing standards. Notably, the SJR index, a metric employed by Scimago Lab, gauges the influence and relative significance of scientific journals based on citation frequencies and the standing of the journals that provide those citations.

Subsequently, journals lacking articles relevant to our inquiry, meaning those not featuring discussions on sticky costs as well as cost behaviour, were excluded from consideration. This process yielded a total of 39 journals, housing 294 articles on cost behaviour and 110 articles on sticky costs.

Figure 1 shows the selection process of the journals, and, in brackets, their corresponding number.

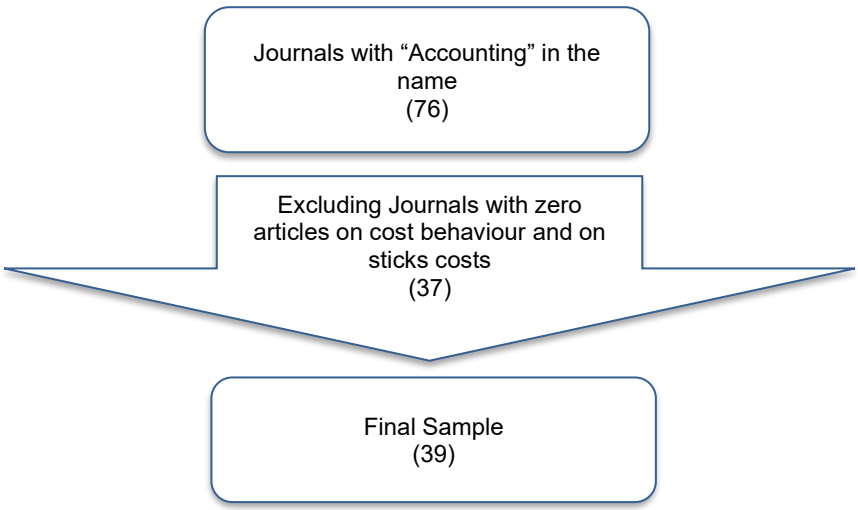


Figure 1. Selection process of the articles

3 Results

In this section, the study will present the results of the evolution of research on sticky costs, the comparison with research on cost behaviour, and the topics explored in higher education regarding cost behaviour.

3.1 Evolution of the Research on Sticky Costs

Concerning the first goal, to provide an overview of the evolution of research on sticky costs, Figure 2 illustrates the evolution of research on sticky costs, both overall and by quartile article. The fourth quartile (Q4) is not represented, as during the study period, there were no journals featuring articles on the sticky costs investigation.

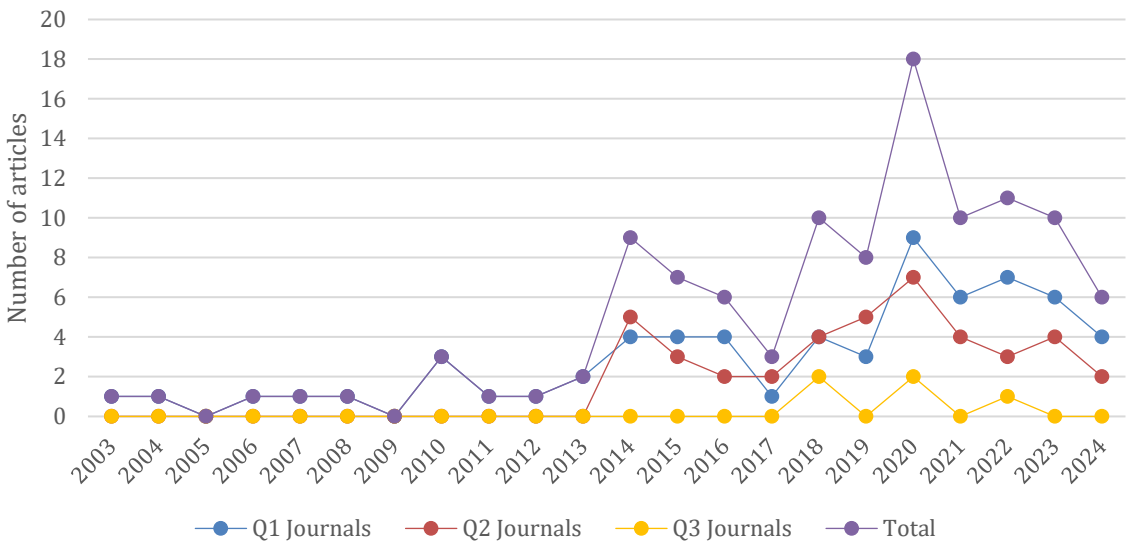


Figure 2. Annual evolution in research on sticky costs.

Studies on sticky costs, while first emerging in 2003, only began to have a significant impact from 2013 onwards. However, it was only from 2018 onwards that they became a constant presence, particularly in Q1 and Q2 journals. The fact that they are more prevalent in journals of these categories suggests their importance for both academia and industry, as these journals only accept studies of high quality. This prominence in top-tier journals underscores the significance of sticky costs as a research topic, highlighting its relevance and potential impact on advancing knowledge in the field.

Furthermore, the predominance of articles on sticky costs in Q1 and Q2 journals, with few in Q3 and none in Q4 journals, also indicates that they are innovative pieces of research crucial for the advancement of the field. Their absence in lower-tier journals suggests that they represent cutting-edge contributions, likely to influence future developments and directions within the issue.

Additionally, although not all publications for 2024 have been included yet, it was decided to incorporate this year due to a significant number of already published articles, indicating the sustained interest in the topic.

3.2 Research on Sticky Costs Versus Research on Cost Behaviour

To achieve the second objective, comparing research on sticky costs with studies on cost behaviour, three analyses were conducted: examination of the number of publications by journal, by journal quartiles, and by country.

Table 1 presents a comparison, journal by journal, of the number of articles published on each topic.

Table 1. Research on Sticky Costs Versus Cost Behaviour by journal.

Journal	Cost Behaviour (number of articles)	Sticky Costs (number of articles)
Accounting and Business Research	8	1
Accounting and Finance	16	10
Accounting and the Public Interest	1	0
Accounting Forum	1	0
Accounting Historians Journal	2	0
Accounting Horizons	10	2
Accounting Perspectives	3	0
Accounting Research Journal	3	1
Accounting Review	26	13
Advances in Accounting	5	0
Asian Journal of Accounting Research	1	1
Asian Review of Accounting	4	1
Asia-Pacific Journal of Accounting and Economics	3	0
Australasian Accounting, Business and Finance Journal	2	0
Australian Accounting Review	6	2
China Journal of Accounting Studies	7	3
Contemporary Accounting Research	26	10
European Accounting Review	19	7
Issues in Accounting Education	26	0
Journal of Accounting and Economics	1	2
Journal of Accounting and Organizational Change	7	2
Journal of Accounting Education	3	0
Journal of Accounting in Emerging Economies	3	3
Journal of Accounting Research	7	4
Journal of Accounting, Auditing and Finance	16	6
Journal of Applied Accounting Research	5	2
Journal of Business Finance and Accounting	5	3
Journal of Contemporary Accounting and Economics	1	0
Journal of Corporate Accounting and Finance	0	1
Journal of Emerging Technologies in Accounting	3	0
Journal of Financial Reporting and Accounting	5	2
Journal of International Accounting Research	2	0
Journal of International Accounting, Auditing and Taxation	3	0
Journal of Management Accounting Research	39	24
Management Accounting Research	8	0
Pacific Accounting Review	0	1
Review of Accounting Studies	8	3
Review of Quantitative Finance and Accounting	9	5
Sustainability Accounting, Management and Policy Journal	0	1
Total	294	110

The comparison between research published in accounting journals on cost behaviour and sticky costs is indicative of the latter's relative novelty. Since 2003, there have been 294

articles on cost behaviour and only 110 on sticky costs in the journals under analysis. However, it also suggests that in recent years, research on cost stickiness has gained prominence in major accounting journals.

While the vast majority of journals have more publications on cost behaviour compared to sticky costs, there are four journals with more publications on the latter. Furthermore, 3 of these journals have no publications on cost behaviour but already have publications on sticky costs. This pattern highlights the emerging significance and growing interest in research on sticky costs within the accounting field, suggesting its potential to become a prominent area of study in the future.

To analyse publications by quartile of journals, Figure 3 confirms the presence of both themes, cost behaviour and sticky costs, in journals of the top 3 quartiles.

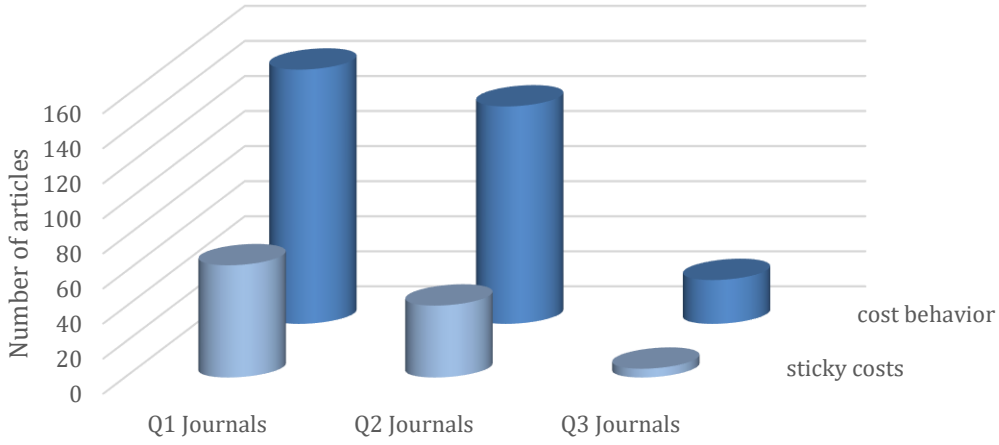


Figure 3. Research on Sticky Costs Versus Cost Behaviour by journal quartiles.

While the oldness of the cost behaviour theme undoubtedly contributes to the higher number of articles, it is noteworthy to emphasise the inclusion of the sticky costs issue in these high-quality journals.

Specifically, most publications on sticky costs are found in Q1 journals, followed by Q2, and in much smaller numbers, Q3. This observation underscores the increasing importance assigned to sticky costs, particularly in prestigious publications like Q1 and Q2 journals, renowned for their selective criteria in accepting only outstanding articles. This further underscores the significance and potential impact of these studies in advancing knowledge in the field.

Finally, a country-wise analysis of the journals was conducted, revealing that the themes under investigation are found in publications originating from only four countries. Figure 4 presents the comparison between the number of articles on cost behaviour and sticky costs.

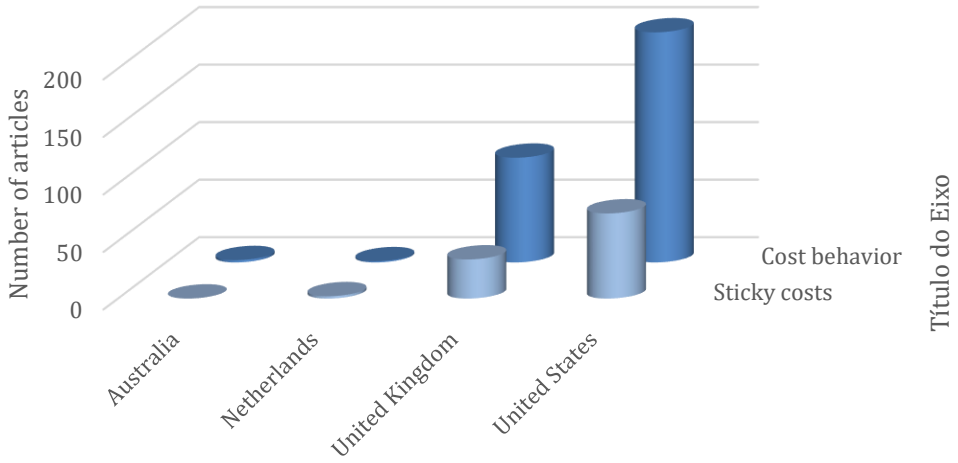


Figure 4. Research on Sticky Costs Versus Cost Behaviour by journal country.

In addition to the previous conclusions that there are more articles on the former theme than on the latter, it is noteworthy that the number of publications on sticky costs mirrors the countries where cost behaviour is more extensively studied: primarily the United States, followed by the United Kingdom. Publications from the Netherlands and Australia are marginal in both themes.

This observation underscores the interconnectedness between research on cost behaviour and sticky costs, as well as the influence of geographical factors on the prevalence of these themes in academic literature. The concentration of publications in certain countries suggests potential areas for further research collaboration and the need for broader international representation in the study of sticky costs.

3.3 Subjects Under Research on Cost Behaviour in Higher Education

Finally, to accomplish the third goal of analysing topics explored in research on cost behaviour within higher education, we examined both themes, cost behaviour and sticky costs, in educational journals with "accounting" and "education" in their titles.

Table 2 expresses the articles in each issue by journal with "Accounting" and "Education" in the title. There were only two journals in our sample, and both were Q2.

Table 2. Research on Sticky Costs Versus Cost Behaviour by accounting education journal.

Journal	Cost Behaviour (number of articles)	Sticky Costs (number of articles)
Issues in Accounting Education	26	0
Journal of Accounting Education	3	0

This study is essential for providing a comprehensive answer to the research question. While the connection between research and teaching is a significant topic in educational literature, this analysis reveals a critical gap. Despite the importance of sticky costs in accounting research and industry, there are no articles on this topic in accounting education journals.

Regarding articles focusing on cost behaviour, there is a considerable dispersion of themes, and not all of them directly address cost behaviour. Some articles merely mention cost behaviour within the broader context of accounting studies or accounting education.

Table 3 presents the themes within cost behaviour in these journals, based on their keywords.

Table 3. Keywords on Accounting Education journals.

Keywords	Number of articles	Keywords	Number of articles
Activity-based costing	1	Cost functions	1
Break-even analysis	1	Cost structure	1
Budget	1	Cost-volume-profit analysis	1
Cost accumulation	1	Labor costs	1
Cost allocation	2	Lost profits damages	1
Cost analysis	1	Overhead costs	3
Cost behavior	2	Profitability	5
Cost control	2	Sales forecasting	1
Cost estimates	1	Variable costs	1

Despite many publications demonstrating a genuine concern for the study of costs within management accounting, there is a visible lack of focus on sticky costs.

It is also important to note that the integration of research findings into educational curricula often takes time. As previously mentioned, the first articles on sticky costs appeared in 2003, but their impact only began to be significant around 2018. This time lag might be one reason why sticky costs have not yet been included in accounting education publications.

4 Conclusions

Research in accounting has significantly expanded, propelling advancements in the field. Accounting systems, comprising financial and management accounting, serve external stakeholders and internal management, respectively. Traditional cost behaviour models categorised costs as fixed or variable, assuming a linear relationship with activity levels. However, recent research introduced "sticky costs", which exhibit an asymmetrical pattern, complicating cost management and affecting earnings predictability and financial stability due to their inadequate adjustment to activity fluctuations.

Despite the critical importance of understanding cost behaviour, the integration of sticky cost concepts into higher education curricula seems inadequate. Hence, this study addresses the

central question: "To what degree are sticky costs integrated into the discourse on cost behaviour within higher education?" The study outlined three research goals: (1) to offer a comprehensive overview of the developmental trajectory of sticky cost research; (2) to compare the findings of sticky cost studies with those of traditional cost behaviour analyses; and (3) to scrutinise the themes explored in research concerning cost behaviour within higher education.

The findings regarding the first goal, providing an overview of sticky cost research evolution, align with Zanella et al. (2015), noting literature scarcity. Sticky cost studies, emerging from 2003, gained significance post-2013 and a steady presence post-2018, notably in Q1 and Q2 journals. Their prevalence in these top-tier journals signifies their importance for academia and industry, given the journals' strict quality standards. This highlights sticky costs' relevance and their potential impact on advancing knowledge.

Findings on the second goal, which compares research on cost behaviour and sticky costs in accounting journals, highlight the latter's relative novelty. While 294 articles on cost behaviour have been published since 2003, only 110 focus on sticky costs in the analysed journals. However, recent years have seen a surge in research on cost stickiness, particularly in major accounting journals. Although most journals feature more publications on cost behaviour than sticky costs, four journals prioritise the latter. Notably, three of these journals exclusively feature publications on sticky costs, indicating a burgeoning interest in this emerging issue.

The third goal findings show the absence of sticky costs from accounting education literature, suggesting a disconnection that requires attention. Integrating recent research findings into educational frameworks will better prepare future professionals to understand and manage this crucial aspect of cost behaviour effectively.

In short, this study provided a comprehensive overview of sticky cost research, juxtaposing it with traditional cost behaviour analyses and probing its presence within higher education. Through an exhaustive analysis of articles spanning two decades from esteemed journals, this study endeavours to enrich both academic scholarship and industry practices, fostering a deeper understanding and more effective management of sticky costs. Ultimately, this endeavour aligns with the pursuit of quality education and sustainable economic growth in consonance with the objectives outlined in the United Nations Sustainable Development Goals.

The answer to the research question is clear: there is no research on sticky costs in the accounting education journals. This highlights the need to integrate contemporary research findings into educational curricula to bridge the gap between academia and industry.

Definitely, this study's findings offer significant contributions to both academia and industry. Within academia, the exploration of sticky costs enriches scholarly discourse by fostering the development of novel theoretical frameworks and analytical models, thereby deepening our understanding of their implications for business management. The incorporation of these insights into accounting and management curricula not only enriches tertiary education but also aligns with the overarching goal of advancing quality education, as outlined in the United Nations Sustainable Development Goal 4. By equipping future professionals with pertinent knowledge and practical skills related to sticky costs, academia plays a pivotal role in promoting inclusive learning opportunities and lifelong educational attainment.

The absence of sticky costs from accounting education literature, despite their recognised significance, underscores a disconnect that warrants attention. This gap highlights the need for integrating contemporary research findings, such as those on sticky costs, into educational curricula to ensure that future professionals are well-versed in relevant and current industry issues. Additionally, the broad range of themes within cost behaviour research, with some articles only tangentially addressing the topic, suggests a need for more focused and in-depth studies that can provide clearer insights and applications in both educational and practical settings.

In the realm of industry, the recognition and effective management of sticky costs foster improved decision-making processes and bolster long-term financial viability, in line with the objectives of the United Nations Sustainable Development Goal 8: Decent Work and Economic Growth. The adoption of adaptable management strategies to address sticky costs enhances operational efficiency and resilience, thereby cultivating an environment conducive to sustainable economic progress and the creation of meaningful employment opportunities.

It is important to acknowledge the limitations of this study. We exclusively analysed articles from indexed journals, which may not fully represent the incorporation of sticky cost topics in higher education curricula. Future research should conduct empirical studies to ascertain whether management accounting courses in universities indeed include this topic. Additionally, it is worth noting that this study serves as a precursor to a forthcoming empirical investigation into the actual inclusion of sticky cost concepts in management accounting education.

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