Vol. 16(2), pp. 80-90, April-June 2024
DOI: 10.5897/JAT2024.0612
Article Number: 0F0BD6572218
ISSN 2141-6664

http://www.academicjournals.org/JAT

ACADEMIC JOURNALS
expand your knowledge

Journal of Accounting and Taxation

Full Length Research Paper

Analysis of the determinants of asymmetric cost behavior: Theoretical foundation and implications

Sadri Lohrasp

School of Accounting, University of Birmingham Dubai, Dubai, United Arab Emirates.

Received 30 April, 2024; Accepted 30 May, 2024

This paper investigates the foundational theories and empirical evidence surrounding cost behavior and asymmetric cost behavior, exploring their implications for managerial decision-making, budgeting procedures, performance evaluation systems, and overall organizational performance. Through a thorough review of relevant literature and theoretical frameworks, as well as an analysis of empirical evidence, the study highlights the significance of understanding cost variability within organizations. Key determinants such as production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics are identified as drivers of asymmetric cost behavior, shaping managerial decisions and organizational outcomes. The research underscores the importance of integrating insights from cost behavior analysis into management practices to optimize resource allocation, adapt to market dynamics, and achieve strategic objectives. The findings are particularly relevant for organizations in the United Arab Emirates (UAE), offering valuable insights to support informed decision-making, enhance operational efficiency, and drive sustainable growth in a dynamic business environment.

Key words: Cost asymmetry, cost stickiness, cost behavior.

INTRODUCTION

Cost behavior forms the bedrock of managerial accounting, serving as a pivotal factor in facilitating effective decision-making and performance evaluation within organizations. Understanding the responsiveness of costs to changes in activity levels is paramount for managers, guiding crucial decisions on resource allocation, pricing strategies, and budgetary planning. However, within this basic knowledge of cost behavior, asymmetric cost behavior is a complicated phenomenon. Asymmetric cost behavior entails scenarios where costs display varying responses to fluctuations in activity levels, contingent upon the direction of change. This phenomenon introduces unique challenges and opportunities for managers, necessitating a thorough investigation into its determinants and implications. Asymmetric cost behavior arises when the magnitude of cost changes differs between increases and decreases in activity levels.

This suggests an asymmetrical relationship between costs and activity, where the response to positive and negative activity fluctuations varies. Such cost behavior typically presents in two forms: sticky costs and anti- sticky costs. Sticky costs occur when costs decrease less for a decrease in activity than they increase for an equivalent rise in activity (Anderson et al., 2003). Conversely, anti-sticky costs occur when costs decrease more for a

E-mail: lohraspsadri@gmail.com.

decrease in activity than they increase for an equivalent rise in activity (Weiss, 2010). Both forms extend the traditional cost model by considering not only fixed and variable costs (as extreme cases) but also the direction of activity changes (Banker and Byzalov, 2014). This research paper endeavors to unravel the intricacies of asymmetric cost behavior within the domain of managerial accounting, aiming to underscore its critical significance and implications for organizational decision-making and performance assessment. While traditional cost behavior analysis provides a foundational understanding, the introduction of asymmetric cost behavior adds a layer of complexity that cannot be overlooked. The disparate responses of costs to changes in activity levels require a nuanced approach to cost management, wherein managers must discern not only the magnitude but also the direction of cost fluctuations. Failure to grasp these nuances may result in suboptimal decisions, misallocation of resources, and ultimately, diminished organizational performance.

Through this research endeavor, we seek to shed light on the determinants driving asymmetric cost behavior by synthesizing existing literature and empirical evidence. By examining factors such as production capacity constraints, market competition, technological advancements, and organizational characteristics, we aim to offer a comprehensive understanding of the underlying mechanisms shaping cost asymmetry. Moreover, this paper aims to elucidate the implications of asymmetric cost behavior on managerial decision-making, budgeting processes, performance evaluation systems, and overall organizational performance. By dissecting the practical ramifications, we endeavor to equip practitioners with insights to navigate the complexities of cost management in today's dynamic business landscape. In addition, this research delves into the intricate dynamics of cost behavior within the United Arab Emirates (UAE) context. By unraveling the complexities of cost stickiness within this framework, we aim to contribute to a deeper understanding of cost dynamics and provide valuable insights for practitioners navigating today's competitive business environment.

The foundation of this study lies in the extensive body of financial accounting research, which explores various aspects of reported earnings, including forecasting, management, and the influence of managerial behavior. Various studies have highlighted the incremental value of incorporating distinctive aspects of cost behavior in understanding earnings behavior (Anderson et al., 2007; Banker and Chen, 2006a; Kama and Weiss, 2013). It has been found that many managerial factors drive asymmetry in cost behavior when compared with sales changes, including adjustment costs, managerial optimism, and agency problems, particularly acute in a rapidly growing economy. Within these contexts, this paper endeavors to explore how explicit models of cost behavior enhance our understanding of financial reports from companies.

An important aspect of the research on cost asymmetry is cost stickiness. Previous research indicates that many costs tend to be 'sticky'—they decrease less in response to sales declines compared to their increase for equivalent sales increases (Anderson et al., 2003). Subsequent studies (Soegiharto and Rachmawati, 2022) have corroborated the prevalence of sticky costs across various countries, highlighting their association with reported earnings and managerial incentives. Additionally, Ibrahim (2015) has identified situations where costs exhibit 'anti-stickiness'—they decline more in response to sales decreases than they rise for equivalent sales increases. These findings suggest an alternative model of cost behavior rooted in deliberate managerial decisions. When faced with sales decreases, managers may opt to retain slack resources to avoid adjustment costs associated with downsizing. Conversely, when sales increase, managers must incur adjustment costs to accommodate the increased demand. Managerial optimism about sales rebounding after declines further influences decisions to maintain resources, resulting in cost stickiness.

Understanding cost behavior is crucial for various aspects of financial reporting, including earnings forecasting and the analysis of conditional conservatism (Zhao et al., 2014). While traditional cost behavior analysis provides a foundational understanding, asymmetric cost behavior introduces a layer of complexity that cannot be overlooked. The asymmetry in cost responses to changes in activity levels necessitates a nuanced approach to cost management, wherein managers must discern not only the magnitude but also the direction of cost fluctuations. Failure to grasp the nuances of asymmetric cost behavior can lead to suboptimal decisions, misaligned resource allocation, and ultimately, diminished organizational performance.

A study sought to examine the prevalence of sticky costs within publicly listed companies in the UAE by analyzing the degree of adjustment between operating revenues and costs, and found evidence of cost asymmetry in the UAE (Zanella et al., 2015). This paper contributes to the understanding of cost behavior and its implications for earnings through a qualitative and quantitative review of various literatures. By testing predictions derived from asymmetric cost behavior theory, we shed light on the factors driving cost stickiness and its impact on earnings forecasting and conditional conservatism. Our findings offer insights into the interface between cost accounting and financial reporting, particularly in the context of Chinese companies with their unique economic and managerial characteristics. The subsequent sections of this study will elaborate on the aims and objectives, literature review, theoretical framework, hypotheses, and synthesis of empirical findings for the conclusion.

Aim and objectives

This research paper aims to delve into the intricate dynamics of cost behavior, particularly focusing on asymmetric cost behavior, within the context of managerial accounting. It seeks to explore how costs within organizations exhibit differing responses to changes in activity levels, known as asymmetric cost behavior, and to uncover the underlying determinants driving this phenomenon. The primary focus will be on accounting and reporting, with a specific emphasis on understanding the nuances of cost dynamics within the unique business landscape of the UAE. Within these contexts, this research also aims to provide a comprehensive understanding of asymmetric cost behavior by examining its theoretical foundations and practical implications. By meticulously analyzing existing literature, empirical evidence, and case studies, the paper aims to shed light on the factors influencing cost asymmetry. It seeks to unravel the complexities of cost management strategies, resource allocation decisions, and performance evaluation systems affected by asymmetric cost behavior. Furthermore, the research aims to contribute to the advancement of knowledge in the field of managerial accounting by synthesizing findings from diverse literature sources and proposing avenues for future research. Ultimately, the aim is to offer valuable insights and recommendations for practitioners to navigate the challenges posed by asymmetric cost behavior in today's dynamic and competitive business environment, particularly within the UAE context.

The UAE, situated in Western Asia, represents a contemporary and diverse economic landscape, standing as one of the most modern nations globally. With its economy ranked as the second-largest and most diversified in the Middle East, alongside being the seventh-largest producer and exporter of oil, the UAE has experienced significant economic growth. However, amidst its economic prowess, the phenomenon of cost asymmetry in financial reporting has garnered attention within its financial landscape, and this research paper is expected to contribute significantly.

As of 2021, the UAE boasts a Gross Domestic Product (GDP) reaching 415.02 billion USD, driven in part by its robust oil and gas sector. However, the escalation of oil and gas prices in the country's early years prompted UAE leaders to consider establishing a capital market to serve as a crucial financial pillar. Consequently, in 2000, the UAE stock exchanges and the Emirates Securities and Commodities Authority (SCA) were established, marking a significant step towards financial market development. In 2015, all publicly traded companies operating in the UAE were mandated to adopt International Financial Reporting Standards (IFRS) for their financial reporting, aligning with global accounting norms. Despite these regulatory advancements, the UAE's stock markets, while exhibiting considerable liquidity with a stock market turnover ratio of 10.51, remain relatively small on the international stage.

Within this dynamic economic context, the issue of cost asymmetry in financial reporting has emerged as a pertinent area of study. In the UAE's context, the investigation into cost asymmetry assumes significance as it sheds light on how costs react to fluctuations in activity levels within the country's unique economic landscape. By examining the degree of adjustment between operating revenues and costs for publicly listed companies in the UAE, this research aims to ascertain the existence or nonexistence of sticky costs—a concept rooted in cost asymmetry theory. Drawing on insights from existing literature and empirical evidence, this study seeks to contribute to the understanding of cost behavior within the UAE's financial markets. Through rigorous analysis and hypothesis testing, the research aims to provide valuable insights into the determinants and implications of cost asymmetry in the UAE, thereby informing decision-makers and practitioners operating within this dynamic economic environment. Within the specified aims, the objectives of this research paper are as follows.

Research objective 1: To explore the theoretical foundations of cost behaviour and asymmetric cost behaviour, drawing from existing literature and empirical evidence

This objective involves conducting a thorough review of existing literature and empirical studies related to cost behavior and asymmetric cost behavior. By examining various theories and models in managerial accounting, such as traditional cost-volume-profit analysis, agency theory, and transaction cost economics, the aim is to establish a solid theoretical foundation. Additionally, empirical evidence from previous research studies will be analyzed to understand real-world applications and practical implications of cost behavior theories. This exploration will provide a comprehensive understanding of the conceptual frameworks underlying cost behavior and its asymmetric nature.

Research objective 2: To identify and analyse the determinants driving asymmetric cost behaviour, including factors such as production capacity constraints, market competition, technological advancements, and organizational characteristics

This objective involves identifying and analyzing the factors that contribute to asymmetric cost behavior within organizations. Key determinants such as production capacity constraints, market competition dynamics, technological advancements affecting production processes, and various organizational characteristics will be examined in detail. Through empirical analysis and case studies, the aim are to understand how these factors influence cost behavior asymmetry. By identifying the drivers of asymmetric cost behavior, the research aims to provide insights into the underlying mechanisms shaping cost dynamics within organizations.

Research objective 3: To assess the implications of asymmetric cost behaviour on managerial decision-making processes, budgeting procedures, performance evaluation systems, and overall organizational performance

This objective entails evaluating the practical implications of asymmetric cost behavior on various aspects of managerial decision-making and organizational performance. The focus will be on understanding how asymmetric cost behavior influences managerial decision-making processes, including resource allocation, pricing strategies, and investment decisions. Additionally, the impact of asymmetric cost behavior on budgeting procedures and performance evaluation systems will be analyzed to assess its effects on organizational efficiency and effectiveness. By conducting this assessment, the research aims to provide valuable insights into the consequences of asymmetric cost behavior on overall organizational performance and competitiveness.

Research questions (RQs)

Cost behavior is a cornerstone concept in managerial accounting, crucial for effective decision-making and organizational performance evaluation. In this research paper, we delve into three key research questions aimed at deepening our understanding of asymmetric cost behavior and its implications within organizational contexts.

RQ1: What are the foundational theories and empirical evidence that underpin cost behaviour and asymmetric cost behaviour?

The first research question seeks to uncover the foundational theories and empirical evidence that underpin cost behavior and its asymmetric nature. By examining traditional cost models alongside emerging perspectives, we aim to establish a comprehensive framework for analyzing asymmetric cost behavior. Drawing insights from existing literature and empirical studies, we lay the groundwork for further exploration into this intriguing phenomenon.

RQ2: What are the key determinants driving asymmetric cost behaviour, including factors such as production capacity constraints, market competition, technological advancements, and organizational characteristics?

The second research question focuses on identifying and analyzing the key determinants driving asymmetric cost behavior. Factors such as production capacity constraints, market competition, technological advancements, and organizational characteristics are explored to understand the underlying mechanisms shaping cost asymmetry. Through this examination, the aim is to elucidate the complex interplay of internal and external factors influencing cost dynamics within organizations.

RQ3: How does asymmetric cost behaviour influence managerial decision-making processes, budgeting procedures, performance evaluation systems, and overall organizational performance?

The third research question delves into the implications of asymmetric cost behavior on managerial decision-making processes, budgeting procedures, performance evaluation systems, and overall organizational performance. By exploring how asymmetric cost behavior influences various aspects of organizational management, the aim is to provide valuable insights for practitioners navigating the challenges of cost management in today's dynamic business environment.

LITERATURE REVIEW

While the concept of cost asymmetry with stickiness has been acknowledged by scholars as far back as the 20th century, it was the seminal work of Anderson et al. (2003) that catalyzed the proliferation of research on asymmetric cost behavior. Since then, a plethora of studies have emerged, predominantly focusing on identifying the drivers of asymmetric cost behavior and empirically testing these relationships across various institutional settings. However, there exists a lesser-explored strand of literature that delves into the ramifications of cost behavior on firm profitability and earnings forecasts. The literature examining asymmetric cost behavior operates under several key assumptions to translate theoretical concepts into empirical analysis. Firstly, it posits that fluctuations in costs reflect managerial decisions to adjust resources in response to changes in demand. According to Anderson et al. (2003), cost stickiness for asymmetry occurs when managers choose to retain resources during temporary declines in demand to avoid adjustment costs associated with capacity reduction and expansion. These adjustment costs may include severance packages for dismissed personnel or disposal costs of physical assets (Banker et al., 2013; Cooper and Haltiwanger, 2006; Hamermesh and Pfann, 1996). Secondly, the literature assumes that changes in a company's activity level are a response to shifts in demand. Since direct observation of activity changes is challenging, many researchers use sales as a proxy for activity fluctuations. However, this approach raises concerns about the impact of selling price fluctuations on the estimated relationship (Anderson and Lanen, 2009; Cannon, 2014). Additionally, the focus of many studies is on analyzing the asymmetric behavior of Selling, General & Administrative costs (SG&A), as these costs are subject to high managerial discretion. Contrary to conventional interpretations associating a rise in the SG&A ratio with managerial incompetence in cost control, such increases are often attributed to the stickiness of SG&A costs, reflecting deliberate managerial decisions rather than cost escalation (Bernstein and Wild, 1998; Lev and Thiagarajan, 1993).

While SG&A costs are frequently examined, some studies also identify sticky and anti-sticky cost patterns for asymmetry in other expense categories, such as total operating costs, labor costs, or costs of goods sold (Balakrishnan and Gruca, 2008; Banker and Byzalov, 2014; Holzhacker et al., 2015; Weiss, 2010). These findings suggest that cost stickiness is not confined to SG&A costs alone but may manifest across various cost components. On a theoretical foundation, a significant number of research on cost asymmetry is available in the realm of corporate finance, a fundamental inquiry centers on the impact of information asymmetry on firms' dividend decisions. Drawing from agency theory, which underscores the divergence of interests between managers and shareholders (Jensen and Meckling, 1976), research suggests that managers may exploit their discretion to prioritize personal benefits over shareholder wealth. To counteract managerial opportunism, strategies such as distributing higher dividends have been proposed as a means of reducing available funds under managerial control and enhancing external monitoring by capital providers (Easterbrook, 1984). However, despite the potential for dividends to mitigate agency conflicts, managers retain the ability to retain earnings for personal gain, thus perpetuating the principal-agent problem.

A significant body of literature has explored the determinants shaping corporate dividend policies. Prior studies have highlighted the positive association between corporate social responsibility (CSR) performance and dividend payouts (Benlemlih, 2019), suggesting that socially responsible firms are more inclined to distribute larger dividends. Similarly, enhanced audit quality has been identified as a factor in mitigating agency issues and fostering dividend payments, particularly in firms characterized by greater information asymmetry and weaker monitoring mechanisms (Zadeh, 2022).

Moreover, governance mechanisms, such as the presence of independent directors and domestic institutional ownership, have been found to bolster dividend propensity (Sharma, 2011; Chacko and Lukose, 2018). Recent research has also delved into the influence of research and development (R&D) activities and innovation on dividend decisions (Hasan et al., 2022; Gugler, 2003). Findings indicate an inverse relationship between R&D expenditure and dividend payouts in various contexts, suggesting that firms engaged in innovation may prioritize reinvestment over dividend distributions.

Research gaps

The literature review for this study has identified several research gaps. Firstly, there is a relatively underexplored area regarding the impact of cost behavior on firm profitability and earnings forecasts. While numerous studies have focused on identifying the determinants of asymmetric cost behavior and empirically testing these relationships across different institutional settings, there is a noticeable gap in understanding the downstream effects of cost asymmetry on firm financial performance. Furthermore, the existing literature predominantly examines the asymmetric behavior of Selling, General & Administrative (SG&A) costs, assuming that cost fluctuations reflect managerial decisions in response to changes in demand. However, there is a lack of comprehensive analysis regarding the manifestation of cost stickiness across various cost components beyond SG&A expenses. Additionally, the literature review underscores the theoretical foundation of research in corporate finance, particularly concerning the impact of information asymmetry on firms' dividend decisions. Although previous studies have explored the determinants shaping corporate dividend policies, there remains a gap in understanding how cost asymmetry interacts with governance mechanisms and other factors to influence dividend distributions. Moreover, while existing research has primarily focused on cost stickiness and asymmetry in non-financial companies and developed economies, there is an opportunity to enrich the literature by investigating its dynamics within financial firms and developing economies, especially concerning the UAE. Additionally, existing studies often adopt descriptive approaches or focus solely on single theoretical perspectives, such as agency and cost asymmetry theories. Hence, future research should consider adopting a multi-theoretical framework to provide a more comprehensive understanding of the cost stickiness phenomenon, particularly in the context of information asymmetry.

Theoretical framework

A seminal work by Hoffmann (2017) is depicted in Figure 1, displaying three distinct cost functions illustrating different cost behaviors: sticky costs (left), anti-sticky costs (right), and symmetrical costs (middle). Sticky costs decrease less for activity decreases than they increase for increases, making the cost curve flatter between low and normal (Y0) activity levels compared to high (YH) activity levels. Conversely, anti-sticky costs decrease more for activity decreases than they increase for increases, resulting in a flatter cost curve between Y0 and YH than between Y0 and YL. The dashed line represents a regular cost curve unaffected by activity direction.

The theoretical framework of the research paper is built upon several key concepts and theories in managerial accounting, finance, and organizational behaviour. Here's an outline of the theoretical foundations:

Cost behaviour and asymmetric cost behaviour

Cost behaviour is fundamental in managerial accounting,

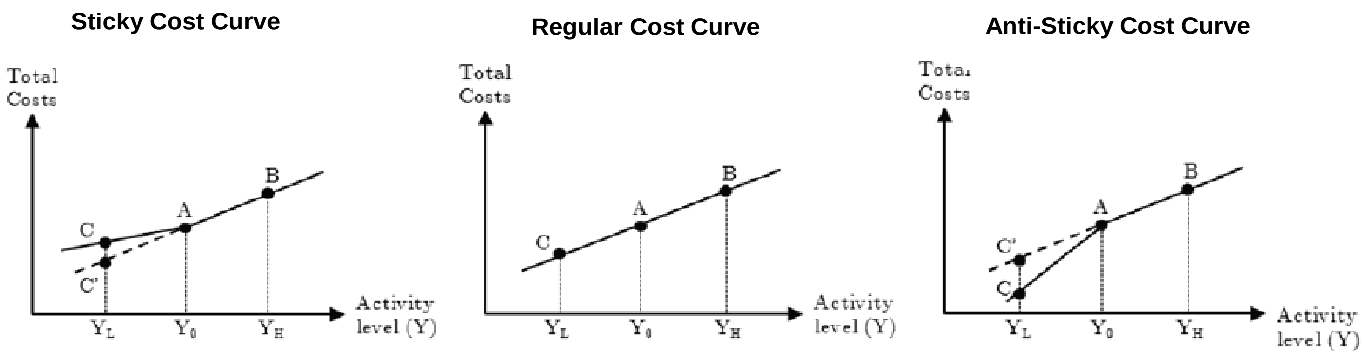

Figure 1. Theoretical framework.

guiding decision-making processes. Asymmetric cost behaviour refers to situations where costs respond differently to increases and decreases in activity levels, leading to sticky or anti-sticky cost patterns. The seminal work by Anderson et al. (2003) laid the groundwork for understanding asymmetric cost behaviour, highlighting managerial decisions as key drivers.

Traditional cost models and extensions

Traditional cost-volume-profit analysis provides a foundation, but the introduction of asymmetric cost behaviour extends these models to consider the direction of activity change. Studies by Banker and Byzalov (2014) and Weiss (2010) expanded traditional cost models to incorporate sticky and anti-sticky cost behaviour.

Agency theory

Agency theory, stemming from corporate finance, emphasizes the conflicts of interest between managers and shareholders. Managers may prioritize personal benefits over shareholder wealth, impacting dividend decisions and potentially influencing cost behaviour to preserve resources.

Transaction cost economics

Transaction cost economics theory suggests that firms may incur adjustment costs when changing resources, influencing decisions to retain resources during temporary declines in demand.

Corporate governance and dividend policies

Corporate governance mechanisms, such as the presence of independent directors and audit quality, play a role in shaping dividend policies and potentially influencing cost behaviour. Research has identified factors like corporate social responsibility performance and innovation activities as determinants of dividend decisions, which may interact with cost behaviour.

Information asymmetry

Information asymmetry between managers and shareholders can affect dividend policies and managerial decisions. Cost behaviour may reflect managerial responses to mitigate agency conflicts or address information asymmetry.

Financial reporting and earnings management

Asymmetric cost behaviour impacts financial reporting and earnings forecasts, with potential implications for firm profitability. Understanding cost dynamics contributes to a deeper understanding of financial reports and managerial behaviour. Theoretical foundations drawn from managerial accounting, corporate finance, and organizational theory provide a comprehensive framework for analysing asymmetric cost behaviour, its determinants, and implications for organizational decision-making and performance evaluation.

Hypothesis

Based on the theoretical framework outlined and the qualitative nature of the research methodology using secondary data, hypotheses can be formulated to guide the analysis and investigation. Here are hypothetical statements aligned with the research objectives:

Hypothesis 1

There exists a substantial body of literature supporting the theoretical foundations of cost behavior and asymmetric cost behavior, encompassing traditional cost models, agency theory, transaction cost economics, and corporate governance perspectives.

Hypothesis 2

Production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics significantly influence asymmetric cost behavior, leading to varying responses of costs to changes in activity levels.

Hypothesis 3

Asymmetric cost behavior has substantial implications for managerial decision-making processes, budgeting procedures, performance evaluation systems, and overall organizational performance, affecting resource allocation, pricing strategies, investment decisions, and competitive positioning. Given the qualitative nature of the methodology, these hypotheses serve as guiding propositions rather than testable predictions. The analysis of secondary data involved synthesizing existing literature, empirical evidence, and case studies to explore the complexities of asymmetric cost behavior and its implications within organizational contexts. The aim is to provide rich insights into the determinants and consequences of asymmetric cost behavior, contributing to a deeper understanding of cost dynamics and managerial decision-making processes.

METHODOLOGY

The methodology employed in this research paper aimed to comprehensively investigate the determinants of asymmetric cost behavior within the realm of managerial accounting. Building upon the theoretical foundations outlined in the introduction, this part of the study outlines the approach taken to analyze existing literature, synthesize empirical evidence, and draw insights into the complexities of asymmetric cost behavior. A qualitative research design was chosen to delve deeply into the nuances of asymmetric cost behavior. This approach allowed for the exploration of multifaceted factors influencing cost dynamics within organizational contexts. By adopting a qualitative lens, the study aimed to uncover rich insights and understandings that quantitative approaches alone may not capture.

A comprehensive literature review was conducted to gather relevant studies and theoretical frameworks related to cost behavior, asymmetric cost behavior, managerial accounting, corporate finance, and organizational behavior. Utilizing secondary data sources facilitated the exploration of diverse perspectives and empirical evidence on the research topic.

Non-probabilistic sampling techniques, such as purposive sampling, were employed due to the utilization of secondary data sources. The selection of literature and empirical studies was guided by the relevance to the research objectives and the richness of insights they offered regarding asymmetric cost behavior and its determinants. Thematic analysis served as the primary method for analyzing the collected data. Themes related to cost behavior, determinants of asymmetric cost behavior, and its implications for managerial decision-making and organizational performance were identified and synthesized. Theoretical frameworks from managerial accounting, corporate finance, and organizational theory were utilized to structure the analysis, providing a systematic understanding of asymmetric cost behavior.

The findings from the thematic analysis were synthesized to offer a comprehensive understanding of asymmetric cost behavior. Theoretical perspectives, empirical evidence, and practical insights were integrated to develop a nuanced understanding of the research topic. These findings were interpreted in light of existing theories and frameworks to derive theoretical and practical implications.

RESULTS AND DISCUSSION

Analysis and interpretation

The literature review is completed with select literature to understand the contexts and factors for cost asymmetry. The analysis and interpretation are presented in the following sections.

Construct identification

Based on various research literatures, we have extracted the constructs that are used to create a theoretical foundation to explore the asymmetric cost behavior of European non-listed firms. These are summarized in the Table 1.

Analysis for hypothesis 1

Hypothesis 1 posits that there exists a substantial body of literature supporting the theoretical foundations of cost behavior and asymmetric cost behavior. This hypothesis draws upon various theoretical perspectives, including traditional cost models, agency theory, transaction cost economics, and corporate governance perspectives. Through an extensive review of existing literature, this hypothesis aims to demonstrate the depth and breadth of research dedicated to understanding the complexities of cost behavior. The data of the literature survey is shown in Table 2.

Each perspective provides a wealth of literature supporting the theoretical foundations of cost behaviour and asymmetric cost behaviour, contributing to the understanding of these concepts within the realm of management accounting and corporate finance. Through a synthesis of traditional cost models, agency theory, transaction cost economics, and corporate governance perspectives, this analysis demonstrates the multidimensional nature of cost behavior and its implications for organizational decision-making and performance. While existing research provides valuable insights into the mechanisms underlying cost behavior, there remain opportunities for further exploration and refinement of theoretical frameworks. By building upon existing knowledge and addressing key research gaps, future studies can continue to advance our understanding

Table 1. Constructs for explaining the asymmetric cost behavior.

S/N	Constructs used to explain asymmetric cost behaviour	Interpretation
1	Cost variability	Variability of cost is an interpretation with the terms of time under consideration for accounting purposes
2	Cost stickiness	The non-linearity in the variation of cost with the volume of activity
3	Cost structure	Types of expenses incurred in running the business and used in accounting
4	Cost behaviour	The ways by which investments and expenses are impacted by change in the business activity
5	Managers' decisions	Strategic decisions of managers that is used to allocate the resources based on the forecasted future of business
6	Firms characterise	The types of businesses and organisational structures that determine the ethics and compliance reporting in accounting

Table 2. Theoretical foundation of asymmetric cost behavior.

Perspective	Literature
Traditional cost models	Cooper and Kaplan (1988). How cost accounting distorts product costs Horngren et al. (2002). Cost accounting: A managerial emphasis Hilton et al. (2008). Cost management: Strategies for business decisions
Agency theory	Jensen and Meckling (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure Eisenhardt (1989). Agency theory: An assessment and review Fama and Jensen (1983). Separation of ownership and control
Transaction cost economics	Williamson (1975). Markets and hierarchies: Analysis and antitrust implications Williamson (1981). The economics of organization: The transaction cost approach Coase (1937). The nature of the firm
Corporate governance	Jensen (1993). The modern industrial revolution, exit, and the failure of internal control systems Shleifer and Vishny (1997). A survey of corporate governance Bebchuk and Weisbach (2010). The state of corporate governance research

of cost behavior and its relevance for contemporary management practices.

Analysis for hypothesis 2

Understanding the dynamics of cost behavior is crucial for effective decision-making and performance management within organizations. Hypothesis 2 posits that various factors, including production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics, significantly influence asymmetric cost behavior. This hypothesis suggests that costs may respond differently to changes in activity levels depending on these underlying factors. The analysis of Hypothesis 2 seeks to explore the multifaceted nature of cost behavior by examining how different external and internal factors shape the relationship between costs and activity levels. By investigating the influence of production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics on asymmetric cost behavior, this study aims to provide insights into the underlying mechanisms driving cost variability within organizations. Extracts of some research work are presented in Table 3 to support hypothesis 2.

These citations provide empirical and theoretical support for how production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics influence asymmetric cost

Table 3. Factors influencing asymmetric cost behaviour.

Factor	Influence on asymmetric cost behaviour	Relevant literature
Production capacity constraints	Limited production capacity may lead to increased fixed costs per unit at higher activity levels due to underutilization of resources, resulting in anti-sticky cost behaviour. Conversely, at lower activity levels, fixed costs may be spread over fewer units, leading to sticky cost behaviour	1) Kaplan (1989). Measures for manufacturing excellence. 2) Anderson and Dekker (2009). Capacity management: A literature review
Market competition dynamics	In highly competitive markets, firms may experience downward pressure on prices when increasing activity levels, resulting in anti-sticky cost behaviour as costs decrease more than revenues increase. Conversely, during periods of low competition, firms may exhibit sticky cost behaviour as they are less likely to reduce costs proportionally with decreases in activity	1) Porter (1980). Competitive strategy: Techniques for analysing industries and competitors. 2) Caves and Porter (1977). From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition
Technological advancements	Technological advancements can lead to economies of scale, reducing unit costs at higher activity levels and resulting in anti-sticky cost behaviour. Conversely, initial investments in new technologies may lead to sticky cost behaviour until economies of scale are realized	1) Brynjolfsson and Hitt (2000). Beyond computation: Information technology, organizational transformation and business performance. 2) Teece (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing, and public policy
Organizational characteristics	Factors such as organizational culture, structure, and management style can influence cost behaviour. For example, organizations with decentralized decision-making structures may exhibit anti-sticky cost behaviour as managers have greater autonomy to adjust costs in response to changes in activity levels. Conversely, organizations with centralized decision-making structures may exhibit sticky cost behaviour due to bureaucratic processes and resistance to change	1) Galbraith (1974). Organization design. 2) Burns and Stalker (1961). The management of innovation.

behaviour, validating Hypothesis 2.

Analysis for hypothesis 3

Table 4 provides a comprehensive overview of the implications of asymmetric cost behavior across various management areas, supported by citations from relevant literature.

Conclusion

The data presented for hypothesis 1 reaffirms the robustness of the foundational theories and empirical evidence that underpin cost behavior and asymmetric cost behavior. By synthesizing theoretical insights with empirical findings, this analysis contributes to a deeper understanding of the mechanisms driving cost variability within organizations (Baumgarten, 2012). Moving forward continued research in this area can further enhance our understanding of cost behavior dynamics and inform more effective management practices and decision-making processes within organizations. The analysis for hypothesis 2 demonstrates that production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics are key determinants driving asymmetric cost behavior. By understanding the influence of these determinants, organizations can better anticipate and manage cost variability, enabling more informed decision-making and strategic planning. Moving forward continued research in this area can further enhance our understanding of the drivers of asymmetric cost behavior and inform more effective cost management practices within organizations. The answer for research question 3 demonstrates that asymmetric cost behavior

Table 4. Implications of asymmetric cost behavior.

Management area	Implications of asymmetric cost behaviour	Relevant literature
Managerial decision-making	-Non-linear cost-revenue relationships impact pricing strategies and resource allocation decisions -Decisions must account for differential cost behaviour at varying activity levels	1) Kaplan and Atkinson (1998). Advanced management accounting. 2) Hansen and Mowen (2009). Cost management: Accounting and control
Budgeting procedures	-Traditional budgeting approaches may lead to inaccuracies due to overlooking asymmetric cost behaviour. - Flexible budgeting techniques are necessary to adapt to changes in activity levels and cost behaviour	1) Drury (2007). Management and cost Accounting. 2) Horngren et al. (2012). Cost accounting: A managerial emphasis
Performance evaluation systems	-Standard performance metrics may fail to capture the impact of asymmetric cost behaviour on managerial performance. -Performance evaluation systems should incorporate measures that account for the efficiency and effectiveness of cost management.	1) Ittner and Larcker (2003). Coming up short on nonfinancial performance measurement 2) Merchant and Van der Stede (2007). Management control systems: Performance measurement, evaluation and incentives
Overall organizational performance	-Effective management of asymmetric cost behaviour enhances resource allocation efficiency, pricing strategies, and competitive positioning -Organizations that successfully navigate asymmetric cost behaviour can achieve cost advantages and sustain long-term growth and competitiveness	1) Johnson and Kaplan (1987). Relevance lost: The rise and fall of management accounting 2) Simons (1995). Levers of control: How managers use innovative control systems to drive strategic renewal

significantly influences managerial decision-making processes, budgeting procedures, performance evaluation systems, and overall organizational performance. By recognizing the implications of asymmetric cost behavior and integrating them into management practices, organizations can enhance their ability to adapt to changing market conditions, optimize resource utilization, and achieve strategic objectives. Through a holistic approach to managing asymmetric cost behavior, organizations can position themselves for sustainable success in an increasingly complex and competitive business landscape.

The analysis reinforces the foundational theories and empirical evidence supporting cost behavior and asymmetric cost behavior, enhancing our understanding of how costs vary within organizations. Key determinants such as production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics drive asymmetric cost behavior, influencing decision-making processes. Asymmetric cost behavior significantly impacts managerial decisions, budgeting procedures, performance evaluation systems, and overall organizational performance. Recognizing and managing these dynamics is crucial for organizations to adapt to market conditions and achieve strategic objectives effectively. Continued research in this area can further refine our understanding and inform more efficient cost management practices within organizations. This research explores the foundational theories and empirical evidence underlying cost behavior and asymmetric cost behavior, while also examining their implications for managerial decision-making, budgeting procedures, performance evaluation systems, and overall organizational performance. The study underscores the significance of understanding cost variability and its drivers, including factors like production capacity constraints, market competition dynamics, technological advancements, and organizational characteristics.

For the UAE, this research is particularly relevant as it can inform management practices across diverse industries, help businesses adapt to market dynamics, support strategic decision-making, enhance organizational performance, and contribute to economic growth and sustainability.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

REFERENCES

Anderson M, Banker R, Janakiraman S (2003). Are selling, general, and administrative costs 'sticky'? Journal of Accounting Research 41:47-63.

Anderson M, Lanen N (2009). Understanding cost stickiness: Implications for managerial decision-making. Journal of Management Accounting Research 21(1):135-160.

Anderson SW, Dekker HC (2009). Strategic cost management in supply chains, part 1: Structural cost management. Accounting Horizons 23(2):201-220.

Anderson M, Banker R, Huang R, Janakiraman S (2007). Cost behaviour and fundamental analysis of SG&A Costs. Journal of Accounting, Auditing and Finance 22:1-28.

Balakrishnan R, Gruca S (2008). Cost Stickiness and Core Competency: A Note. Contemporary Accounting Research 25(4):993-1006.

Banker R, Byzalov D, Chen L (2013). Employment Protection Legislation, Adjustment Costs and Cross-Country Differences in Cost Behavior. Journal of Accounting and Economics 55(1):111-127.

Banker R, Byzalov D (2014). Asymmetric cost behaviour. Journal of Management Accounting Research 26:43-79.

Banker RD, Chen L (2006). Predicting earnings using a model based on cost variability and cost stickiness. The Accounting Review 81:285-307.

Baumgarten D (2012). The Cost Stickiness Phenomenon: Causes, Characteristics, And Implications for Fundamental Analysis and Financial Analysts' Forecasts. Springer Science and Business Media.

Bebchuk L, Weisbach M (2010). The state of corporate governance research. The Review of Financial Studies 23(3):939-961.

Bernstein L, Wild J (1998). Financial Statement Analysis: Theory, Application, and Interpretation. Boston, Mass: McGraw-Hill.

Benlemlih M (2019). Corporate social responsibility and dividend policy. Research in International Business and Finance 47:114-138.

Brynjolfsson E, Hitt LM (2000). Beyond computation: Information technology, organizational transformation and business performance. Journal of Economic Perspectives 14(4):23-48.

Burns T, Stalker GM (1961). Mechanistic and organic systems. Classics of Organizational Theory 10(2), 209-214.

Caves RE, Porter ME (1977). From entry barriers to mobility barriers: Conjectural decisions and contrived deterrence to new competition. The Quarterly Journal of Economics 91(2):241-261.

Cannon J (2014). Determinants of 'Sticky Costs': An Analysis of Cost Behavior using United States Air Transportation Industry Data. The Accounting Review 89(5):1645-1672.

Chacko J, Lukose PJ (2018). Institutional ownership and dividend payout in emerging markets: Evidence from India. Journal of Emerging Market Finance 17(1_suppl):S54-S82.

Coase R (1937). The nature of the firm. Economica 4(16):386-405.

Cooper R, Kaplan RS (1988). How cost accounting distorts product costs. Strategic Finance 69(10):20.

Cooper R, Haltiwanger J (2006). On the Nature of Capital Adjustment Costs. The Review of Economic Studies 73(3):611-633.

Drury C (2007). Management and Cost Accounting. Cengage Learning EMEA.

Easterbrook FH (1984). Two agency-cost explanations of dividends. The American Economic Review 74(4):650-659.

Eisenhardt K (1989). Agency theory: An assessment and review. The Academy of Management Review 4(1):57-74.

Fama E, Jensen M (1983). Separation of ownership and control. The Journal of Law and Economics 26(2):301-325.

Galbraith JR (1974). Organization design: An information processing view. Interfaces 4(3):28-36.

Gugler K (2003). Corporate governance, dividend payout policy, and the interrelation between dividends, R&D, and capital investment. Journal of Banking and Finance 27(7):1297-1321.

Hamermesh D, Pfann G (1996). Adjustment costs in factor demand. Journal of Economic Literature 34(3):1264-1292.

Hansen D, Mowen M (2009). Cost management: Accounting and control. Cengage Learning.

Hasan F, Shafique S, Das BC, Shome R (2022). R&D intensity and firms dividend policy: evidence from BRICS countries. Journal of Applied Accounting Research 23(4):846-862.

Hilton R, Maher M, Selto F (2008). Cost management: Strategies for business decisions. McGraw-Hill/Irwin.

Hoffmann K (2017). Cost Behaviour: An Empirical Analysis of Determinants and Consequences of Asymmetries. PhD Series, No. 6.2017, ISBN 9788793483859, Copenhagen Business School (CBS), Frederiksberg.

Holzhacker M, Krishnan R, Mahlendorf M (2015). The Impact of Changes in Regulation on Cost Behavior. Contemporary Accounting Research 32(2):534-566.

Horngren C, Datar S, Rajan, M (2002). Cost accounting: A managerial emphasis. Upper Saddle River, NJ: Prentice Hall.

Ibrahim AE (2015). Economic growth and cost stickiness: evidence from Egypt. Journal of Financial Reporting and Accounting 13(1):119-140.

Ittner C, Larcker D (2003). Coming up short on nonfinancial performance measurement. Harvard Business Review 81(11):88-95.

Jensen M (1993). The modern industrial revolution, exit, and the failure of internal control systems. The Journal of Finance 48(3):831-880.

Jensen M, Meckling H (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. Journal of Financial Economics 3(4):305-360.

Kama I, Weiss D (2013). Do earnings targets and managerial incentives affect sticky costs? Journal of Accounting Research 51:201-224.

Kaplan R (1989). Measures for manufacturing excellence. Harvard Business Review 66(1):67-77.

Kaplan RS, Atkinson AA (1989). Advanced management accounting. New Jersey: Englewood Cliffs.

Johnson TH, Kaplan RS (1987). Relevance lost: the rise and fall of management accounting.

Lev B, Thiagarajan R (1993). Fundamental Information Analysis. Journal of Accounting Research 31(2):190-215.

Merchant K, Van der Stede W (2007). Management control systems: Performance measurement, evaluation and incentives. Prentice Hall.

Porter ME (1980). Industry structure and competitive strategy: Keys to profitability. Financial Analysts Journal 36(4):30-41.

Simons R (1995). Levers of control: How managers use innovative control systems to drive strategic renewal. Boston, MA: Harvard Business Press.

Sharma V (2011). Independent directors and the propensity to pay dividends. Journal of Corporate Finance 17(4):1001-1015.

Shleifer A, Vishny R (1997). A survey of corporate governance. The Journal of Finance 52(2):737-783.

Soegiharto I, Rachmawati R (2022). Sticky cost determinants: Which one has the stronger impact? The Indonesian Accounting Review 12(2):189-202.

Teece DJ (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. Research Policy 15(6):285-305.

Weiss D (2010). Cost behaviour and analysts’ earnings forecasts. The Accounting Review 85:1441-1471.

Williamson O (1975). Markets and hierarchies: Analysis and antitrust implications. New York: Free Press.

Williamson O (1981). The economics of organization: The transaction cost approach. Cambridge, MA: Harvard University Press.

Zadeh MH (2022). Audit quality and liquidity policy. International Journal of Managerial Finance (ahead-of-print).

Zanella F, Oyelere P, Hossain S (2015). Are costs really sticky? Evidence from publicly listed companies in the UAE. Applied Economics 47:6519-6528.

Zhao G, Liang SK, Wang YT (2014). Accounting conservatism, and bank loan contracts: Evidence from China. China Journal of Accounting Studies 2(3):200-227.