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Does the cost behavior remain sticky? a 20-year literature review of cost stickiness

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Abstract

Research aims: This study aims to describe the development of cost stickiness research over the past twenty years globally and presents a future research agenda.

Design/Methodology/Approach: The method used in this study is a systematic literature review with a final research sample of 91 articles from 42 international journals indexed by Scopus Q1-Q4 and 20 articles from national journals indexed by SINTA 1-4.

Research findings: This research found annual developments and fluctuations in cost stickiness research topics in international and national journals. Mapping of cost stickiness research exhibits that (1) the dominating antecedent variable is revenue change, (2) the popular consequence variable is accounting conservatism, (3) the most widely used theory is cost stickiness theory, (4) the majority of cost stickiness research used quantitative methods with secondary data, (5) the widely used population is public sector or profit-oriented companies, and (6) the proxy dominating cost stickiness research is SG&A.

Theoretical contribution/Originality: This research mapping is based on six critical aspects of cost stickiness and provides several suggestions for future research. It is expected that future research related to cost stickiness can use this research as a reference and inspiration.

Research limitation/Implication: Several websites in national journals indexed by SINTA 1-4 could not be accessed due to errors, limiting the number of research samples in national journals. Hence, future research can expand the search for articles in SINTA 1-6 or through other pages/portals (such as Web of Science) to more comprehensively describe the development of cost stickiness research.

Keywords: Cost Behavior; Cost Stickiness; Scopus; Sinta; Systematic Literature Review

Introduction

Traditional cost behavior models assume that costs are fixed and variable (Gray, 2020). Garrison et al. (2018) define fixed costs as costs whose total amount remains constant when the level of activity changes, while variable costs are costs whose total value follows changes in activity. Traditional cost behavior theory states that activity levels and changes in cost behavior are closely related. This symmetric view of the relationship is challenged by Anderson et al. (2003), who consider it asymmetric because although traditional costs are divided into fixed and variable costs, in fact, almost all costs are fixed. This cost behavior is called cost stickiness, which refers to the phenomenon of costs in a company that

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tends to change differently in response to income or operational activities (Banker & Byzalov, 2014) .

The stream of research related to cost stickiness has been conducted abroad, such as Xue and Hong (2016), Ibrahim (2018), Bugeja et al. (2015), Salehi et al. (2018), Banker et al. (2016), Golden et al. (2020), Fourati et al. (2020), and Cheung et al. (2016). Previous research overseas provides valuable insights, but there is little empirical evidence regarding this phenomenon in Australia (Bugeja et al., 2015). Yang (2018) also explained that research related to the cost stickiness phenomenon in Australia is limited due to the scarcity of evidence that supports its existence. A similar thing happened in Indonesia; based on observations in this research, in Indonesia, there were only 20 articles discussing cost stickiness in the last 20 years.

Several studies pertaining to cost stickiness in Indonesia are as follows: Windyastuti (2013), Ratnawati & Nugrahanti (2015), Sugiri et al. (2016), Lusiana and Kristianti (2020), Setiawati et al. (2017), Evelyn (2018), Azmi and Januryanti (2021), and Irawan (2021). A large stream of literature (both overseas and in Indonesia) contributes to understanding the cost stickiness phenomenon globally. Banker et al. (2017) stated that research on asymmetric cost behavior is still popular, and a significant expansion exists. For that reason, this study was motivated to re-raise the topic of cost stickiness using a systematic literature review (SLR) as the number of studies on cost stickiness in Indonesia remains limited.

A literature review related to cost stickiness was carried out by Guenther et al. (2014), Linggardjaja (2020), and Ibrahim et al. (2022). Guenther et al. (2014) elucidated the determining factors of cost stickiness and categorized several reasons for the emergence of cost stickiness using a sample of 13 articles. Linggardjaja (2020) studied the factors influencing cost stickiness with a sample of 30 articles from 24 international journals. Ibrahim et al. (2022) tried to reduce the gap in prior studies by conducting SLR on articles from the 2018 ABS journal ranking 2-4. Ibrahim et al. (2022) endeavor accommodated the gaps in the two previous literature studies. However, the sample coverage was not broad enough, as it focused too much on ABS journal ranking. As such, the current study reduces the gap from previous studies by using international articles indexed by Scopus and national journals indexed by Sinta 1-4 with an observation period of 2003-2023 or 20 years. It is done to cover the current topic of cost stickiness and provide a broader picture. The current study also extends previous studies by adding a review that was not done by Guenther et al. (2014), Linggardjaja (2020), and Ibrahim et al. (2022), namely a review of the development of cost stickiness research based on research methods referring to Herawati and Bandi (2017) as well as countries and research populations referring to Dewi et al. (2018).

This research contributes to and provides an in-depth description of the cost stickiness phenomenon to offer a basis for future research. Future research can develop topics related to cost stickiness by referring to several future research agendas presented in this research. This research was conducted to provide answers to the following questions:

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RQ₁: How is the development of cost stickiness research in terms of research topics, theories, methods, countries, populations, and cost stickiness proxies?

RQ₂: What is the potential or future agenda for cost stickiness research?

Literature Review

Cost Behavior

Cost behavior defines the functional relationship between activity and cost changes (Weil & Maher, 2005). A deep understanding of cost behavior is essential for financial management because managerial decisions will depend on predictions and analysis based on cost behavior. Traditional cost behavior models differentiate costs into two types: (1) fixed costs and (2) variable costs associated with changes in activity levels. This model illustrates the close relationship between activity levels and changes in costs. Krisnadewi and Soewarno (2020) report that the higher the activity level, the higher the costs required to support that activity. It denotes that costs can be considered proportional to the activity level. Cost stickiness, on the other hand, refers to cost behavior that does not always change following changes in activity (Ibrahim & Ezat, 2017).

Cost Stickiness

Cost stickiness is the phenomenon in which costs in a company tend to change differently in response to changes in income or operational activities (Banker & Byzalov, 2014). Anderson et al. (2003) are the first study to reveal evidence of asymmetry in cost behavior regarding changes in activity. The research is based on the belief that selling, general, and administrative (SG&A) costs are sticky and increase as volume increases linearly but do not decrease by the same amount as volume decreases.

The causes of cost stickiness behavior can be summarized into three categories. First, managers make cost adjustment trade-offs to minimize idle resources and replace resources when activity increases (Banker & Byzalov, 2014). Second, managers rely on future sales projections compared to the company's historical sales (Chen et al., 2019). Managers tend to assume that sales declines are only temporary while sales increases are permanent. Third, managers are selfish without supervision (Li et al., 2020). This behavior has an impact on wasting company resources because when activity decreases, managers do not make adjustments to the idle resources.

Research Method

This research used a systematic literature review method. The population used was articles from international journals indexed by Scopus and articles from national journals indexed by SINTA. This research sample collection consisted of two stages: collecting sample articles from international journals referring to Muslim and Setiawan (2020) and

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collecting articles from national journals referring to Herawati and Bandi (2019). The search for articles employed keywords from Ibrahim et al. (2022), i.e., "cost behavior," "cost stickiness," "cost anti-stickiness," "sticky costs," "asymmetric cost behavior," and "cost asymmetry." The research sample was selected based on the following criteria. First, articles were published on Scopus Q1-Q4. Second, articles were published in SINTA 1-4. Third, articles were written in English and Indonesian. Fourth, these articles have complete and precise information regarding topics, theories, research methods, populations, and cost stickiness proxies.

The selected articles were classified based on a research topic (Ditta & Setiawan, 2019), theory (Permatasari & Tjahjadi, 2023), method (Herawati & Bandi, 2017), country and research population (Dewi et al., 2018), as well as a proxy for cost stickiness (Herawati et al., 2019). Ditta and Setiawan (2019) mapped research topics by dividing them into two categories, namely antecedent variables (factors encouraging cost stickiness) and consequence variables (implications/impact of cost stickiness). Mapping research methods are generally classified into quantitative, qualitative, and mixed methods (Herawati & Bandi, 2017). The general process of this research is illustrated in Figure 1.

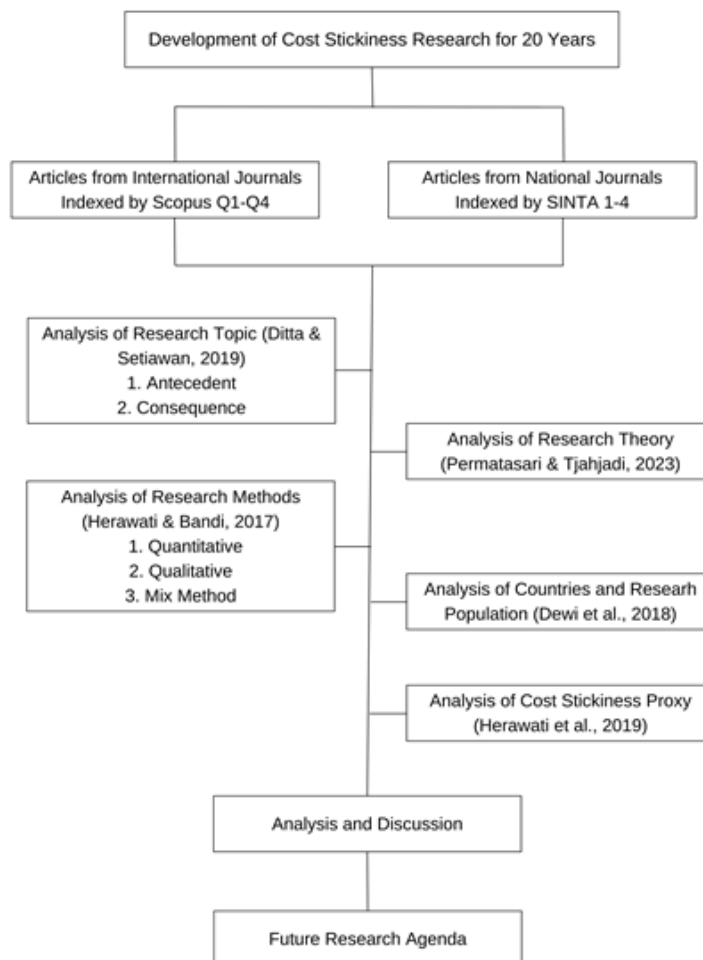


Figure 1 Flow of Systematic Literature Review Process

Result and Discussion

Research Sample Selection Results

The search findings resulted in 281 articles from international journals indexed by Scopus and 21 from national journals indexed by SINTA. Through a selection process, the final sample that met the research criteria was 91 articles from 42 international journals and 20 articles from national journals. The sample selection process for this research is presented in Table 1.

Table 1 Sample Selection of Cost Stickiness

Description	Number of Articles
<i>International Journal Articles</i>	
Articles in international journals indexed by Scopus Q1-Q4	281
Articles not indexed by Scopus Q1-Q4	(2)
Articles are not in English.	(1)
Duplicate article	(87)
The article does not match the research topic.	(98)
Number of samples used	91
<i>National Journal Articles</i>	
Articles in national journals indexed SINTA 1-4	21
The article does not match the research topic.	(1)
Number of samples used	20

Figure 2 depicts the development of cost-stickiness research publications in international and national journals over the last two decades. The development of cost-stickiness research fluctuates every year. From 2003 to 2012, the number of cost-stickiness research articles in international journals was constrained, i.e., only one article per year. In 2020, there was a significant increase in the number of articles, reaching a peak of 17. Unlike international journals, cost stickiness research in national journals began to develop in 2013 and experienced yearly fluctuations.

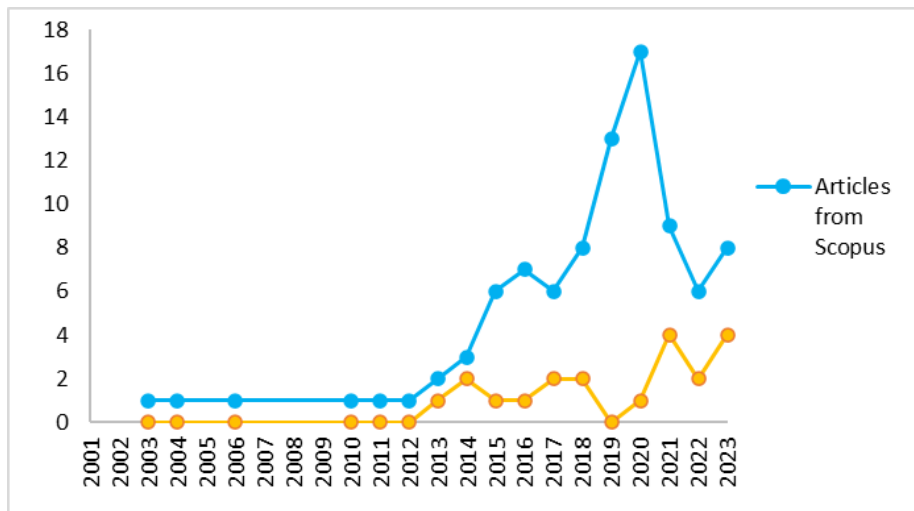


Figure 2 Development of Cost Stickiness Research Publications

Research Topic Mapping

The research topic mapping refers to Ditta and Setiawan (2019), dividing it into two categories: antecedent variables (factors encouraging cost stickiness) and consequences (implications/impact of cost stickiness). This mapping aimed to describe the development of the most popular and researched research topics on cost stickiness.

Table 2 Mapping Antecedent Variables of Cost Stickiness

Antecedent Variables	Scopus		SINTA		Total Article	%
	Number of Articles	%	Number of Articles	%		
Managerial Expectation	3	3	0	0	3	3
Managerial Incentive	2	2	0	0	2	2
Asset Intensity	3	3	2	10	5	4
Employee Intensity	4	4	0	0	4	3
Managerial Policy	4	4	0	0	4	3
Institutional Ownership	2	2	0	0	2	2
Executive Compensation	0	0	2	10	2	2
Earning Management	2	2	1	5	3	3
Intellectual Capital	2	2	2	10	4	3
Organizational Capital	2	2	0	0	2	2
Manager Optimism	3	3	0	0	3	3
Manager Orientation	3	3	0	0	3	3
Industry Competition	2	2	1	5	3	3
Economic Growth	5	5	1	5	6	5
Revenue Change	18	18	5	24	23	19
Profitability	0	0	1	5	1	1
Corporate Governance	5	5	1	5	6	5
Others	38	39	5	24	43	36
Total	98	100	21	100	119	100

Table 2 displays that the antecedent variable popularly used in international and national journals is revenue change, with 18 articles and five articles, respectively. Other variables widely used in international journals are corporate governance and economic growth, with five articles each. In contrast, in national journals, the variables are asset intensity and intellectual capital, with two articles each. Using antecedent variables in international journals tends to be holistic by explaining internal and external factors, whereas most national journals only explain internal factors. This study's results align with those of Guenther et al. (2014) and Linggardjaja (2020). However, it does not align with Ibrahim et al. (2022), who explain that corporate governance and management control mechanisms are the most widely researched antecedent variables.

Table 3 presents a mapping of consequence variables in international and national journals. The most popular consequence variables in international journals are accounting conservatism, which has three articles each, and company performance and dividend yields, which have two articles each. Unlike international journals, the consequence variables used in national journals are only CSR and the response of investors for one article each. This research is different from Guenther et al. (2014) and Linggardjaja (2020),

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who did not explain the mapping of consequence variables, while Ibrahim et al. (2022) explained the consequence variables but did not map them in detail.

Table 3 Mapping Consequence Variables of Cost Stickiness

Consequence Variables	Scopus		SINTA		Total Article	%
	Number of Articles	%	Number of Articles	%		
CSR	1	5	1	50	2	9
Earnings Forecast Errors	1	5	0	0	1	5
Company Performance	2	10	0	0	2	9
Accounting Conservatism	3	15	0	0	3	14
Bank Loan Contract	1	5	0	0	1	5
Financial Statement Quality	1	5	0	0	1	5
Shareholder Value	1	5	0	0	1	5
Firm Value	1	5	0	0	1	5
Operational Risk	1	5	0	0	1	5
Merger & Acquisition Value	1	5	0	0	1	5
Income Smoothing	1	5	0	0	1	5
Market Reaction	1	5	0	0	1	5
Response of Investors	0	0	1	50	1	5
Stock Price Delay	2	10	0	0	2	9
Dividend Yield	2	10	0	0	2	9
Total	20	100	2	100	22	100

Research Theory Mapping

Mapping based on research theory aimed to describe the theory underlying cost stickiness research globally. This mapping refers to Permatasari and Tjahjadi (2023). Figure 3 reveals 17 theories underlying cost stickiness research in international and national journals. The theory most widely used in international journals is the cost stickiness theory, with 44 articles. This theory states that costs become asymmetric when the cost response to changes in equivalent activities is asymmetric due to deliberate decisions by managers to adjust resources. Other theories widely employed as a basis for cost stickiness research in international journals are agency theory, with 19 articles; cost behavior theory, with 18 articles; and adjustment theory, with 13 articles. These theories are also widely used in cost stickiness research in national journals, such as cost behavior theory with eight articles, cost stickiness theory with five articles, and adjustment theory with four articles. Of the 17 theories underlying cost stickiness studies, several theories are rarely used and require further study, such as managerial opportunism theory, hubris theory, and deliberate decision theory.

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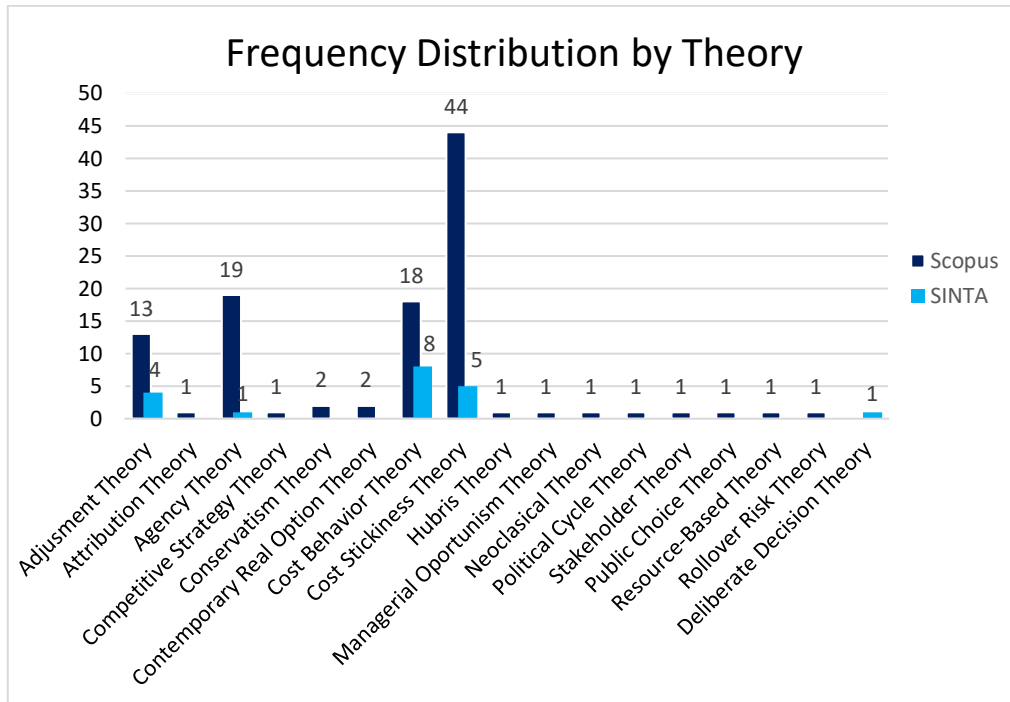


Figure 3 Research Theory Mapping

Research Method Mapping

The objective of the mapping based on research methods was to define the evolution of the methods that are most frequently employed in cost stickiness research. This mapping used the classification from Herawati and Bandi (2017), dividing it into three categories: quantitative, qualitative, and mixed methods. This research illustrates that most cost-stickiness research in international and national journals used quantitative methods while applying qualitative and mixed methods is still very constrained. The mapping of research methods is presented in Table 4.

Table 4 Mapping Methods of Cost-Stickiness Research

Research Method	Scopus		SINTA		Total Article	%
	Number of Articles	%	Number of Articles	%		
Quantitative	89	98	20	100	109	98
Qualitative	2	2	0	0	2	2
Mixed Method	0	0	0	0	0	0
Total	91	100	20	100	111	100

In applying quantitative methods, the majority have used secondary data in company reports; however, Krisnadewi and Soewarno (2021) utilized primary data with an experimental method. This research was conducted among Taiwanese students who did not know about asymmetric cost behavior by measuring the Life Orientation Test-Revision (LOT-R). This research employed a 2x2 factorial design to test the hypothesis: the level of manager optimism and achievement of profit targets. Unlike international journals, all

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research in national journals has applied quantitative methods using secondary data from company reports listed on the Indonesian Stock Exchange.

Countries and Research Populations Mapping

Mapping based on the research population refers to Dewi et al. (2018). This mapping aims to describe countries and populations that are widely used in cost stickiness research. Twenty-three countries have been used as research objects for cost stickiness. The country most widely used by researchers is the United States, with 48 articles. Yang (2018) pointed out that the majority of cost stickiness research was conducted in the United States because of several influencing factors, such as market competition, company characteristics, and economic structure. On the other hand, of the 23 countries, several are rarely studied, such as Arabia, Chile, England, and Taiwan. Mapping by country of study is depicted in Figure 4.

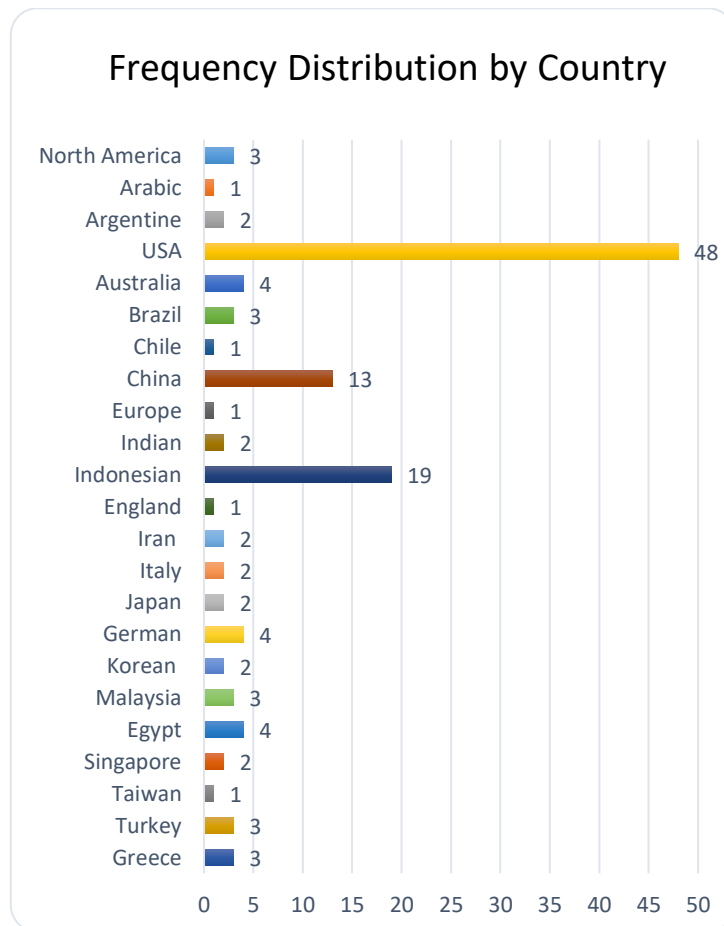


Figure 4 Research Country Mapping

Subsequently, Table 5 exhibits that 19 populations were used in cost stickiness research. The populations widely used by researchers are non-financial and utility companies, with

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46 articles in international journals, and manufacturing companies, with ten articles in national journals. Of the 46 articles in international journals that used a population of non-financial and utility companies, 29 were conducted in the United States, and the rest were carried out in Australia, Egypt, Brazil, and China. The population that researchers widely used was public companies or profit-oriented companies, while non-profit companies or the public sector are still rarely explored in cost stickiness research.

Table 5 Mapping Cost Stickiness Research Population

Population	Scopus		SINTA		Total Article	%
	Number of Articles	%	Number of Articles	%		
Service Company	9	7	0	0	9	6
Health Sector Companies	1	1	0	0	1	1
Financial Companies	5	4	6	30	11	8
Manufacturing Companies	20	16	10	50	30	21
Tourism and Hospitality Companies	1	1	0	0	1	1
Trading Companies	9	7	0	0	9	6
Agriculture and Mining Companies	3	2	1	5	4	3
State-Owned Companies	1	1	0	0	1	1
Merger Companies	2	2	0	0	2	1
Non-Profit Companies	1	1	0	0	1	1
Public Companies	4	3	1	5	5	3
Retail Companies	2	2	1	5	3	2
Technology Sector Companies	0	0	1	5	1	1
Non-Financial and Utilities Companies	46	37	0	0	46	32
SMEs	2	2	0	0	2	1
Public Sector	1	1	0	0	1	1
Hospital	2	2	0	0	2	1
Accounting Student	1	1	0	0	1	1
Other Industries	13	11	0	0	13	9
Total	123	100	20	100	143	100

Mapping the research population illustrates the tendency of research related to cost stickiness to focus on specific company scales. Most studies tend to focus on large companies with high operational and structural complexity levels. It can be seen from the dominance of the non-financial and utility companies' population, which often involve entities with significant operations. Several studies have also concentrated on manufacturing companies, especially in national journals. Using these two types of populations reflects the desire to explore cost stickiness in different sectors and understand whether their operational characteristics can provide different insights regarding cost stickiness. Although this research provides a comprehensive picture of the geographic distribution and types of companies that are the focus of cost stickiness research, future research needs to be done to investigate whether these findings can be extended to sectors that may be rarely researched, such as public sector entities, non-profit companies, and others.

Cost Stickiness Proxy Mapping

Cost stickiness proxy mapping refers to Herawati et al. (2019). The objective of this mapping is to provide a comprehensive overview of the cost stickiness measurements that researchers have employed over the past two decades. Table 6 presents a mapping of cost stickiness proxies. The popular proxy researchers used is the SG&A, with 51 articles in international journals and 17 in national journals. The results of this research signify that several studies tend to focus on aspects of company management and administration in studying cost stickiness. Other proxies also used in international journals are operational costs for 31 articles, COGS for 11 articles, and total costs for nine articles. The same thing also happens in national journals, which use non-mainstream proxies to measure cost stickiness. However, applying this proxy remains limited to research articles in national journals, such as operational, labor, and production costs.

Table 6 Mapping Cost Stickiness Proxy

Cost Stickiness Proxy	Scopus		SINTA		Total Article	%
	Number of Articles	%	Number of Articles	%		
Operating Cost	31	29	2	8	33	25
Adjustment Cost	1	1	0	0	1	1
Operating Lease Cost	1	1	0	0	1	1
Labor Cost	3	3	2	8	5	4
Production Cost	0	0	1	4	1	1
COGS	11	10	2	8	13	10
SG&A	51	48	17	71	68	52
Total Cost	9	8	0	0	9	7
Total	107	100	24	100	131	100

Future Research Agendas

Research Topic

Based on the literature that has been reviewed, the future research agenda in the field of cost stickiness can focus on two main aspects: further exploration of antecedent variables, especially external factors and consequence variables. Future research is expected to explore the influence of industrial competition variables on cost stickiness, considering that only a few studies have investigated this aspect with a limited focus on developed countries. Intense industry competition can encourage companies to lower selling prices to maintain or increase market share. In this situation, cost stickiness may occur when production costs do not decrease proportionally to the decrease in income due to decreased selling prices. Thus, further research is necessary on the influence of industrial competition on cost stickiness, especially in developing countries such as Indonesia.

Future research could also delve into consequence variables, such as corporate investment decisions. This variable can provide a deeper understanding of how cost stickiness affects a company's investment strategy and its consequences for long-term performance. Although there is a relatively large amount of research related to cost

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stickiness, specific research regarding the impact of cost stickiness on company investment decisions is still limited. It creates an opportunity to fill the gap and contributes to a further understanding of how cost stickiness influences corporate investment policies.

Research Theory

Future research could further explore theories rarely used in cost stickiness research, such as managerial opportunism theory, hubris theory, public choice theory, attribution theory, and deliberate decision theory. These theories have unique characteristics that become the theoretical basis for explaining the cost stickiness phenomenon.

First, managerial opportunism theory aims to understand how managers' opportunistic behavior can influence asymmetry in cost responses to changes in activities. Adopting this theory on cost stickiness allows researchers to observe the possibility of fraud from the presence of asymmetry in variable and fixed costs. Second, hubris theory explains the impact of manager arrogance on cost decisions, which tend to be asymmetrical. When a company experiences a decline in revenue or operational activity, overconfident managers tend to be reluctant to reduce costs proportionally. Instead, managers prefer to maintain or even increase costs. Drawing on this theory, future research can exploit managers' arrogance better to understand firm cost behavior in situations of economic uncertainty.

Third, public choice theory puts forward that bureaucratic power can be the main driver of cost stickiness behavior in the public/government sector. Thus, applying this theory in future research can provide a deeper understanding of the complexity of the factors that shape cost stickiness in the government/public sector context. Fourth, attribution theory is a conceptual framework that examines how individuals interpret and explain the causes behind events, behavior, and outcomes. This theory aims to understand how people provide interpretations of their own and others' actions and how these attributions can influence thoughts, emotions, and behavior. By applying this theory to future research, researchers can dig deeper into how perceptions trigger events, influence social interactions and interpersonal conflicts, and shape cost stickiness.

Future research could also integrate several of the above theories to understand cost stickiness holistically. To determine the most appropriate theory in cost stickiness research, researchers can then consider the topics and objects that are the focus of the research. It is vital to ensure that the theory applied can accurately and effectively explain the cost stickiness phenomenon.

Research Method

Most cost-stickiness research in international and national journals has used quantitative methods, while qualitative and mixed methods remain very scarce. Most studies also used secondary data from company financial reports. It is hoped that future research can use qualitative or mixed methods to provide more comprehensive findings, and quantitative

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methods can be considered by collecting primary data through instruments such as surveys and experiments. In-depth interviews with managers involved in resource adjustments can also significantly contribute to the topic of cost stickiness from a different perspective. Future researchers may be able to find other factors that cause cost stickiness, such as fraud, and reveal whether managers recognize the occurrence of cost stickiness and understand the economic consequences associated with carrying out this practice. Likewise, by using the mixed method, future researchers can provide a more precise and in-depth picture of the cost stickiness phenomenon supported by more credible evidence.

Research Population

The research population generally used in international and national journals is public companies or profit-oriented companies. Future research is recommended to expand the scope of study objects related to cost stickiness by involving non-profit or public sector populations, such as universities, elementary/middle/high schools, or district/municipal governments. As organizations that depend on funding from tax revenues or other public funds, the public sector will likely experience limited resources. In a situation where revenues decline, public entities may face difficulties in reducing operational costs in a balanced manner, leading to potential cost stickiness. The public sector also tends to be more complex, involving many layers of bureaucracy and regulation. It can make it challenging to adjust costs quickly and efficiently when income fluctuations occur. Using a rarely studied population, future research can make scientific contributions to cost stickiness by covering different objects and capturing more varied phenomena.

Cost Stickiness Proxy

Future studies in the realm of cost stickiness can expand insight by utilizing proxies for adjustment costs, operational rental costs, and production costs. It is based on the results of a literature review exhibiting that these proxies are of limited use, especially in national journals. Using adjusted cost proxies reflects a company's flexibility in managing costs and can provide a more accurate picture of cost stickiness. A proxy for operating lease costs can be employed because these costs are often significant in a company's cost structure. Cost stickiness analysis involving operating lease costs can provide insight into how a company manages its fixed costs as operational activities change. Production cost proxies are relevant, as they can have varying levels of stickiness depending on the company's industry and type of production. Including production costs in cost stickiness research can provide opportunities to identify specific patterns in cost responses to changes in operational activity levels. By integrating these proxies in cost stickiness research, future research is anticipated to provide a more comprehensive understanding. Sensitivity analysis on several proxies can also be carried out to determine the best proxy for measuring cost stickiness in a particular context. This analysis allows researchers to evaluate the extent to which alternative proxies can provide consistent and relevant results in the context of cost stickiness. By considering the sensitivity of these proxies, researchers can identify the most appropriate and reliable proxies that reflect the company's level of cost stickiness.

Conclusion

This research aims to describe the development of cost stickiness research over 20 years and present future research agendas. The data used in this research were articles from international journals indexed by Scopus Q1-Q4 and articles from national journals indexed by SINTA 1-4. Searching for the article using keywords refers to Ibrahim et al. (2022), namely "cost behavior," "cost stickiness," "cost anti-stickiness," "sticky costs," "asymmetric cost behavior," and "cost asymmetry." Based on the search and selection process, the final sample size for this research was 91 articles from 42 international journals and 20 articles from 14 national journals.

This research reveals that the development of cost-stickiness research in international and national journals experiences fluctuations every year. Cost stickiness research for 20 years exhibits revenue change as the main antecedent variable with differences in approach between international journals, which tend to be holistic by explaining internal and external factors, while national journals focus more on internal factors only. In terms of consequence variables, the popularly used variable in international journals is accounting conservatism. In contrast, in national journals, there are only consequence variables, namely CSR and investor response to earnings announcements. The theories underlying cost stickiness research for 20 years are cost stickiness theory, agency theory, cost behavior theory, and adjustment theory. The majority of cost stickiness research used a quantitative approach with secondary data. The United States is the most researched country, with a research population dominated by public companies and profit-oriented companies. Finally, the majority of cost stickiness measurements employed the SG&A proxy.

The results of this mapping suggest the potential for future cost stickiness research by exploring aspects that are still rarely researched or have not been discussed in cost stickiness research. Several aspects that can be used as a reference for further research are external factors that influence cost stickiness, consequence variables that are rarely researched, the application of theories that are rarely used, the use of qualitative or mixed methods, the use of a population of non-profit or public sector companies, and exploration of less commonly used proxies for cost stickiness. This research also has limitations in the data collection process. Several websites in national journals indexed by SINTA 1-4 could not be accessed due to errors, limiting the number of research samples in national journals. It is expected that future research can expand the search for articles on SINTA 1-6 or through other websites/portals (such as WoS) to provide a more comprehensive picture regarding the development of cost stickiness research.

References

- Anderson, M. C., Banker, R. D., & Janakiraman, S. N. (2003). Are Selling, General, and Administrative Cost "Sticky"? *Journal of Accounting Research*, 41(972), 47–63.
<https://doi.org/10.1111/1475-679X.00095>

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- Azmi, Z., & Januryanti, J. (2021). Faktor-Faktor yang Mempengaruhi Sticky Cost. *J-MAS (Jurnal Manajemen dan Sains)*, 6(1), 274-280. <http://dx.doi.org/10.33087/jmas.v6i1.219>
- Banker, R. D., Basu, S., Byzalov, D., & Chen, J. Y. S. (2016). The Confounding Effect of Cost Stickiness on Conservatism Estimates. *Journal of Accounting and Economics*, 61(1), 203–220. <https://doi.org/10.1016/j.jacceco.2015.07.001>
- Banker, R. D., & Byzalov, D. (2014). Asymmetric Cost Behavior. *Journal of Management Accounting Research*, 26(2), 43-79. <https://doi.org/10.2308/jmar-50846>
- Banker, R. D., Byzalov, D., Fang, S., & Liang, Y. (2017). Cost Management Research. *Journal of Management Accounting Research*, 30(3). <https://doi.org/10.2308/jmar-51965>
- Bugeja, M., Lu, M., & Shan, Y. (2015). Cost Stickiness in Australia: Characteristics and Determinants. *Australian Accounting Review*, 25(3), 248–261. <https://doi.org/10.1111/auar.12066>
- Chen, J. V., Kama, I., & Lehavy, R. (2019). A Contextual Analysis of the Impact of Managerial Expectations on Asymmetric Cost Behavior. *Review of Accounting Studies*. <https://doi.org/10.1007/s11142-019-09491-2>
- Cheung, J., Kim, H., Kim, S., & Huang, R. (2016). Is the Asymmetric Cost Behavior Affected by Competition Factors? *Asia-Pacific Journal of Accounting & Economics* 25 (1-2), 1–17. <https://doi.org/10.1080/16081625.2016.1266271>
- Dewi, A. C., Fitriana, A., & Setiawan, D. (2018). Perkembangan Penelitian di Bidang Pengungkapan di Indonesia: Telaah Konseptual. *Jurnal Siasat Bisnis*, 22(1), 1–19. <https://doi.org/10.20885/jsb.vol22.iss1.art1>
- Ditta, A. S. A., & Setiawan, D. (2019). Corporate Governance in Indonesia: One Decade Perspective. *Jurnal Keuangan Dan Perbankan*, 23(1), 61–77. <https://doi.org/10.26905/jkdp.v23i1.2182>
- Evelyn, E. (2018). Pengaruh Perubahan Penjualan, Asset Intensity, Profitability, Size, dan Leverage terhadap Cost Stickiness. *Jurnal Muara Ilmu Ekonomi Dan Bisnis*, 2(2), 411-418.
- Fourati, Y. M., Ghorbel, R. C., & Jarboui, A. (2020). Sticky Cost Behavior and Its Implication on Accounting Conservatism: A Cross-Country Study. *Journal of Financial Reporting and Accounting*, 18(1), 169-197. <https://doi.org/10.1108/JFRA-08-2018-0071>
- Garrison, R. H., Noreen, E. W., & Brewer, P. C. (2018). *Managerial Accounting Sixteenth Edition*. McGraw-Hill Education: New York.
- Golden, J., Mashruwala, R., & Pevzner, M. (2020). Labor Adjustment Costs and Asymmetric Cost Behavior: An Extension. *Management Accounting Research*, 46(March). <https://doi.org/10.1016/j.mar.2019.07.004>
- Gray, D. L. (2020). Are Operating Lease Costs Sticky Cost for Retail Firms? *Advances in Management Accounting*, 32, 75–100. <https://doi.org/10.1108/S1474-787120200000032003>
- Guenther, T. W., Riehl, A., & Rößler, R. (2014). Cost Stickiness: State of the Art of Research and Implications. *Journal of Management Control*, 24(4), 301–318. <https://doi.org/10.1007/s00187-013-0176-0>
- Herawati, N., & Bandi, B. (2017). Dua Puluh Tahun Riset Perpajakan dalam Akuntansi: Suatu Studi Bibliografi. *Jurnal Akuntansi Dan Keuangan*, 19(2), 102–121. <https://doi.org/10.9744/jak.19.2.102-121>
- Herawati, N., & Bandi, B. (2019). Makro Ekonomi dan Return Saham: Suatu Telaah Pustaka di Indonesia. *Jurnal Akuntansi dan Bisnis*, 19(1), 119-133. <http://dx.doi.org/10.20961/jab.v19i1.288>
- Herawati, N., Rahmawati, R., Bandi, B., & Setiawan, D. (2019). Penelitian penghindaran pajak di Indonesia. *InFestasi*, 15(2), 108-135. <https://doi.org/10.21107/infestasi.v15i2.6006>

Amanda, Hakim & Zuhdi
Does the cost behavior remain sticky?

- Ibrahim, A. E. A. (2018). Board Characteristics and Asymmetric Cost Behavior: Evidence from Egypt. *Accounting Research Journal*, 31(2), 301–322. <https://doi.org/10.1108/ARJ-11-2015-0148>
- Ibrahim, A. E. A., Ali, H., & Aboelkheir, H. (2022). Cost Stickiness: A Systematic Literature Review of 27 Years of Research and A Future Research Agenda. *Journal of International Accounting, Auditing and Taxation*, 46, 100439. <https://doi.org/10.1016/j.intaccaudtax.2021.100439>
- Ibrahim, A. E. A., & Ezat, A. N. (2017). Sticky Cost Behavior: Evidence from Egypt. *Journal of Accounting in Emerging Economies*, 7(1), 16–34. <https://doi.org/10.1108/JAEE-06-2014-0027>
- Irawan, D. (2021). Intellectual Capital on Cost Stickiness: A Modified Value Added Intellectual Coefficient (MVAIC) Approach. *Jurnal Reviu Akuntansi dan Keuangan*, 11(2), 285–293. <https://doi.org/10.22219/jrak.v11i2.17432>
- Krisnadewi, K. A., & Soewarno, N. (2020). Competitiveness and Cost Behaviour: Evidence from the Retail Industry. *Journal of Applied Accounting Research*, 21(1), 125–141. <https://doi.org/10.1108/JAAR-08-2018-0120>
- Krisnadewi, K. A., & Soewarno, N. (2021). Optimism and Profit-Based Incentives in Cost Stickiness: An Experimental Study. *Journal of Management Control*, 32(1), 7–31. <https://doi.org/10.1007/s00187-020-00309-w>
- Li, Z., Ying, Q., Chen, Y., & Zhang, X. (2020). Managerial Risk Appetite and Asymmetry Cost Behavior: Evidence from China. *Accounting and Finance*, 60(5), 4651–4692. <https://doi.org/10.1111/acfi.12692>
- Linggardjaja, I. K. (2020). Factors Affecting Cost Stickiness: A Literature Review. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, 4(1), 52–65. <https://www.journal.stiemb.ac.id/index.php/mea/article/view/205>
- Lusiana, L., & Kristianti, I. (2020). Sticky Cost Behavior in Selling, General, and Administrative Costs in Indonesian Manufacturing Companies. *Jurnal Keuangan dan Perbankan*, 24(2), 214–224.
- Muslim, A. I., & Setiawan, D. (2020). A Literature Review of Tax Avoidance. *Assets: Jurnal Akuntansi Dan Pendidikan*, 9(2), 83–95. <https://doi.org/10.25273/jap.v9i2.6112>
- Permatasari, I., & Tjahjadi, B. (2024). A closer look at integrated reporting quality: a systematic review and agenda of future research. *Meditari Accountancy Research*, 32(3), 661–692. <https://doi.org/10.1108/medar-08-2022-1782>
- Ratnawati, L., & Nugrahanti, Y. W. (2015). Perilaku Sticky Cost Biaya Penjualan, Biaya Administrasi dan Umum Serta Harga Pokok Penjualan pada Perusahaan Manufaktur. *Jurnal Ekonomi Dan Bisnis*, 18(2), 65–80. <https://doi.org/https://doi.org/10.24914/jeb.v18i2.314>
- Salehi, M., Ziba, N., & Daemi Gah, A. (2018). The Relationship Between Cost Stickiness and Financial Reporting Quality in Tehran Stock Exchange. *International Journal of Productivity and Performance Management*, 67(9), 1550–1565. <https://doi.org/10.1108/IJPPM-10-2017-0255>
- Setiawati, L. P. E., Rasmini, N. K., & Mimba, N. P. S. H. (2017). Perilaku Cost Stickiness Dalam Kompensasi Eksekutif Bank BUMN dan Non BUMN yang Terdaftar di Bursa Efek Indonesia. *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 6(5), 2337–3067.
- Sugiri, S., Febrianto, R., & Kresnawati, E. (2016). Sticky Cost Behavior of Bank's Executive Compensation in Four South East Asian Countries. *Journal of Economics, Business, and Accountancy Ventura*, 19(3), 363–376. <https://doi.org/10.14414/jebav.v19i3.771>
- Weil, R., & Maher, M. (2005). *Handbook of Cost Management*. John Wiley & Sons.
- Windiyastuti. (2013). Pengujian Variabel Ketenagakerjaan terhadap Biaya Stickiness. *Jurnal Keuangan dan Perbankan*, 17(3), 426–433. <https://doi.org/10.26905/jkdp.v17i3.761>

Amanda, Hakim & Zuhdi
Does the cost behavior remain sticky?

- Xue, S., & Hong, Y. (2015). Earnings Management, Corporate Governance and Expense Stickiness. *China Journal of Accounting Research*, 9(1), 41–58.
<https://doi.org/10.1016/j.cjar.2015.02.001>
- Yang, Y. (2018). Do Accruals Earnings Management Constraints and Intellectual Capital Efficiency Trigger Asymmetric Cost Behaviour? Evidence from Australia. *Australian Accounting Review*, 29(1), 177–192. <https://doi.org/10.1111/auar.12250>
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Conflicts of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.



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