



2018

### MUFIDER, 7, 2(2024), 144 - 155

## A REVIEW OF STUDIES ON THE THEORY OF COST STICKINESS WITH **BIBLIOMETRIC ANALYSIS**

# MALİYET YAPIŞKANLIĞI TEORİSİNE İLİŞKİN YAPILMIŞ ÇALIŞMALARIN BİBLİYOMETRİK ANALİZ İLE İNCELENMESİ\*

# Nazan GÜNGÖR KARYAĞDI <sup>a\*</sup>, Kadir GÖKOĞLAN<sup>b</sup>

<sup>a</sup>\* Corresponding Author, Assoc. Prof. Dr., Bitlis Eren University, ngkaryagdi@beu.edu.tr, ORCID: 0000-0003-3938-4147 <sup>b</sup>Assoc. Prof. Dr., Dicle University, kadir.gokoglan@dicle.edu.tr, ORCID: 0000-0001-6397-8477

### **ARTICLE INFO**

Article history: Received 15.05.2024 Revised 20.06.2024 Accepted 12.07.2024

Keywords: Cost, Cost Stickiness Theory, Bibliometric Analysis Jel Codes: M40. M41

### **RESEARCH ARTICLE**

**BENZERLİK/ PLAGIARISM** 

Ithenticate: %5

## ABSTRACT

Costs, which are of great importance for businesses, are evaluated in two groups as fixed and variable costs. According to the traditional cost theory, both fixed and variable costs increase and decrease symmetrically at the relevant activity level. However, in recent years, as an alternative to this approach of the traditional cost theory, opinions have emerged that costs may not move symmetrically but asymmetrically depending on the increase or decrease of the activity level. In this framework, the aim of this study is to present conceptual information about this view, which is put forward as an alternative to the traditional cost theory, and to conduct a bibliometric analysis of international studies on the subject

In the study, international literature was searched, and Web of Science database was used. In addition, the relationships between the data obtained in the study were presented by creating visual network maps through the "VOSviewer" program. According to the results of the analysis, the most studies on cost stickiness were conducted in 2021 with 64 publications. 90% of the studies were published as articles. 15,197 citations were made to 685 publications, a rate of 22.19% per publication. The researchers who published the most on cost stickiness with 8 publications were Banker, Rajiv D. and Naoum V.C. The highest number of publications in Web of Science categories on cost stickiness was in *Economics with approximately 44%. Again, the highest number of citations was in* 

\* Bu çalışma 8-10 Mayıs 2024 tarihleri arasında düzenlenen 2. Uluslararası Sosyal Bilimler Kongresi'nde (USBK'2024) sunulan özet bildirinin genişletilmiş versiyonudur.

APA STİLİ KAYNAK KULLANIMI: Güngör Karyağdı, N., & Gökoğlan, K. (2024). A REVIEW OF STUDIES ON THE THEORY OF COST STICKINESS WITH BIBLIOMETRIC ANALYSIS. Muhasebe ve Finans İncelemeleri Dergisi, 7(2), 144 - 155, https://doi.org/10.32951/mufider.1484416

*Economics with approximately 69% and the highest number of publications in this field was in Corporate Governance with approximately 32.4%.* 

62% of the publications were in journals indexed in the Social Sciences Citation Index (SSCI). 99% of the studies were conducted in English. Approximately 26% of the studies were published by Emerald Group Publishing. The study is important in terms of determining the studies on cost stickiness theory in accounting science and the relationship between these studies.

## ÖZET

İşletmeler için büyük önem taşıyan maliyetler, sabit ve değişken maliyetler olarak iki grupta değerlendirilmektedir. Geleneksel maliyet teorisine göre hem sabit hem de değişken maliyetler ilgili faaliyet düzeyinde simetrik olarak artar ve azalır. Ancak son yıllarda geleneksel maliyet teorisinin bu yaklaşımına alternatif olarak maliyetlerin simetrik değil, faaliyet düzeyinin artması veya azalmasına bağlı olarak asimetrik hareket edebileceği yönünde görüşler ortaya çıkmıştır. Bu çerçevede bu çalışmanın amacı, geleneksel maliyet teorisine alternatif olarak ortaya atılan bu görüş hakkında kavramsal bilgiler sunmak ve konuyla ilgili uluslararası çalışmaların bibliyometrik analizini yapmaktır.

Calısmada uluslararası literatür taraması yapılmıs ve Web of Science veri tabanı kullanılmıştır. Ayrıca çalışmada elde edilen veriler arasındaki ilişkiler "VOSviewer" programı aracılığıyla görsel ağ haritaları oluşturularak sunulmuştur. Analiz sonuçlarına göre, maliyet yapışkanlığı konusunda en fazla çalışma 64 yayın ile 2021 yılında yapılmıştır. Çalışmaların %90'ı makale olarak yayımlandı. 685 yayına 15.197 atıf yapılarak yayın başına %22,19'luk bir oran elde edildi. Malivet vapıskanlığı konusunda 8 vavın ile en fazla vavın vapan araştırmacılar Banker, Rajiv D. ve Naoum V.C. olmuştur. Maliyet yapışkanlığı konusunda Web of Science kategorilerinde en fazla yayın yaklaşık %44 ile Ekonomi alanında yapılmıştır. Yine en fazla atıf yaklaşık %69 ile Ekonomi alanında ve bu alanda en fazla yayın yaklaşık %32,4 ile Kurumsal Yönetim alanında yapılmıştır. Yayınların %62'si Sosyal Bilimler Atıf Endeksi'nde (SSCI) taranan dergilerde yer almıştır. Çalışmaların %99'u İngilizce olarak gerçekleştirilmiştir. Çalışmaların yaklaşık %26'si Emerald Group Publishing tarafından yayımlanmıştır. Çalışma muhasebe biliminde maliyet yapışkanlığı teorisi üzerine yapılan çalışmaları ve bu çalışmalar arasındaki ilişkiyi belirlemesi açısından önemlidir.

## **1. INTRODUCTION**

The ability of enterprises to take place in the markets and to provide competitive advantage is closely related to responding to customer demands on time and offering products to the market at the desired quality and price. Providing superiority to competitors in this regard is directly related to the successful control of the costs incurred. For this reason, managers who play an active role in the business should be competent both in carrying out business activities and in measuring the costs that are important in the realisation of activities. It is very important for managers to have sufficient information in order to protect the prestige of the business, to establish its reputation and to ensure the continuity of the business and to ensure its profitability. Cost information of the enterprise is one of the most important of these. Information such as cost volume and profit analysis, production or purchasing decision, revealing budgets, customer profitability are examples of cost information.

Every business aims to maximise the value of the firm when starting its activities. For this reason, it tends to evaluate all kinds of factors that may affect the firm value. While factors such as financial structure, liquidity, sales and profitability directly affect the firm value of enterprises, factors such as image, brand and public relations affect it indirectly (Uluyol and Türk, 2013: 366; Karadeniz et al, 2019: 172). According to the traditional cost

#### MAKALE BİLGİLERİ

Makale Tarihçesi: Gönderilme Tarihi 15.05.2024 Düzenleme 20.06.2024 Kabul Tarihi 12.07.2024 Anahtar Kelimeler Maliyet, Maliyet Yapışkanlığı Teorisi, Bibliyometrik Analiz Jel Kodları: M40, M41 theory in the literature, there is a symmetrical relationship between sales amounts and costs. This theory argues that sales and costs increase and decrease at the same rate. In contrast to this theory, the asymmetric cost theory argues that costs do not change in the same direction in periods when sales increase or decrease. This approach is called cost stickiness (Kaçar and Demirci, 2022:76).

Sticky costs cause an increase in the cost-to-sales ratio and are considered as negative data about the ability of business managers to control costs (Hoffmann, 2017:20). This situation may adversely affect the decision-making processes and financial performance of enterprises. This is because businesses that want to continue their existence in competitive markets can be ensured by having a successful cost management and the correct analysis of cost behaviour by business managers (Polat and Taşar, 2024: 147).

Recently, testing the validity of the cost stickiness theory, which is of great importance for businesses, has been examined in many sectors and the importance of cost stickiness has gradually increased in the literature. The number of studies on the subject both nationally and internationally has started to increase day by day. In the light of this information, the study aims to make a bibliometric analysis of the studies on cost stickiness theory supported by visual network mapping and it is envisaged that the study will contribute to the literature in this respect.

## 2. CONCEPTUAL FRAMEWORK

The traditional cost approach analyses costs in two groups as fixed and variable costs. It is stated that there is a proportional relationship between these variable costs and the level of activity (Guenther et al., 2013: 302; Ürgüp, 2022: 444). However, Noreen and Soderstrom (1997) argued in their study that the assumption that there is a linear correlation between cost change and activities is not correct. They argued that an increase in activities leads to an easier reaction in costs compared to the reaction of costs to decreases in activities (Cannon, 2014: 1645). In addition to this view, Anderson et al. (2003), in a study on industrial firms, found that the relationship between costs and activity volume is not symmetric as in the traditional cost system, but that costs react asymmetric cost behaviour has entered the accounting literature. This concept can be expressed as the asymmetric change of cost elements in periods when enterprises experience revenue increases and decreases (Hacıhasanoğlu and Dalkılıç, 2018:1803).

According to another definition, cost stickiness is the situation where costs do not change linearly in response to changes in the level of activity, but instead depend on the deliberate resource adjustment decisions of business managers and decision makers (Polat and Taşar, 2024: 148). It is known that there are many factors that cause cost stickiness. The most effective of these factors is the decisions taken by business managers regarding the activities. All operational decisions taken by business managers greatly affect cost behaviour due to factors such as management expectations, demand uncertainties, resource adjustment costs, legal regulations (Banker et al., 2016: 222). In addition, other business-specific decisions made by managers or some behaviours exhibited by managers may also cause cost stickiness. Deliberate decisions taken by managers, optimism, technological limitations, employee intensity, debt intensity, adjustment costs, growth of gross domestic product, intermediation problems, etc. can be said as determinants of cost stickiness (Malik, 2012: 5). It is also seen that the contracts signed by the managers, which are costly to withdraw, renegotiate and renegotiate, are also among the factors that cause cost stickiness (Calleja et al., 2006: 127).

Along with many factors that cause cost stickiness in enterprises, there are also factors that affect the level of cost stickiness. These factors are as follows (Ürgüp, 2022: 445):

*Managerial Factors*: It is seen that many managers make business decisions based on certain constraints, incentives and prejudices that systematically affect costs (Banker et al., 2018: 202). This situation affects the cost behaviour of managers from time to time.

*Macroeconomic Factors*: Macroeconomic policies of each country differ. In addition, the level of cost stickiness also differs between countries. Country-specific macroeconomic factors have significant effects on cost stickiness and behaviours of enterprises (Banker et al., 2013: 22).

**Business Specific Behaviours:** Various factors such as the economic structure in which enterprises are involved and the characteristics of enterprises, as well as the ownership structure of enterprises, audit, economic system and business characteristics greatly affect cost behaviour (Ürgüp, 2022: 445):

## 3. METHODOLOGY

A bibliometric analysis was performed on 699 papers as a consequence of a search in the web of science database, taking into account the essential ideas of "cost stickiness" as part of the research. All of the studies included in the study are of foreign origin, and the data collected was kept in plain text file (txt) format. The "VosViewer" tool was also used to do bibliometric analysis on studies collected from the Web of Science database. Tables, figures, and graphs were used to attempt to explain the study's findings.

## 4. FINDINGS

The data obtained in the study were subjected to bibliographic analyses and presented in figures and tables. Firstly, general findings about the studies were analysed. Then, information about the articles written in the field and their authors is given. Finally, the concepts of the studies in the field of cost stickiness were taken into consideration and analyses were tried to be carried out.

### **4.1. General Findings**

Table 1 provides general information about the studies on cost stickiness between 2000 and 2024.

Definitions	Datas
Time Interval	2000 : 2024
References (Journals, Books, etc.)	13.069
Articles	699
Average Annual Article Publication	11.040
Annual Average Citation Per Article	22.48
Total References	15.736
Total Number of Authors	69

**Table 1.** General Findings Related to the Studies

Considering Table 1, it was determined that 699 studies were conducted within 24 years. It is seen that an average of 23 studies on cost stickiness are conducted annually. It was determined that 16 citations were made per article per year. However, it is seen that 69 different authors made 15.736 references. The reference rate stands out in terms of showing the high number of international studies on cost stickiness

## 4.2. Findings from Bibliometric Analysis

Between 2000 and 2024, the results of the analyses of the studies on cost stickiness theory are presented in tables and figures.

## 4.2.1. Findings Related to the Articles

Between 2000 and 2024, data on academic articles on cost stickiness theory are tried to be explained with the help of tables and figures.

Definitions	Datas		
Articles	626		
Articles; Book Chapters and symposium books	38		
Article; Early Access	13		

Table 2. General Findings Related to Articles
---

Table 2 shows general information about the articles included in the study. According to Table 2, it was determined that 626 international articles were written within the 24-year period, 38 books, book chapters or symposium books included studies on cost stickiness, and 13 articles are still in the publication stage.

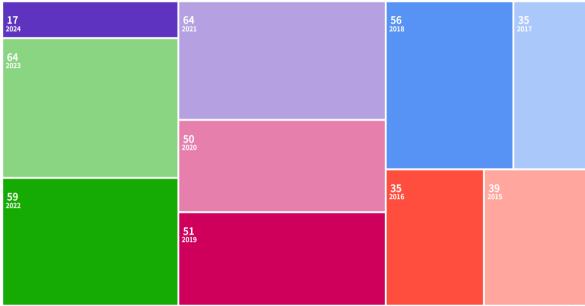


Figure 1. Statistical Data on Annual Article Distribution

The distribution of the articles identified within the scope of the study according to years is shown in Figure 1. Accordingly, 2021 was the year of the highest number of articles on cost stickiness theory with 64 articles. In 2023, the second highest number of articles was published with 64 articles and in 2022, the third highest number of articles was published with 59 articles. It is also seen in the research that 17 articles were published within 4 months. In short, it is seen that the cost stickiness theory continues to be remarkable by researchers.



Figure 2. Distribution of Articles According to Related Fields

Figure 2 shows the distribution of studies according to their fields of interest. According to Figure 2, it is seen that cost stickiness theory is mostly studied in the field of economics with 300 articles. According to the field of interest, the field of business finance follows with 216 studies written in the field of cost stickiness theory. Finally, the field of management has addressed the subject of cost stickiness theory with 76 studies.

Publisher	Number of Articles
Elsevier	179
Wiley	104
Taylor & Francis	63
Springer Nature	52
Emerald Group Publishing	27

Table 3 provides general information about the organisations in which the articles were published. In Table 3, especially the first five organisations with the highest number of publications are shown. According to Table 3, Elsevier publisher ranks first with 179 articles. With 104 publications, Wiley ranks second. Taylor & Francis is followed with 63 publications and Springer Nature with 52 publications. Finally, Emerald Group Publishing is the fifth publisher with the highest number of publications with 27 publications. In addition, other publishing organisations are shown in Figure 3.

	2	179 Elsevier	
19 Amer Accounting Assoc	<b>4</b> Assoc Computing Machinery		
	7 Atlantis Press		
	12 Cambridge Univ Press		
<b>6</b> Amer Chemical Soc	Press		
12 Amer Economic Assoc			
Amer Economic Assoc			
	3 Destech		

Figure 3. Institutions where the articles were published

Figure 4 shows the distribution of studies according to countries. According to Figure 4, England ranks first with 55 studies. With 51 studies, the Germany ranks second and France ranks third with 22 studies.

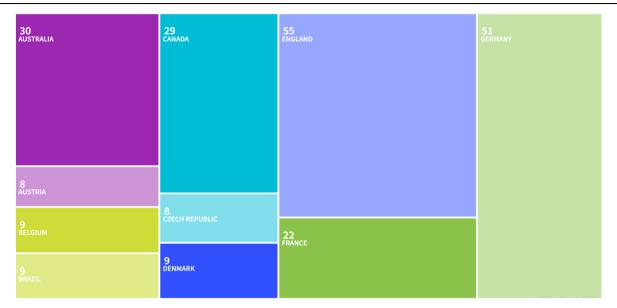


Figure 4. Distribution of Studies by Countries

According to Table 4, the index with the highest number of publications is Social Sciences Citation Index (SSCI) with 427 publications. The second index is Sciences Citation Index Expanded (SSCI-Expanded) with 141 publications.

Indices	Number of Publications
Social Sciences Citation Index (SSCI)	427
Sciences Citation Index Expanded (SSCI-Expanded)	141
Emerging Sources Citation Index (ESCI)	109
Conference Proceedings Citation Index-Social Sciences & Humanities (CPCI-SSH)	46
Book Citation Index-Social Sciences & Humanities (BKCI-SSH)	8

Table 5 presents the data on the journals in which the articles published on cost stickiness were published.

Table 5. Data on the Journals in which the articles were published

Journals	Number of Publications
Journal of Monetary Economics	25
Journal of Money Credit and Banking	19
Journal of Management Accounting Research	15
Journal of Economic Dynamics Control	13
Accounting and Finance	12

According to Table 5, the journal with the highest number of publications is Journal of Monetary Economics with 25 publications. In second place is the Journal of Money Credit and Banking with 19 publications. The third journal is Journal of Management Accounting Research with 15 publications. Considering the journals published, it is seen that the cost stickiness theory is generally studied more in economics.

## 4.2.2. Findings Related to Citations

The citations to studies published between 2000 and 2024 are shown in Figure 5. In addition, Table 7 and Figure 6 show the data on the citations of the studies on a yearly basis.

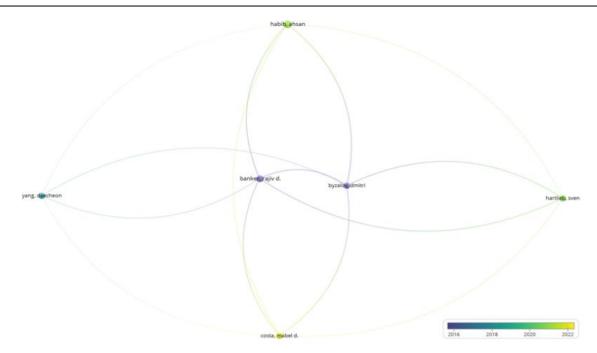


Figure 5. Annual Average Citation Rates of Studies

Figure 5 shows the citations to the studies and the years in which the citations were made. According to Figure 5, it is seen that the first study was conducted by Banker A.D. in 2016. In the following years, it is seen that a study was carried out by Habib A. in 2022.

Table 6. Data on Annual Citation Rates

Dates	Rates	Annual Average	Total	
2020	1,470			
2021	1,578			
2022	1,794	491.75	15,736	
2023	2,033			
2024	491			

Table 6 shows the annual citation data for the last five years. According to Table 6, the year with the highest number of citations is 2023 with 2,033 citations. The year 2022 ranks second with 1,794 citations. From 2000 to 2024, an average of 491.75 citations were made every year, totaling 15,736 citations.

Table 7. Annual	Citation	Data fo	or Authors

Authors -	Years					Annual Average	Total
Aunors	2020	2021	2022	2023	2024	Citation	10101
Vonhippel, E	84	68	62	64	10	59.9	1,857
Anderson, MC; Banker, RD and Janakiraman, SN	51	61	61	77	18	22.18	488
Gerali, A; Neri, S; Signoretti, FM	44	42	36	45	5	26.87	403
Galí, J; Gertler, M and López-Salido, JD	17	12	10	10	1	16.38	393
Chen, CX; Lu, H and Sougiannis, T	42	49	47	67	48	26.92	350

Table 7 shows the authors with high citations in the last 5 years and their distribution according to years. According to Table 7, Vonhippel, who published in 2020, ranked first with 84 citations. In general, it is seen that Vonhippel is the author with the highest rate with 1,857 citations and 59.9 average.

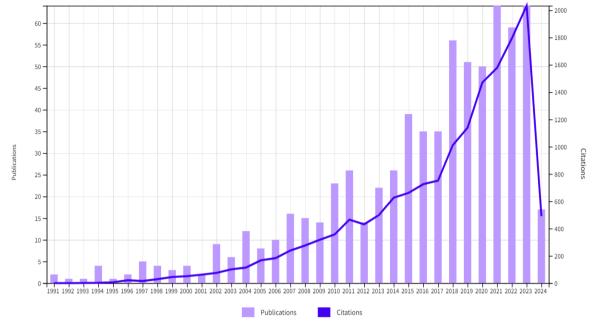


Figure 6. Data on Published and Cited Works by Year

According to Figure 6, both the highest publication rate and the highest citation rate are seen in 2021 and 2023. In addition, both the number of studies and the citation rate are at the highest level in 2023.

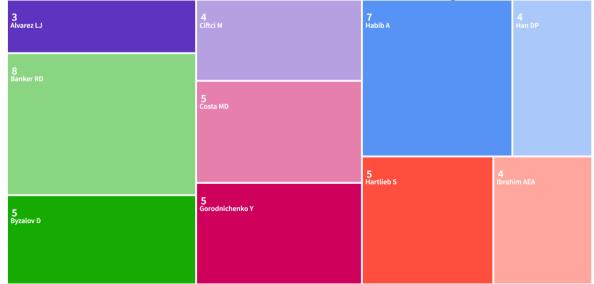


Figure 7. Authors with the Most Contributions

Figure 7 shows the number of studies of the authors who contributed the most to the subject of cost stickinessbetween 2000 and 2024. Considering Figure 7, it is seen that Banker RD is the author with the highest number of studies in this field with 8 articles. Habib A. is the author with 7 studies.

4.2.3. Findings Regarding the Keywords Used in the Articles

new keynesian phillips curve			labor cost stickiness m41	
monetary policy e52 price stickiness state-dependent pricing e31 persistence	earnings management cost behaviour cost management			
heterogeneity inflation	sticky costs	corpora	te governance	
menu costa sticky prices		asymmetric cost behavior		
inflation price rigidity		cost stickiness		
phillips curve wage rigidity	adjustment costs	cost anti-stickiness	sticky cost	
unemployment		agency problem	overconfidence	
dsge				

Figure 8. Keyword Cloud

Figure 8 depicts the most common terms used by the authors in their investigations. According to Figure 8, price is the most frequently used keyword in the studies. Then, it is seen that word groups such as cost and stickiness are used predominantly in the studies.

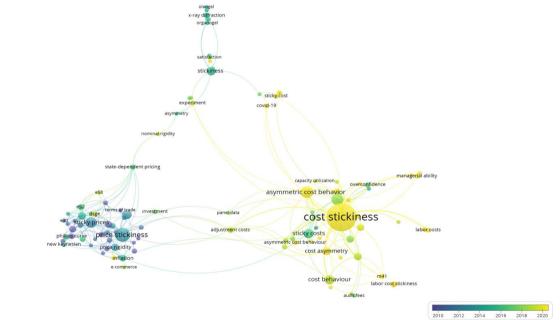


Figure 9. Keyword Cloud by Years

iewer

Figure 9 shows the words used as keywords by researchers according to years. According to Figure 9, it is seen that until 202014, in addition to the concept of prices, it is used together with the concept of stickiness. However, since 2016, the expression cost has started to be used together with the expression stickiness. Since 2018, it is seen that the most used word is cost stickiness.

## 5. CONCLUSION

Cost stickiness theory has been the subject of research in many disciplines. It is mainly used in economics and finance. Due to this situation, studies on cost stickiness theory between 2000-2024 were accepted as the subject of the research. For this purpose, bibliometric analysis was carried out by examining the studies on cost stickiness theory during 24 years.

As a result of the analysis, it was determined that 699 studies were conducted on cost stickiness theory within 24 years (including the first quarter of 2024). With these studies, it is seen that an average of 27 articles were written annually and an average of 22 citations were made. Considering these data, the high number of international studies on cost stickiness theory stands out. Between 2000 and 2024, 2021 and 2023 stand out as the years in which the most studies were conducted on the cost stickiness theory. The years 2023 and 2022 are also the years in which the most studies were conducted. In this direction, it is seen that the importance of the cost stickiness theory increases as we approach the present day. It is noteworthy that the majority of the studies are in the field of economics and are generally conducted by US authors. It is noteworthy that there are 18 studies from Turkey in this field. While Social Sciences Citation Index (SSCI) is the index with the highest number of publications. It is seen that the first studies on cost stickiness theory were conducted by Naoum VC and Banker RD.

The year 2023 was the year with the highest number of citations and studies. Vonhippel, E is seen as the most cited author in the 24-year period. Banker RD is the author with the most studies in the field of cost stickiness theory. In the 24-year period, cost and stickiness were used as key concepts in the studies. Later, these two concepts started to be used together and it is seen that the cost stickiness word group has been used predominantly since 2018. A large part of the studies within the scope of the research consists of articles written in English. For this reason, new studies can be conducted by taking into account the studies written in Turkey in this field. The study was conducted by considering the studies in the Web of Science interface. Studies can be conducted using different interfaces. Finally, this study covers studies within a period of 24 years (2000-2024).

#### **Ethics Committee Declaration**

Ethics committee declaration is not required for the study.

#### **Author Contribution Rate Declaration**

The data were collected by Nazan Güngör KARYAĞDI. The analysis was carried out by Kadir GÖKOĞLAN. The conclusion and discussion section were written jointly by the authors.

#### **Conflict Statement**

There is no conflict of interest between the authors.

#### **Declaration of Support**

No support was received from any organisation for this study.

### REFERENCES

- Anderson, M. C., Banker, R., & Janakiraman, S. (2003). Are selling, general, and administrative costs sticky? Journal of Accounting Research, 47-63.
- Banker, R.D., Byzalov, D. & Threinen, L. (2013). Determinants of international differences in asymmetric cost behavior (SSRN Working Paper).
- 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.
- Banker, R.D., Byzalov, D., Fang, S. & Liang, Y. (2018). Cost management research. Journal of Management Accounting Research, 30(3), 187-209.
- Calleja, K., Steliaros, M. &Thomas, D.C. (2006). A note on cost stickiness: Some international comparisons. Management Accounting Research, 17(2), 127-140.
- Cannon, J.N. (2014). Determinants of "sticky costs": An analysis of cost behavior using United States air transportation industry data. The Accounting Review, 89(5), 1645-1672.

- Guenther, T.W., Riehl, A.& Rößler, R. (2013). Cost stickiness: state of the art of research and implications. Journal of Management Control, (24), 301-308.
- Hacıhasanoğlu, T. & Dalkılıç, E. (2018). Maliyet yapışkanlığı hipotezinin BİST imalat sektörü kapsamında test edilmesi. Hitit Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 11(3), 1802-1808
- Hoffmann, K. (2017). Cost behavior: An empirical analysis of determinants and consequences of asymmetries, PhD Series, No. 6.2017, ISBN 978.879.3483859, Copenhagen Business School (CBS), Frederiksberg,
- Kaçar, H., & Demirci, Ş. D. (2022). BİST gayrimenkul yatırım ortaklığı sektörü itibarıyla maliyet yapışkanlığının panel veri analizi ile test edilmesi. Yalova Sosyal Bilimler Dergisi, 12(2), 76-98.
- Karadeniz, E., Günay, F. & Koşan, K. (2019). Halka açık konaklama işletmelerinde maliyet yapışkanlığının analizi. Journal of Tourism Theory and Research, 5(2), 171-181.
- Malik, M. (2012). A review and synthesis of "cost stickiness" literature (SSRN Working Paper).
- Polat, L.& Taşar Açık, S. (2024). BIST gıda ve içecek sektöründe yer alan işletmelerde maliyet yapışkanlığının analizi. Marmara Üniversitesi Öneri Dergisi, 19 (61), 146-163.
- Uluyol, O. & Türk, V. E. (2013). Finansal rasyoların firma değerine etkisi: Borsa İstanbul (BİST)'da bir uygulama. Afyon Kocatepe Üniversitesi İİBF Dergisi. 15 (2), 365-384.
- Ürgüp, E.S. (2022). Maliyet yapışkanlığı teorisinin test edilmesi: BIST Kimya İlaç Petrol Lastik ve Plastik ürünler sektörü örneği. Ekonomi Politika Ve Finans Araştırmaları Dergisi, 7(2), 442-456.