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Abstract

This study seeks to investigate the effect of four firm's characteristics on the degree of cost stickiness and to examine the moderating role of these characteristics on the relationship between cost stickiness and firm's profitability in Egyptian manufacturing firms. The four-firm characteristics examined in this study are business strategy, ownership structure, assets intensity, and debt intensity. The financial data of this study were collected from the published annual reports for a sample of 64 Egyptian listed manufacturing firms during the period (2016-2020) with total observations of 259 firm-year. The measurement of cost stickiness in this paper is based on Anderson et al.'s (2003) cost stickiness model. Based on the multiple regression analysis used to test the two research models examined in this paper, the results provide evidence that asset intensity positively significantly affects cost stickiness, however, debt intensity negatively affects cost stickiness. In addition, asset intensity and debt intensity moderate the relationship between cost stickiness and a firm's performance.

Keywords: Egypt, Sticky Costs, Selling, General, and Administrative Costs, Profitability, Firm Characteristics

Introduction

For different market participants, understanding how costs behave is vital. Managers are employed to effectively manage costs that affect profitability. Profitability is subsequently used to evaluate business and manager performance. Therefore, managers can maximize their profits by placing more emphasis on studying costs. Financial statement users, such as financial analysts, banks, and stockholders, put out great efforts to analyze and anticipate cost behavior since it is important to forecast sales to estimate future income more precisely. Additionally, stakeholders assess a company's performance based on, among other things, management's competence to properly manage costs.

Researchers began investigating the relationship between costs and activities in the late 1960s and early 1970s. They traditionally classified costs, according to the relationship between costs and activity levels, into variable and fixed costs. This classification implied that costs behave symmetrically, meaning that variable costs change proportionately in response to changes in activity levels, but fixed costs remain constant regardless of changes in activity levels.

Then, for the first time, Anderson et al. (2003) created a new model (ABJ model) to explicitly assess the term stickiness of costs. This new model had a rapid impact on the accounting field, resulting in a growing amount of research on this topic.

Since its first introduction by Anderson *et al.* (2003), the sticky cost has been an important topic of cost behavior studies for several decades. Anderson *et al.* (2003) examined the behavior patterns of the company's selling, general, and administrative (SG&A) costs and discovered an asymmetrical pattern of cost behavior known as "sticky costs". Cost stickiness was defined as "Asymmetric cost behavior in response to activity variations, in which costs decrease more in response to a sales decline than they increase in response to an equivalent sales increase" (Anderson et al., 2003; Banker et al., 2016; and Golden et al., 2020).

Based on Anderson et al. (2003) findings, independent managerial decisions dictate the cost behavior, which does not change in response to variations in activity levels. Therefore, sticky costs appear as a result of asymmetry in managers' actions when making decisions concerning resource allocation in reply to changes in activity levels. In this case, when activity levels decline, management postpones making resource allocation decisions. The management intentionally saves idle resources to ensure the continuation of the reduction in activity. On the other hand, when anticipating a rise in activity levels, management accelerates the choice to expand resources to absorb this increase in activity. Costs are "sticky" on average because of this operational asymmetry: they rise more, in reaction to sales increases, than they decrease in response to sales drops (Banker *et al.*, 2016).

Following the release of Anderson et al. (2003) results, research on sticky costs began to appear in a variety of settings and contexts. Reimer (2019) categorized empirical data in the cost stickiness literature into 3 categories. First, studies demonstrating the existence of cost stickiness, including Anderson et al. (2003); Anderson et al. (2007); Villiers et al. (2014); Xu and Sim (2017); Zhang et al. (2019); and Habib and Huang (2019). Second, studies investigating the determinants of cost stickiness, such as Calleja et al. (2006); Dierynck et al. (2012); Balakrishnan et al. (2014); Banker et al. (2014); Xu and Zheng (2018); Chung et al. (2019); and Ballas et al. (2022). Third, studies examining the consequences of sticky cost behavior, including Banker et al. (2016); Ciftci et al. (2016); Ciftci and Salama (2018); He et al. (2020); and Tang et al. (2020).

Reviewing the literature showed few studies on cost stickiness (Ibrahim *et al.*, 2021). The importance of cost stickiness as a problem that could affect the accuracy of several accounting procedures, such as cost estimation, pricing, and profit projections, is not addressed in these few studies. In addition, Ibrahim et al. (2021) argued that there is a shortage of studies that examined cost stickiness drivers, including assets intensity, business strategy, competition, idle capacity, a company's culture, industry type, and ownership structure. Among others, the influence of these variables on cost stickiness behavior was not examined. Moreover, Ibrahim et al. (2021) found that studies examining the consequences of sticky costs were scarce. Therefore, it was recommended to empirically investigate the economic consequences of cost stickiness at both micro and macro levels.

As a result, empirical studies that provide useful guidance for practices to recognize the implications of cost stickiness are urgently needed. The economic ramifications of cost stickiness, such as the influence of sticky costs on the company's value, profits, the likelihood of future losses, and audit expenses, have steadily gained attention in recent years. Despite this, few studies were conducted to examine cost stickiness and its drivers and consequences, especially in developing countries such as Egypt.

Therefore, this study tries to fill this gap by studying the effect of four organizational characteristics, namely business strategy, debt intensity, assets intensity, and ownership structure on cost stickiness and the moderating role of these four firm's characteristics on the relationship between cost stickiness and company's profitability in an emerging economy, Egypt.

Accordingly, this research seeks to accomplish three objectives. The first is to examine whether costs in developing economies, i.e., Egypt, behave asymmetrically (sticky costs) compared to cost behavior in developed nations. The second is to show how business strategy, debt intensity, assets intensity, and ownership structure will impact cost stickiness, which extends the literature on both organizational characteristics and cost management. The third is to give empirical evidence on the impact of cost stickiness on a firm's profitability after considering the effect of the four firm's characteristics on this relationship.

This study contributes to several different research areas. First, this study enriches the existing literature on sticky cost behavior by presenting evidence from emerging economies, which is especially important given the scarcity of research in the Egyptian context. Second, this study provides new insights into the consequences of sticky cost behavior, especially its effect on profitability. Third, by linking cost stickiness with profitability, the study contributes to a line of research that combines managerial and financial accounting. Finally, to the best of the researcher's knowledge, this is the first study in the Egyptian environment to examine the moderating effect of organizational drivers on the relationship between sticky cost behavior and profitability.

The remaining of the paper is organized as follows: The origins and main concept of cost stickiness and analysis of the literature are presented in section 2 to develop the research hypotheses. The research methodology is presented in section 3, which summarizes variables measurements, data collection, and research models. Section 4 covers the empirical models used to test the research hypotheses. Section 5 analyses and discusses the empirical results, while section 6 concludes the findings and outlines research limitations and recommends future research directions.

Literature Review and hypotheses development:

As the existence of cost stickiness becomes more widely accepted, more academics are focusing on its characteristics, contributing variables, and consequences. As a result, the literature review of this paper can be classified into three groups: the first group consists of studies that provide evidence of cost stickiness in the Egyptian context, and the second group presents studies on cost stickiness determinants. Studies that examined the economic consequences of cost stickiness are presented in the third group of literature.

Cost stickiness in Egypt

Several studies were conducted to examine the extent to which sticky cost behavior exists in the Egyptian environment. Ibrahim (2015) examined the asymmetric behavior of three cost items: SG&A costs, cost of goods sold, and operating costs. The results demonstrated that the SG&A costs and cost of goods sold were both sticky, while the operating costs were anti-sticky. The findings revealed that the nature and size of cost stickiness depend on the economic conditions; where, SG&A costs were sticky before the 2008 financial crisis, but anti-sticky after the 2008 financial crisis. In addition, SG&A costs increased more in the financially stable period than in the recession period for a 1% rise in demand. However, they declined to a greater amount in the recession-era following the financial crisis than in the period preceding the financial crisis. On the other hand, the cost of goods sold was sticky pre and after the recession period, but the level of cost stickiness was greater in the stable period than in the recession period.

Ibrahim and Ezzat (2017) aimed to build on previous research by evaluating whether costs in the Egyptian business environment act asymmetrically. The results showed that all of the costs studied, SG&A costs, cost of goods sold, and total costs, have sticky behavior, meaning that they increase more than they drop when demand increases by the same amount. Further, they studied the cost stickiness behavior in Egypt's various sectors. Examining each industry independently provides more information about cost behavior and the factors affecting the extent of stickiness. Based on the findings of Ibrahim and Ezzat (2017), certain industries were identified for their stickiness, and cost stickiness varies by sector. Cost stickiness was not found in all industries. In line with Ibrahim and Ezzat (2017), Ibrahim (2018) and Mandour (2021) found that the cost of goods sold behavior appears to be sticky; it rises more when sales increase than when it falls for equivalent sales decrease.

Additional evidence on asymmetric cost behavior in Egyptian sectors was offered by Wahdan et al. (2021). The findings showed that six of the nine sectors examined had sticky cost behavior. Because of managerial optimism for future sales, as well as the high degree of employee intensity and asset intensity, four industries (Construction and Building Materials, Basic Resources, Real Estate, and Healthcare and Pharmaceuticals) showed cost stickiness. In addition, the industrial goods, services, and automobiles sector and the chemical industry sector showed cost anti-stickiness as a result of management pessimism caused by the continuous decrease in sales during the research period. However, in the food and beverage sector, travel and leisure sector; and personal and household products sector, there is no evidence of sticky cost behavior.

One of the limitations of the studies discussed earlier is that they only focused on the degree of cost stickiness in the Egyptian environment. These studies, however, did not examine the organizational factors that may influence managers' resource allocation decisions as a result of activity level changes. In the Egyptian context, cost stickiness is expected to be influenced by several organizational factors relating to resource adjustment, indicating a gap in the literature on cost stickiness.

Determinants of cost stickiness

The occurrence of cost stickiness can be explained in a variety of ways. Based on analyzing the literature, there are primarily three basic perspectives on the factors of cost stickiness. The first perspective is the adjustment cost perspective, where managers will keep resources, in the long run, despite a temporary drop in sales. When sales increase, the use of preserved resources can decrease costs and enhance profits. In addition, managers who plan to generate future revenues would try to maintain their resources to avoid being deprived of future earnings opportunities. (Anderson et al., 2003 and Yasukata, 2011). As a result, cost stickiness is caused by managers' intentional modification of economic resources invested in business activities. The second perspective is the principal-agent perspective. According to Chen et al. (2012), Cost stickiness may be caused by managers' desire to develop personal power. Managers typically utilize an excessive growth of firm size as a mean of enhancing their interests by acquiring more resources to extend personal interests such as prestige, power, reputation, etc, which is driven by their self-interest motivation. The third

perspective is the optimistic managers' expectations perspective. Based on this viewpoint, The Chief Executive Officer (CEO) and The Chief Financial Officer (CFO)'s optimism will lead to an overestimation of future demand and greater cost stickiness. Therefore, the existing level of cost stickiness affects future sales expectations. (Chen et al., 2021).

Cost stickiness emerges because adjustment costs are considered to be higher for a decrease in sales than for growth in sales. Hence, managers' assessments of adjustment costs have an impact on the level of cost stickiness. Compared to the costs of keeping slack resources, the less the estimated adjustment costs, the less the cost stickiness. This occurs due to reducing allocated resources. In addition, estimated costs of adjustment are not explicit costs reported in the financial statements, but rather implicit costs of output lost (Bugeja et al., 2015).

Accordingly, previous studies have concentrated on variables that may affect future demand and the adjustment costs, and therefore, affect cost stickiness, such as macroeconomic conditions, past changes in demand, and assets' structure. This paper examines in-depth the effect of business strategy, ownership structure, asset intensity, and debt intensity, which represent firm characteristics, on the cost stickiness of the Egyptian manufacturing listed companies.

1. Cost stickiness and business strategy

Porter (1980)'s business strategy typology is widely deployed by businesses and is widely acknowledged as the dominant paradigm in the literature on competitive strategies, particularly business cost leadership and differentiation strategies (Banker et al., 2011). Porter (1996) stated that differentiation strategy involves, among other things, customizing distinct products based on variability in customers' demand and keeping product-specific technology and performance characteristics. When a company's sales decrease, organizations that follow a differentiation strategy face increased levels of adjustment costs rather than reducing their investment, indicating that differentiation strategy-focused companies may have higher cost stickiness than others (Zhong et al., 2020). On the other hand, a cost leadership strategy is generally selected to achieve a competitive edge over competitors by lowering operating costs below those of competitors in the same industry (Porter, 1996). (Zhong et al., 2020) revealed that when sales decrease, cost leadership strategists will lower costs as promptly

as possible to maintain or expand market share. Hence, businesses that pursue a cost leadership strategy incur reduced adjustment costs and have a more flexible cost structure.

In addition, Banker et al. (2013) showed that organizations that pursue a differentiation strategy have more sticky costs on average than firms that pursue a cost leadership strategy. However, to the best of the researcher's knowledge, few studies have examined the effect of business strategy, based on Porter (1980)'s business strategy typology, on the level of cost stickiness. Therefore, the following hypothesis is formulated:

H₁: The degree of cost stickiness of companies implementing a differentiation strategy will be higher than that of companies implementing a cost leadership strategy.

2. Cost stickiness and ownership structure

The impact of ownership structure on cost stickiness has been studied in just a few studies. The impact of government ownership on labor cost stickiness was investigated by Prabowo et al. (2018). Generally, they found that labor costs are sticky, but those state-owned businesses have a higher level of labor cost stickiness than private businesses. Prabowo et al. (2018) revealed that government involvement in internal recruitment decisions via government ownership prevents managers from reducing the number of employees when sales decrease to keep employment rates stable. However, when sales begin to rise, the government can motivate companies to employ additional employees to fulfill the increased demand, hence, lowering rates of unemployment.

Chung et al. (2019) analyzed the impact of institutional ownership on cost stickiness as a mechanism of corporate governance and monitoring. Results indicated that long-term institutional ownership could decrease cost stickiness, compared to government ownership. This is in line with the findings of Prabowo et al. (2018) who found that government ownership leads to more cost stickiness than private enterprises, because of stronger sociopolitical effects on government ownership.

Other studies examined the impact of ownership structure, as a control variable, on the asymmetry cost behavior. Chen et al. (2012), Ibrahim (2018), and Tang et al. (2020) studied institutional ownership's impact on cost stickiness. The lack of empirical studies that inspect the association between ownership structure and cost stickiness, and that address it as a core study subject, detects a new area of study in the cost stickiness literature. Thus, the following hypothesis is developed:

H₂: The degree of cost stickiness in state-owned companies will be higher than that in institutional-owned companies.

3. Cost stickiness and asset intensity

According to Anderson et al. (2003), when a company's operations depend more on its resources and its employees rather than on their purchased goods and services, its adjustment costs would be high. When demand falls, it is very simple to reduce purchased resources, however, disposing of assets is more costly for the company since it must pay selling fees and lose firm-specific investments. In addition, Subramaniam and Watson (2016) revealed that fixed asset intensity increases cost stickiness level, especially R&D costs.

However, Zanella et al. (2015) confirmed that cost stickiness does not correlate with asset intensity in the UAE because UAE has a mostly expatriate labor force that does not have the benefits of Employment Protection Legislation (EPL). This is in line with Xu and Sim (2017) and Stimolo and Porporato (2020) who found that cost stickiness is not affected by asset intensity. In addition, other studies also examined asset intensity, but as a control variable such as Calleja et al. (2006), Chen et al. (2012), and Zhong et al. (2020).

Based on the above discussion, it is clear that the previous studies provide conflicting results concerning the relationship between asset intensity and cost stickiness. Moreover, to the best of the researcher's knowledge, no study has examined the effect of asset intensity on the level of cost stickiness of Egyptian companies. Then, it is recommended to study the impact of asset intensity on cost stickiness in greater depth, utilizing different metrics or proxies, especially in the Egyptian context. Therefore, the following hypothesis is developed:

H₃: The degree of cost stickiness will be higher in companies with high asset intensity than that in companies with low asset intensity.

4. Cost stickiness and debt intensity

Debt load can be considered to be a crucial aspect of businesses. Habib and Costa (2021) argued that external stakeholders, especially lenders, can keep an eye on management to prohibit them from conserving resources against the interests of the company and preventing agency issues when sales decrease, and short-term debts can lessen the level of cost stickiness. This is consistent with Calleja et al. (2006) who found that companies with higher debt levels showed symmetric cost behavior. This is maybe a result of lenders' increased review and pressure against firms to meet their obligations. As a result, managers of these companies may choose to endorse a more flexible cost structure that reacts quickly to changes in demand. In addition, Abu-Serdanah (2014) and Dalla Via and Perego (2014) concluded that companies with high debt levels tend to reduce costs when demand declines, which reduces the degree of cost stickiness or increases the degree of cost anti-stickiness.

In light of the preceding discussion, and to the best of the researcher's knowledge, no study has evaluated the effect of debt intensity on the level of cost stickiness of Egyptian enterprises. Therefore, it is suggested that the relationship between debt intensity and cost stickiness be studied in greater depth, especially in the Egyptian context. As a result, the following hypothesis is formulated:

H₄: The degree of cost stickiness will be higher in companies with low debt intensity than that in companies with high debt intensity.

Consequences of cost stickiness

Financial analysts use the cost behavior in estimating future costs more accurately to forecast future earnings. This means that management should incorporate cost behavior into profit analysis (Weiss, 2010). Several firm indicators, such as the ratio of SG&A costs to sales, could be used to estimate future performance. When this ratio increases, this implies that the company is unable to manage operating costs to face declining sales. This increase in the ratio might also be regarded as enterprises struggling to compete with their competitors. So, firms must devote more resources to implementing sales operations, which would lead to lowering their profitability. Therefore, financial analysts and investors consider the increase in this ratio an indicator of inefficient operations, while its decrease is viewed as a good signal of managerial quality and business competitiveness (Warganegara and Tamara, 2014). This is consistent with Dang (2018) who revealed that a high level of cost stickiness is a

negative indicator of future profitability, implying that an increase in the ratio of SG&A costs to revenues is linked to a decline in the future firm profitability.

However, Anderson et al. (2007) stated that cost ratios are not always indicators of managers' failure to control costs. In certain situations, additional capacity is retained to maximize the firm's value. Keeping unused resources enables managers to effectively manage their organizations and provides favorable indicators about future firm performance.

In light of the above-discussed studies, cost stickiness has two opposing effects on profitability, the positive effect and the negative effect. Furthermore, to the best of the researcher's knowledge, no study on the moderating role of a firm's characteristics on the relationship between cost stickiness and profitability, especially in Egyptian sectors was found. As a result, the following hypotheses about the moderating effect of the four firm's characteristics on the relationship between cost stickiness and company profitability are formulated:

H₅: Business strategy moderates the relationship between cost stickiness and a firm's profitability.

H₆: Ownership structure moderates the relationship between cost stickiness and a firm's profitability.

H₇: Assets intensity moderates the relationship between cost stickiness and a firm's profitability.

H₈: Debt intensity moderates the relationship between cost stickiness and a firm's profitability.

Research Methodology

Data Collection and Sample Selection

The annual financial information of Egyptian manufacturing public companies registered on the Egyptian Stock Exchange makes up the study's data. The Egyptian Company for Information Dissemination (EGID) and the Egyptian Stock Exchange are the sources of all financial information. The sample covers a period of 5 years ranging from 2016 to 2020. In the first phase, 320 observations from 64 firms are gathered in total. Then, the sample is filtered to exclude those firms whose financial data were not available to measure the study's variables. Therefore, the final sample is made up of 259 firm-year observations. This sample size is thought to be sufficient to perform reliable statistical analysis.

In addition, the logarithm of costs at year t divided by costs at year t-1 was used to measure cost stickiness, for this purpose, selected data for the year 2015 are included.

Variables Measurement

Firm Characteristics

Based on previous studies, cost stickiness could vary between firms according to their internal characteristics (Anderson et al., 2003, and Xu & Sim, 2017). This study investigated the following firm characteristics: business strategy, ownership structure, asset intensity, and debt intensity. Consistent with Bentley et al. (2013) and Zhang et al. (2019), business strategy (*BS*) is measured using four proxy measures, the ratio of R&D to sales, the ratio of change in total sales, the ratio of SG&A costs to sales, and the ratio of net Property, Plant, and Equipment to total assets. These four proxy measures are added together to form a strategy score for each firm. Companies with differentiation strategies have higher strategy scores, while cost-leadership strategy firms have lower scores.

The total number of shares held by the State divided by the total number of outstanding shares of a company i during the year t is used to measure State Ownership (*SO*) (Chung et al., 2019). Asset intensity (*AI*) is measured using the ratio of total assets to sales, and debt intensity (*DI*) is measured using the ratio of long-term debts to sales (Anderson et al., 2003).

Cost Stickiness

The Anderson et al. (2003) model is used in this study to measure cost stickiness by calculating the log change of SG&A costs ($SG\&A_{i,t}$) between years t and t-1, as follows:

$$CS_{it} = \log (SG\&A_{i,t} / SG\&A_{i,t-1})$$

where:

CS= Cost Stickiness of firm i in period t

SG&A = Sales, General, and administrative costs of firm i

Profitability

Consistent with Abdel Megeid and El-Deeb (2021), Return on Asset (ROA) and Return on Equity (ROE) are used as proxy measures for a company's profitability. Table 1 summarizes the independent, dependent, and control variables of the study, their proxy measures, and the different sources of data.

Research Models

Two models are developed to examine the study hypotheses that were previously mentioned in section 2. To investigate the direct impact of firm characteristics on cost stickiness, the first model is developed. Firm size and financial leverage are included as control variables in the first model since they may influence this relationship.

$$CS_{it} = \alpha + \beta_1 BS_{it} + \beta_2 SO_{it} + \beta_3 AI_{it} + \beta_4 DI_{it} + \beta_5 SIZE_{it} + \beta_6 Lev_{it} + \varepsilon_{it}$$

.....Model (1)

The second model is developed to investigate the effect of the interaction between cost stickiness and the four firm characteristics on firm profitability, in addition to the control variables, firm size, and financial leverage.

$$PRO_{it} = \alpha + \beta_1 BS_{it} * CS_{it} + \beta_2 SO_{it} * CS_{it} + \beta_3 AI_{it} * CS_{it} + \beta_4 DI_{it} * CS_{it} + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \varepsilon_{it}$$

.....Model (2)

Data Analysis and Results

The STATA statistical software was used to perform the following statistical procedures to assess the data gathered for this study. First, descriptive analysis to calculate the mean, median, range, standard deviation, minimum and maximum values. Second, the linear relationship between the study variables is assessed using Pearson's correlation, which also determines its strength and direction. Third, the research hypotheses were tested using regression modeling.

Table 1: Variables Measurements, Proxies, and Sources

Variables	Name	Proxies Measures	Data Source
Independent Variables	Business Strategy <i>BS</i>	1. <i>R&D / Sales</i> 2. <i>The change in total Sales Ratio</i> 3. <i>SG&A / Sales</i> 4. <i>Net Property, Plant, and Equipment / total assets</i>	Financial Statements
	Ownership Structure <i>SO</i>	<i>The total number of shares held by state divided by the total number of outstanding shares</i>	Annual reports
	Asset intensity <i>AI</i>	<i>Total Assets/ Total Sales</i>	Financial Statements
	Debt intensity <i>DI</i>	<i>Total Long-Term Debts / Sales</i>	Financial Statements
Dependent Variables	Cost Stickiness <i>CS</i>	<u><i>Anderson et al. (2003) Model</i></u> $CS_{it} = \log (SG\&A_{i,t} / SG\&A_{i,t-1})$	Financial Statements
	Profitability <i>y Pro</i>	$ROA = \text{Net Income} / \text{Total Assets}$ $ROE = \text{Net Income} / \text{Total Equity}$	Financial Statements
Control Variable	Firm Size <i>Size</i>	<i>Natural log of firm's Total Assets</i>	Financial Statements
	Financial Leverage <i>Lev</i>	<i>Long-term liabilities/ Total assets</i>	

Descriptive Analysis

The descriptive statistics of this study are presented in Table 2. As shown in Table 2, the business strategy ranges from (-0.68262), cost leadership strategy, and (267.4837), differentiation strategy with mean and median values of (3.4685) and (0.5737) respectively. State ownership, the proxy measure for ownership structure ranges from (0), no state ownership to (1), companies owned by the

state with mean and median values of (0.1597) and (0) respectively. Assets intensity ranges from (0) and (4855.778) with mean and median values of (23.9049) and (1.4567) respectively. Debt intensity ranges from (0) to (375.2778) with mean and median values of (1.8546) and (0.0634) respectively.

Table 2: Descriptive Statistics

	Mean	Median	Standard Deviation	Minimum	Maximum
Business Strategy	3.468543	0.5737476	19.72809	-0.6826217	267.4837
Ownership Structure	0.1596533	0	0.2844473	0	1
Assets Intensity	23.90492	1.456765	298.5575	0	4855.778
Debt Intensity	1.854607	0.0634368	23.11705	0	375.2778
Cost Stickiness	0.0161309	0.0277662	0.3049236	-1.99098	1.904647
Profitability (ROA)	0.0345606	0.0240167	0.128164	-0.5477654	0.6905209
Profitability (ROE)	0.0759298	0.0607327	0.3953746	-2.813677	3.397656
Firm Size	20.15671	20.40033	2.538155	15.55165	25.7112
Financial Leverage	0.0898915	0.0397666	0.1912277	0	2.3332

Cost stickiness ranges from (-1.9909) to (1.9046) with mean and median values of (0.01613) and (0.024) respectively. ROA, a proxy measure for profitability ranges from (-0.5477) and (0.6905) with mean and median values of (0.033456) and (0.02401) respectively. ROE, the other proxy measure for profitability ranges from (-2.8137) and (3.3977) with mean and median values of (0.07593) and (0.06073) respectively.

In addition, the mean and the median values of firm size are (20.1567) and (20.4003) respectively. The firm size of the sample varies between (15.5517) and (25.7112), meaning that the sample firms of the study represent all the Egyptian firms operating in the market. Moreover, according to the mean of financial leverage that appears in table 2, about 9% of Egyptian companies use debts to finance their operations.

Pearson Correlation Test

The Pearson correlation matrix is constructed to identify the strength and direction of the association between independent variables and the dependent variables. Table 3 shows the results of Pearson Correlation with a two-tailed

significance test. Based on the results presented in Table 3, it is apparent that the most correlated variables with cost stickiness (CS) are assets intensity (AI), debt intensity (DI), and business strategy (BS), significant at the 0.01 level. The Pearson coefficients indicate that the relationship between asset intensity and cost stickiness is positive. However, the relationship between debt intensity and business strategy from one side and cost stickiness from the other side is negative. Ownership structure measured through state ownership (SO) has no relation to cost stickiness. However, there is no relationship between cost stickiness and the two proxy measures of a firm's profitability, ROA, and ROE. Further, firm size (SIZE) correlates with business strategy, state ownership, and cost stickiness.

Regression Analysis and Discussion of Results

To evaluate the two research models, multivariate regression analysis is used. The first model investigates the direct relationship between cost stickiness and the four company characteristics of business strategy, ownership structure, assets intensity, and debt intensity. The second model examines how the four firm's characteristics moderate the relationship between cost stickiness and a company's profitability.

Results of the Relation between Firm Characteristics and Cost Stickiness

In the first model, the impact of four company attributes—business strategy, ownership structure, assets intensity, and debt intensity—on cost stickiness is examined. Table 4 provides a summary of the regression analysis findings.

According to the multiple regression analysis of the first research model, the model explains 23.4% of the variation in firm cost stickiness. Table 5's findings show that two firm characteristics—asset intensity and debt intensity—have a significant impact on cost stickiness. Cost stickiness is positively influenced by asset intensity. This is in line with the findings of Anderson et al. (2003) and Subramaniam and Watson (2016) that asset intensity positively affects the stickiness of SG&A costs in manufacturing enterprises. This finding suggests that because fixed assets are difficult to be reduced when demand declines, therefore, increasing fixed assets must increase cost stickiness. Furthermore, managers would not want to quickly cut down these resources since doing so would be costly and time-consuming if demand rose after a period of low demand. Therefore, the third hypothesis which states that “*The degree of cost stickiness will be higher in companies with high asset intensity than that in companies with low asset intensity*” is accepted.

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Table (3): Pearson's Correlation Matrix

		<i>BS</i>	<i>SO</i>	<i>AI</i>	<i>DI</i>	<i>CS</i>	<i>ROA</i>	<i>ROE</i>	<i>SIZE</i>	<i>LEV</i>
<i>BS</i>	Pearson Correlation	1								
	Sig. (2-tailed)									
<i>SO</i>	Pearson Correlation	-0.0723	1							
	Sig. (2-tailed)	0.2466								
<i>AI</i>	Pearson Correlation	0.8244**	-0.0389	1						
	Sig. (2-tailed)	0.000	0.5333							
<i>DI</i>	Pearson Correlation	0.8215**	-0.0217	0.9953**	1					
	Sig. (2-tailed)	0.0000	0.7279	0.0000						
<i>CS</i>	Pearson Correlation	-0.3676**	0.0704	0.4310**	-0.4220**	1				
	Sig. (2-tailed)	0.0000	0.2592	0.0000	0.0000					
<i>ROA</i>	Pearson Correlation	0.0187	0.0382	0.0611	0.0703	0.0123	1			
	Sig. (2-tailed)	0.7640	0.5406	0.3275	0.2599	0.8434				
<i>ROE</i>	Pearson Correlation	0.0028	0.1186	0.0231	0.0214	0.0853	0.4163**	1		
	Sig. (2-tailed)	0.9648	0.0566	0.7113	0.7321	0.1713	0.0000			
<i>SIZE</i>	Pearson Correlation	-0.2212**	0.2515**	-0.1020	-0.0879	0.1694**	0.0821	0.1101	1	
	Sig. (2-tailed)	0.0002	0.0000	0.1015	0.1585	0.0063	0.1880	0.0768		
<i>LEV</i>	Pearson Correlation	-0.0310	-0.0232	-0.0050	0.0491	-0.0965	0.0339	-0.0303	0.0962	1
	Sig. (2-tailed)	0.6191	0.7097	0.9364	0.4314	0.1212	0.5870	0.6273	0.1225	
** Correlation is significant at the 0.01 level (2-tailed).										

Table 4: Multiple regression model of the relationship between firm’s characteristics and cost stickiness

Panel A: Model summary					
Model	R	R²	Adjusted R²	Std. Error	
1	0.4836	0.2339	0.2157	0.092978385	
Panel B: Coefficients ^a					
Independent variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Standard Error	Beta		
Constant	-0.2471676	0.1462138		-1.69	0.092
Business Strategy	-0.0001587	0.0015413	-0.0103858	-0.10	0.918
Ownership Structure	-0.0139714	0.0620838	-0.0131355	0.23	0.822
Assets Intensity	0.002257	0.0007183	2.214063	3.11	0.002
Debt Intensity	-0.0236184	0.0093115	-1.811164	-2.54	0.012
Firm Size	0.0150774	0.007219	0.1238256	2.09	0.038
Financial Leverage	-0.3297483	0.1067243	-0.209045	-3.09	0.002

^a Dependent Variable: Cost Stickiness

According to the multiple regression analysis of the first research model, the model explains 23.4% of the variation in firm cost stickiness. Table 5's findings show that two firm characteristics—asset intensity and debt intensity—have a significant impact on cost stickiness. Cost stickiness is positively influenced by asset intensity. This is in line with the findings of Anderson et al. (2003) and Subramaniam and Watson (2016) that asset intensity positively affects the stickiness of SG&A costs in manufacturing enterprises. This finding suggests that because fixed assets are difficult to be reduced when demand declines, therefore, increasing fixed assets must increase cost stickiness. Furthermore, managers would not want to quickly cut down these resources since doing so would be costly and time-consuming if demand rose after a period of low demand. Therefore, the third hypothesis which states that “*The degree of cost stickiness will be higher in companies with high asset intensity than that in companies with low asset intensity*” is accepted.

In addition, the first regression model results show that debt intensity significantly affects cost stickiness negatively. This is consistent with Calleja et al. (2006), Abu-Serdanah (2014) and Dalla Via and Perego (2014). This reveals that firms with high debts have no cost stickiness. This could be justified due to the pressures exerted by Egyptian creditors and lenders on firms to have a more adjustable cost structure, so they can fulfill their financial obligations when they come due. Hence, the fourth hypothesis which states that “*The degree of cost stickiness will be higher in companies with low debt intensity than that in companies with high debt intensity*” is accepted.

However, the first regression model failed to find a significant impact of business strategy and ownership structure on cost stickiness. Therefore, the first and second hypotheses are rejected.

Results of the Relation between Firm Characteristics, Cost Stickiness, and Firm Profitability

The second regression model examines the impact of the four firm’s characteristics on the relationship between cost stickiness and firm profitability, which is measured using ROA and ROE. This regression model is run twice (Models 2A and 2B) to measure the firm’s profitability using the two proxy measures. The results of the regression analysis are summarized in Table 5.

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Table 5: Multiple regression model of the relationship between Cost Stickiness and Firm Profitability

Panel A: Model summary					
Model	R	R²	Adjusted R²	Std. Error	
2A	0.239374	0.0573	0.0349	0.12652	
Panel B: Coefficients ^a					
Independent variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Standard Error	Beta		
Constant	-0.040	0.065		-0.613	0.541
Cost Stickiness*Business Strategy	0.003	0.003	0.752	0.962	0.337
Cost Stickiness*State Ownership	0.112	0.113	0.062	0.986	0.325
Cost Stickiness*Assets Intensity	0.001	0.000	6.603	3.012	0.003
Cost Stickiness*Debt Intensity	-0.021	0.006	-7.428	-3.247	0.001
Firm Size	0.004	0.003	0.077	1.235	0.218
Financial Leverage	-0.043	0.045	-0.065	-0.961	0.337

^a Dependent Variable: ROA

Panel A: Model summary					
Model	R	R²	Adjusted R²	Std. Error	
2B	0.158	0.025	0.002	0.3986204	
Panel B: Coefficients ^a					
Independent variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Standard Error	Beta		
Constant	-0.263	0.205		-1.283	0.201
Cost Stickiness*Business Strategy	0.002	0.010	0.193	0.243	0.808
Cost Stickiness*State Ownership	0.432	0.357	0.077	1.209	0.228
Cost Stickiness*Assets Intensity	0.001	0.001	1.926	0.864	0.389
Cost Stickiness*Debt Intensity	-0.019	0.020	-2.157	-0.927	0.355
Firm Size	0.017	0.010	0.109	1.723	0.086
Financial Leverage	-0.138	0.142	-0.067	-0.970	0.333

^a Dependent Variable: ROE

Based on the results shown in Table 5, models 2A and 2B are not significant since both models have low R-square values of 0.0573 and 0.025, respectively. In addition, it is clear, from panel B of model 2A in Table 5, that the interaction of asset intensity with cost stickiness positively affects a firm's profitability measured using ROA. Therefore, the seventh hypothesis which states that "*Assets intensity moderates the relationship between cost stickiness and a firm's profitability*" is accepted. Also, the interaction of debt intensity and cost stickiness negatively affects profitability. Therefore, the seventh hypothesis which states that "*Debt intensity moderates the relationship between cost stickiness and a firm's profitability*" is accepted. However, both business strategy and state ownership do not have any impact on the relationship between cost stickiness and a firm's profitability. Hence, the fifth and sixth hypotheses are rejected. According to panel B of model 2B in Table 5, which measure a firm's profitability using ROE, the interaction between the four firm characteristics and cost stickiness does not affect profitability.

Conclusion

The main objective of conducting this study is to empirically investigate the effect of firm characteristics on asymmetric cost behavior. Four firm characteristics were chosen (business strategy, ownership structure, asset intensity, and debt intensity) that may be associated with cost stickiness in the Egyptian listed manufacturing firms, and which may moderate the relationship between cost stickiness and profitability. The study results suggest that the degree of cost stickiness increase with an increase in asset intensity. This is due to the difficulty of reducing fixed assets to face the demand decline. Reducing fixed assets is costly and time-consuming especially when demand increases again after a period of decline.

In addition, the study results reveal that the degree of cost stickiness decreases with an increase in debt intensity. This is due to the pressures exerted by Egyptian creditors and lenders on firms to have a more adjustable cost structure, so they can fulfill their financial obligations when they come due.

Another objective of the current study is to examine the moderating role of the four firm characteristics on the relationship between cost stickiness and firm profitability. To achieve this objective, two proxy measures were used to reflect profitability, ROA, and ROE. The results suggest that cost stickiness interaction with assets intensity improves profitability, which is measured using ROA. Therefore, cost stickiness improves profitability in the existence of asset intensity as a moderator variable. This could be justified due to increasing the portion of fixed costs relative to total costs. In case of a sales drop, the ratio of SG&A costs to sales will increase as fixed costs are difficult to be eliminated. In addition, the operating leverage of a company increases as the fixed part in its cost structures rises. Thus, high operating leverage will then result in greater profitability during the sales rises.

The study results indicate also that the interaction between cost stickiness and debt intensity negatively affects profitability. The moderating effect of debt intensity in the relationship between cost stickiness and ROA reveals that increasing the ratio of cost to sales reflects management's failure to adjust costs to face sales decline. therefore, the financial performance of a company is harmed by the failure to incorporate flexible aspects into the design of their cost structures. In addition, companies must use more resources to carry out their sales operations, which decreases their profitability. Accordingly, an increase in the cost ratio is considered by investors and analysts as an indicator of inefficient operations, while a drop in this ratio is seen as a sign of good management and business competitiveness.

Consequently, managers must be able to control unused capacity and resources to prevent or lessen the impacts of sticky cost behavior. This may include concentrating on marketing to increase demand or allocating unused resources to alternative uses. Additionally, better performance and outcomes will emerge from taking cost stickiness into account throughout the planning and control phases and considering those elements that lead to cost stickiness, which will eventually increase shareholder wealth.

Limitations and Directions for Future Research

The current study has several limitations. First, the study restricts its analysis of the degree of cost stickiness to only four business characteristics, business strategy, ownership structure, asset intensity, and debt intensity. Second, due to the distinctive characteristics of these businesses, banks and financial services companies were excluded from the research sample. Third, due to the availability of information, the research sample is considered small compared to those utilized in developed nations. Fourth, to examine cost stickiness in Egyptian manufacturing enterprises, the current study solely relied on SG&A expenses. Therefore, using Cost of Goods Sold (COGS), future studies may analyze sticky cost behavior. In addition, future studies can examine the effects of sticky cost behavior on earnings quality. Furthermore, the various cost stickiness effects across financial enterprises and banks, non-profit organizations, family businesses, government-affiliated businesses, and international businesses may offer insightful information. Finally, some aspects of corporate governance, such as the audit board, board composition, or board remuneration, might be important areas for further research, particularly in developing countries like Egypt.

References

- Abdel Megeid, N. S., & El-Deeb, M. S. (2021). Board Characteristics Effect on Cost Stickiness Using Earnings Management as a Mediating Variable “Evidence from Egypt”. *Alexandria Journal of Accounting Research*, 5(2), 1-47.
https://aljaxu.journals.ekb.eg/article_186539_bdd04bb19e33aea6387b77fa55f23743.pdf
- Abu-Serdaneh, J. (2014). The asymmetrical behavior of cost: evidence from Jordan. *International Business Research*, 7(8), 113-122. <http://dx.doi.org/10.5539/ibr.v7n8p113>
- Anderson, M. C., Banker, R. D., & Janakiraman, S. N. (2003). Are Selling, General, and Administrative Costs “Sticky”? *Journal of accounting research*, 41(1), 47-63. <https://doi.org/10.1111/1475-679X.00095>
- Anderson, M., Banker, R., Huang, R., & Janakiraman, S. (2007). Cost Behavior and Fundamental Analysis of SG&A Costs. *Journal of Accounting, Auditing, and Finance*, 22(1), 1–28. <https://doi.org/10.1177/0148558X0702200103>.

-
-
- Balakrishnan, R., Labro, E., & Soderstrom, N. S. (2014). Cost Structure and Sticky Costs. *Journal of Management Accounting Research*, 26(2), 91–116. <https://doi.org/10.2308/jmar-50831>.
- Ballas, A., Naoum, V. C., & Vlismas, O. (2022). The effect of strategy on the asymmetric cost behavior of SG&A expenses. *European Accounting Review*, 31(2), 409-447. <https://doi.org/10.1080/09638180.2020.1813601>
- Banker, R. D., Basu, S., Byzalov, D., & Chen, J. Y. (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., Flasher, R., & Zhang, D. (2013). Strategic positioning and asymmetric cost behavior. *Working paper, Temple University*. https://www.researchgate.net/publication/272245971_Strategic_Positioning_and_Asymmetric_Cost_Behavior
- Banker, R., Byzalov, D., Ciftci, M., & Mashruwala, R. (2014). The Moderating Effect of Prior Sales Changes on Asymmetric Cost Behavior. *Journal of Management Accounting Research*, 26(2), 221–242. <https://doi.org/10.2308/jmar-50726>.
- Banker, R.D., Hu, N., Pavlou, P., & Luftman, J.N. (2011). CIO reporting structure, strategic positioning, and firm performance. *Management Information Systems Quarterly*, 35(2), 487–504. <https://doi.org/10.2307/23044053>
- Bentley, K. A., Omer, T. C., & Sharp, N. Y. (2013). Business strategy, financial reporting irregularities, and audit effort. *Contemporary Accounting Research*, 30(2), 780-817. <https://doi.org/10.1111/j.1911-3846.2012.01174.x>
- 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>
- Calleja, K., Steliaros, M., & Thomas, D. C. (2006). A Note on Cost Stickiness: Some International Comparisons. *Management Accounting Research*, 17(2), 127–140. <https://doi.org/10.1016/j.mar.2006.02.001>.
- Chen, C., Gores, T., Nasev, J., & Wu, S. (2021). CFO overconfidence and cost behavior. *Journal of Management Accounting Research*, 33. <https://doi.org/10.2308/JMAR-18-055>

-
-
- Chen, C., Lu, H., & Sougiannis, T. (2012). The agency problem, corporate governance, and the asymmetrical behavior of selling, general, and administrative costs. *Contemporary Accounting Research*, 29(1), 252–282. <https://doi.org/10.1111/j.1911-3846.2011.01094.x>
- Chung, C. Y., Hur, S.-K., & Liu, C. (2019). Institutional Investors and Cost Stickiness: Theory and Evidence. *The North American Journal of Economics and Finance*, 47, 336–350. <https://doi.org/10.1016/j.najef.2018.05.002>.
- Ciftci, M., & Salama, F. M. (2018). Stickiness in Costs and Voluntary Disclosures: Evidence from Management Earnings Forecasts. *Journal of Management Accounting Research*, 30(3), 211–234. <https://doi.org/10.2308/jmar-51966>.
- Ciftci, M., Mashruwala, R., & Weiss, D. (2016). Implications of Cost Behavior for Analysts' Earnings Forecasts. *Journal of Management Accounting Research*, 28 (1), 57–80. <https://doi.org/10.2308/jmar-51073>.
- Dalla Via, N., & Perego, P. (2014). Sticky cost behaviour: evidence from small and medium sized companies. *Accounting & Finance*, 54(3), 753-778. <https://doi.org/10.1111/acfi.12020>
- Dang, T. H. H. (2018). Impacts of cost stickiness on profitability: The case of listed companies in Vietnam. *Journal of International Economics and Management*, (111), 54-63. <https://jiem.ftu.edu.vn/index.php/jiem/article/view/196>
- Dierynck, B., Landsman, W. R., & Renders, A. (2012). Do Managerial Incentives Drive Cost Behavior? Evidence About the Role of the Zero Earnings Benchmark for Labor Cost Behavior in Private Belgian Firms. *The Accounting Review*, 87(4), 1219–1246. <http://www.jstor.org/stable/23246275>.
- Golden, J., Kohlbeck, M. and Rezaee, Z. (2020), "Is Cost Stickiness Associated with Sustainability Factors?", Burney, L.L. (Ed.) *Advances in Management Accounting*, 32, 35-73. <https://doi.org/10.1108/S1474-787120200000032002>
- Habib, A., & Huang, H. J. (2019). Cost Stickiness in the New Zealand Charity Sector. *The International Journal of Accounting*, 54(3), 1950012. <https://doi.org/10.1142/S1094406019500124>.

-
-
- Habib, A., & Costa, M. D. (2021). Debt maturity structure and cost stickiness. *Journal of Corporate Accounting & Finance*, 32(1), 78-89. <https://doi.org/10.1002/jcaf.22479>
- He, J., Tian, X., Yang, H., & Zuo, L. (2020). Asymmetric Cost Behavior and Dividend Policy. *Journal of Accounting Research*, 58(4), 989–1021. <https://doi.org/10.1111/1475-679X.12328>.
- Ibrahim, 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. (2015). Economic growth and cost stickiness: evidence from Egypt. *Journal of Financial Reporting and Accounting*, 13(1), 119-140. <https://doi.org/10.1108/JFRA-06-2014-0052>
- 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>
- Ibrahim, A. E. A., Ali, H. M. H. O., & Aboelkheir, H. N. E. R. (2021). Cost Stickiness: A Systematic Literature Review of 27 Years Of Research and a Future Research Agenda. *Journal of International Accounting, Auditing, and Taxation*, 46, 1-45. <https://doi.org/10.1016/j.intaccaudtax.2021.100439>
- Mandour, M. (2021). Financial Risk and Cost Stickiness: Evidence from Egypt. *International Journal of Accounting and Financial Reporting*, 11(2), 46-65. <https://doi.org/10.5296/ijafr.v11i2.18751>
- Porter M. (1996). What is strategy? *Harvard Business Review* 74(6), 61–80. https://www.uniba.it/it/docenti/somma-ernesto/whatisstrategy_porter_96.pdf
- Prabowo, R., Hooghiemstra, R., & Van Veen-Dirks, P. (2018). State ownership, socio-political factors, and labor cost stickiness. *European Accounting Review*, 27(4), 771–796. <https://doi.org/10.1080/09638180.2017.1329659>.
- Reimer, K. (2019). Cost Stickiness Concept. In: *Asymmetric Cost Behavior. Quantitatives Controlling*. Springer Gabler, Wiesbaden. https://doi.org/10.1007/978-3-658-22822-4_2
- Stimolo, M. I., & Porporato, M. (2020). How different cost behaviour is in emerging economies? Evidence from Argentina. *Journal of Accounting in Emerging Economies*, 10(1), 21-47. <https://doi.org/10.1108/JAEE-05-2018-0050>

-
-
- Subramaniam, C., & Watson, M. W. (2016). Additional evidence on the sticky behavior of costs. In *Advances in Management Accounting*, 26, 275-305. <https://doi.org/10.1108/S1474-787120150000026006>
- Tang, L., Huang, Y., Liu, J., & Wan, X. (2020). Cost Stickiness and Stock Price Crash Risk: Evidence from China. *Emerging Markets Finance and Trade*, 1–26. <https://doi.org/10.1080/1540496X.2020.1787148>.
- Villiers, C., Hay, D., & Zhang, Z. (2014). Audit Fee Stickiness. *Managerial Auditing Journal*, 29(1), 2–26. <https://doi.org/10.1108/MAJ-08-2013-0915>
- Wahdan, M. A., Ahmed, A. K., & Alsayed, M. S. H. (2021). Does Sticky Cost Behavior Affect Earnings Quality? Evidence from Egypt. *International Journal of Accounting and Financial Reporting*, 11(2), 17-29. <https://doi.org/10.5296/ijafr.v11i2.18634>
- Warganegara, D. L., & Tamara, D. (2014). The impacts of cost stickiness on the profitability of Indonesian firms. *International Journal of Economics and Management Engineering*, 8(11), 3621-3624. doi.org/10.5281/zenodo.1337531
- Weiss, D. (2010). Cost behavior and analysts' earnings forecasts. *The Accounting Review*, 85(4), 1441-1471. <https://doi.org/10.2308/accr.2010.85.4.1441>
- Xu, J., & Sim, J. (2017). Are Costs Really Sticky and Biased? Evidence from Manufacturing Listed Companies in China. *Applied Economics*, 49(55), 5601–5613. <https://doi.org/10.1080/00036846.2017.1316823>.
- Xu, S., & Zheng, K. (2018). Tax Avoidance and Asymmetric Cost Behavior. *Journal of Accounting, Auditing, and Finance*, 35(4), 1–25. <https://doi.org/10.1177/0148558X18793757>.
- Yasukata, K. (2011). Are 'Sticky Costs' the Result of Deliberate Decision of Managers? (February 1, 2011). <https://ssrn.com/abstract=1444746>
- Zanella, F., Oyelere, P., & Hossain, S. (2015). Are costs really sticky? Evidence from publicly listed companies in the UAE. *Applied Economics*, 47(60), 6519-6528. <https://doi.org/10.1080/00036846.2015.1080807>
- Zhang, J., Yin, M., Han, J., & Aroskar, R. (2019). Why is Asset-Light Strategy Necessary? An Empirical Analysis Through the Lens of Cost Stickiness. *Tourism Management Perspectives*, 32. <https://doi.org/10.1016/j.tmp.2019.100571>
- Zhong, T., Fangcheng, S., Haiyan, Z., & Jeoung, Y. L. (2020). Business Strategy, State-Owned Equity and Cost Stickiness: Evidence from Chinese Firms. *Sustainability* 12(5), 1-21. <https://doi.org/10.3390/su12051850>

دراسة الدور المعدل لخصائص الشركة المصرية في العلاقة بين درجة لزوجة

التكاليف وربحية الشركة

د. نانسي محمد محمود أحمد

المستخلص

تسعى هذه الدراسة إلى التحقق من تأثير أربعة من خصائص الشركة على درجة لزوجة التكلفة وفحص الدور المعدل لهذه الخصائص في العلاقة بين لزوجة التكلفة وربحية الشركة بالتطبيق على الشركات الصناعية المصرية. وخصائص الشركات الأربع التي تم فحصها في هذه الدراسة هي استراتيجية العمل، هيكل الملكية، كثافة الأصول وكثافة الديون. تم جمع البيانات المالية لهذه الدراسة من التقارير السنوية المنشورة لعينة من ٦٤ شركة تصنيع مصرية مدرجة بالبورصة خلال الفترة (٢٠١٦-٢٠٢٠) بإجمالي ملاحظات ٢٥٩ شركة - سنة. يستند قياس لزوجة التكلفة في هذا البحث إلى نموذج لزوجة التكلفة الذي وضعه أندرسون وآخرون (٢٠٠٣). واستنادًا إلى تحليل الانحدار المتعدد المستخدم لاختبار نموذجي البحث اللذين تم فحصهما في هذه الورقة، تقدم النتائج دليلاً على أن كثافة الأصول تؤثر بشكل إيجابي على درجة لزوجة التكلفة، ومع ذلك، تؤثر كثافة الديون سلباً على لزوجة التكلفة. بالإضافة إلى ذلك، تعمل كثافة الأصول وكثافة الديون على تحسين العلاقة بين لزوجة التكلفة وأداء الشركة.

الكلمات المفتاحية: مصر، درجة لزوجة التكاليف، التكاليف العامة، البيع والإدارة، الربحية، خصائص الشركة.