



**Measuring the impact of management expectations on  
asymmetric cost behavior to increase the information  
content quality of the management accounting system  
(An Applied Study)**

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## **Measuring the impact of management expectations on asymmetric cost behavior to increase the information content quality of the management accounting system (An Applied Study)**

### **Abstract:**

**This study aimed:** to test the impact of the managerial expectations on asymmetric cost behavior in the context of resource adjustment costs and unused resource constraints in the business environment of Egypt.

To achieve these objectives this study relied on the analysis of the Forward financial reports of Egyptian companies registered at Egypt Stock market (33 company) during the period 2015- 2018.

**To develop 3 models to measure this effect:** the first, to measure the impact of the managerial expectations on asymmetric cost behavior (**first hypothesis**), and the second: to measure the impact the managerial expectations with high level of unused resource on asymmetric cost behavior (**the second hypothesis**) and the third: to measure the impact the managerial expectations with high level of unused resource and adjustment costs on asymmetric cost behavior (**the third hypothesis**) .

**The study found:** Our results show that the impact of managerial expectations on cost asymmetry is the strongest when adjustment costs and unused resources are high. Conversely, when both are low, expectations have low impact on the degree of cost asymmetry, and the impact of managerial expectations on a asymmetric cost behavior is medium at a low degree of unused resources, a high magnitude of adjustment costs, and optimistic managerial expectations.

Depending on the previous result this study recommended, study the additional economic determinants when assessing the impact of managerial expectations on cost behavior

**Keywords:** Cost asymmetry ( Cost stickiness - Cost anti-stickiness) , Forward-looking statements . Managerial expectations . Unused resources .Adjustment costs

## ملخص البحث

**استهدفت الدراسة :** قياس تأثير التوقعات الإدارية في ضوء - درجة استغلال الموارد المتاحة وتكاليف التعديل - علي درجة السلوك غير المتماثل للتكلفة في بيئة الأعمال المصرية ، بهدف زيادة جودة المحتوي المعلوماتي لمخرجات المحاسبة الإدارية .

**لتحقيق هذا الهدف :** اعتمدت الدراسة علي تحليل التقارير المالية المستقبلية للشركات الصناعية المسجلة ببورصة الأوراق المالية بمصر ، حيث بلغ عدد شركات العينة التي تم التطبيق عليها ( 33 شركة ) خلال الفترة من 2015 – 2018 م ، وقد تم بناء ثلاث نماذج لقياس هذا التأثير : أولهما لقياس تأثير التوقعات الإدارية المستقبلية علي درجة السلوك غير المتماثل للتكلفة البيعية والعمومية والأدائية SG&A ( الفرض الأول ) ، وثانيهما : لقياس اثر التوقعات الإدارية المستقبلية في ضوء درجة الموارد غير المستغلة علي السلوك غير المتماثل للتكلفة البيعية والعمومية والأدائية SG&A ( الفرض الثاني ) ، وثالثهما : لقياس اثر التوقعات الإدارية المستقبلية في ضوء درجة الموارد غير المستغلة وتكاليف التعديل علي السلوك غير المتماثل للتكلفة البيعية والعمومية والأدائية SG&A ( الفرض الثالث ) .

**وقد توصلت الدراسة الي :** ضرورة أدراك المديرين لسلوك التكاليف غير المتماثلة للتكلفة لتحسين جودة محتوي ومخرجات المحاسبة الإدارية ، كما توصلت الدراسة الي أن التوقعات الإدارية المستقبلية المتفائلة يكون لها أثر قوي في ظل درجة عالية من الموارد غير المستغلة ودرجة عالية من تكاليف التعديل علي درجة السلوك غير المتماثل للتكلفة البيعية والعمومية والإدائية ، أما في حالة انخفاض الموارد غير المستغلة وتكاليف التعديل يكون تأثيرها ضعيف الي متوسط خاصة في ظل النظرة المتشائمة لتوقعات الإدارة علي درجة السلوك غير المتماثل للتكلفة البيعية والعمومية والإدائية .

**اعتمادا علي ذلك :** أوصت الدراسة بضرورة دراسة كافة العوامل التي تؤثر علي درجة السلوك غير المتماثل للتكلفة وفي بيئات اقتصادية مختلفة ، لأهمية ذلك في زيادة جودة المحتوي المعلوماتي لمخرجات نظام المحاسبة الإدارية .

**الكلمات الافتتاحية :** التوقعات الإدارية – السلوك غير المتماثل للتكلفة – التقارير المالية المستقبلية – درجة الموارد غير المستغلة - تكاليف التعديل – التكلفة البيعية والعمومية والإدائية.

## **The first Section: the general framework of the research**

### **1/1 Research Introduction:**

Management accounting plays an important and distinct role in preparing and presenting relevant accounting information to management at the appropriate time, so it is considered one of the most important tools for providing the required information for managers to make rational decisions.

Costs are always a major factor in making decisions, so their behavior must be understood to obtain relevant information so that it is available to the decision maker at the appropriate time, which increases the degree of understanding of alternatives and reduces the degree of uncertainty and thus reaches correct and rational decisions and evaluates performance better, and therefore the correct understanding of the behavior of costs has a great importance in management accounting because it is the essence of the process of making administrative and investment decisions, and there are many administrative decisions in the company that depend on costs in light of the traditional model of cost behavior analysis, which assumes that the total variable costs change in a linear and proportional manner with the change in the volume of activity regardless of the direction of this change, increase or decrease, compared to the level of activity, which means that the cost behavior is symmetric in relation to the increase or decrease in the volume of activity. However, at the end of the last century and the beginning of this century, some studies indicated the invalidity of the traditional model about the linearity of the relationship between some elements of costs and volume of activity ([Noreen and staterstron, 1994 - Anderson et.al, 2003](#)). There are some elements of costs whose change in increase or decrease is asymmetrical with the change in the volume of activity, that is, they are characterized by a random reaction to changes in the volume of activity and are known as (asymmetric or sticky costs ), which are called sticky costs if the size of the increase in costs associated with increased demand for output is greater than the size of the decrease in costs associated with a symmetric decrease in the volume of activity ([Anderson et al., 2003](#)). In other words, the phenomenon of sticky costs occurs when Costs increase at a greater rate than the rate of increase in sales revenue, or costs decrease at a smaller rate when sales revenue decreases.

Moreover, when a company faces excess capacity, the opposite phenomenon known as anti-sticky cost behavior may occur. In this case, the response of costs to a decrease in the level of activity is greater than in case of increased activity ([Banker et al., 2014](#)).

Therefore, the asymmetric behavior of the cost may affect the information content of the outputs of the management accounting system through its impact on the accuracy of estimates of cost items that are used to rationalize, make decisions, and evaluate performance, as the management accounting system relies primarily on the cost accounting system in carrying out its main tasks that are planning, organizing, directing, controlling, rationalizing, making decisions and evaluating performance.

Estimating costs for preparing budgets without taking into account the asymmetric behavior of costs leads to a reduction in the response of costs to an increase in activity or a decrease in their response to a decrease in activity, and thus an irrationality in decision making and performance evaluation process, so awareness of asymmetric cost behavior contributes to reducing the Information gap for the outputs of the

management accounting system and therefore reaching rational decisions and the accuracy of performance evaluation (Mahdavinia and Zolfaghori, 2017).

## 1/2 Research Problem:

Studies of the impact of asymmetric cost behavior on cost utilization in Cost accounting system and management accounting system have not given adequate attention from the accounting thought, due to the focus of studies on the concept of cost behavior, its features and The fundamental difference between the constants of accounting thought and this concept, which made the reflection of The asymmetric behavior of the cost on the tools and outputs of the management accounting system the focus of contemporary accounting thought (Pichetkun and Panmanee, 2012).

In the past few years, beginning in 2010, studies have varied that have dealt with the reasons for the occurrence of asymmetric costs, their types, and their impact on the accuracy of accounting information and on the expectations of financial analysts, as forecasting cost behavior is an essential part of Earnings Forecasting (Weiss, 2010).

A study by Cohen et al. (2017) showed that companies with high employee density (the ratio of the number of employees to sales revenues) and high asset density (the ratio of total assets to sales revenues) face higher adjustment costs, and this happens because they rely more on Their own resources to support a certain sales volume are greater than relying on acquired external materials and services, and thus there is excess capacity with a regression in sales for two consecutive years, and the difficulty of reducing these costs with a decrease in sales volume leads to sticky costs. Also, the study (Ciftic and Salama, 2016) indicated that the tendency of managers to make decisions that maximize their personal interests at the expense of the company's interests (agency problems) leads to the occurrence of asymmetric cost behavior, and the study (Cohen et al., 2017) added that the desire of managers to form an economic empire (Empire building) Which is based on increasing the size of the company beyond its optimal size and preserving unused resources with the aim of increasing the personal benefits of managers. This leads to an increase in selling and administrative costs very quickly when sales rise, and they decrease very slowly when sales decrease. This leads to stickiness in selling, general and administrative costs. And therefore cost stickiness in general, and therefore the agency problem is considered one of the most important problems causing cost stickiness, as managers can intervene to make decisions that limit or preserve unused resources. They can also choose the decision to reduce the company's development costs and achieve profit goals or maintain Unused costs for their personal interests, which increases the degree of cost stickiness (Chen et al., 2017- Zhang, 2016). Hence, the correct understanding of cost behavior resulting from agency problem may lead to improving the company's administrative decisions.

Recently, studies in developed countries, especially after 2016, have tended to shift attention from studying the behavior of the phenomenon itself (sticky cost) and its causes to studying the relationship of sticky cost behavior to other variables and factors that affect the behavior of costs and affected by it.

The study (Reimer k., 2019) indicated the impact of profit forecasts on the symmetric behavior of costs, in addition to the decisions that management can take regarding modifying unused resources that may affect the asymmetric behavior of cost. The study also addressed the link between the organizational

mechanism and asymmetric behavior of cost. As the study (Jason V., et al., 2017) showed that the asymmetric behavior of cost does not only affect profits but also affects stock prices. The study (Mojdehi, 2017) also addressed the impact of corporate governance and earnings management on Asymmetric behavior of costs. The results of this study indicated that earnings management has a strong impact on earnings costs. The effects of corporate governance were investigated within the framework of two components: ownership concentration and institutional ownership. It was found that corporate governance leads to reducing stickiness of costs, while earnings management increases stickiness of costs, but by using the two variables together (governance and profit management) it was found that they have a positive effect on reducing the stickiness of costs, as the study (Azeez, et al., 2018) indicated the impact of administrative decisions on the stickiness of costs in the light of The restrictions of the use of unused resources.

By following previous studies, all of which were conducted in developed countries, and which were related to the influence and impact of several elements on asymmetric cost behavior, it is found that there is an extreme scarcity in Arab studies in general and in Egypt in particular regarding this topic, and hence The importance of this study emerged because it addressed an important aspect that had not been dealt with before in the Arab environment, especially in Egypt – according to the researcher’s knowledge up to the date of preparing this research, which is related to measuring the impact of management expectations on asymmetric cost behavior in light of the restrictions on the degree of exploitation of available resources and the costs of adjustment (adaptation). Thus, this study contributes to enriching the Arab library by addressing a topic that is considered one of the topics raised on the international scene now, and the scientific debate about this topic is still continuing until the writing of this research.

### **From the above, the main question of this study is:**

Do future management expectations affect the asymmetric costs behavior in Egyptian companies, and what is the impact of this on the quality of information provided by the management accounting system?

This is done through the following sub-questions:

- Do management expectations affect asymmetric cost behavior in industrial companies?
- Does the degree of exploitation of economic resources available to management affect asymmetric cost behavior?
- Do the costs of adjusting resources (adaptation costs) incurred by the company in the event of a decrease in the volume of activity affect the asymmetric cost behavior
- What are the implications of the asymmetric cost behavior on the quality of the information provided by The Management accounting system?

### **1/3 Research Objective:**

The research aims mainly to study the random behavior of asymmetric costs and measure the impact of management expectations on the behavior of asymmetric costs with the aim of increasing the Quality of Information provided by management accounting. Accordingly, the impact of management

expectations, the degree of exploitation of available resources, and the costs of modification (adaptation) on the asymmetry degree of Costs will be clarified. And this is achieved by achieving the following sub-objectives:

- Studying and analyzing the behavior of asymmetric costs.
- Identifying the impact of management expectations on the behavior of asymmetric costs.
- Highlighting how to improve the information quality of the accounting Management system by using asymmetric cost behavior.

#### **1/4 Research Importance:**

The current study is considered one of the pioneering studies examining the impact of management expectations Through the Disclosure of future information to management on the asymmetric cost behavior with the aim of Rationalizing the process of making decisions and evaluating performance. Based on this, this study is considered one of The first studies applied to the Egyptian environment that attempt to link financial accounting By disclosing the future expectations of management and cost accounting By studying its impact on the asymmetric behavior of costs and its impact on outputs of Management accounting system

#### **1/5 Research methodology:**

The research relies on both the inductive approach and the deductive approach as follows:

-**The inductive approach** is through extrapolating previous research and studies in Research area regarding the impact of management expectations on asymmetric cost behavior.

-**The deductive approach** is through the use of statistical methods in the field of research to measure the impact of future management expectations on asymmetric cost behavior in light of the degree of exploitation of available resources and the cost of adaptation.

#### **1/6 Research plan:**

The study will be divided into the following sections:

**The first section:** The general framework of the research

**The second section:** Analyzing the previous studies

**The third section:** studying and analyzing the asymmetric cost behavior and its impact on the Quality of management accounting outputs

**The fourth section:** Measuring the impact of management's expectations and associated factors on the Asymmetric costs behavior

**The fifth section:** Applied study

## **The sixth Section: Results and recommendations**

### **The second section: Analyzing the previous studies**

There are a number of studies conducted to explain the phenomenon of asymmetric cost behavior, one of the first of these studies was a study (Anderson, Banker and Jankiraman, 2003), where the so-called sticky (asymmetric) costs appeared, which applied the (ABJ) model, which are the first letters of Their names, and some studies have also addressed the different types of asymmetric costs Such as selling, general and administrative costs, cost of goods sold and research and Development costs, advertising costs, etc., and they also studied different levels, whether they were Within the industry, the same facility, or the same sector, based on Time series analysis, and there is another group of studies concerned with studying the relationship Between Asymmetric (sticky) costs and other factors through being affected by or influencing these factors.

### **The following is a review of the most important studies:**

#### **2/1: study (Shipeng Han et al., 2019)**

This study indicated that changing resources in response to changing sales can create asymmetric costs, and management incentives can affect the movement of stock prices through the impact of management's profit forecasts on asymmetric cost behavior.

This study believed that management's strategic choices, in addition to management's expectations of future performance (optimistic - pessimistic), lead to cost asymmetry, and this leads to information asymmetry between management and investors. Therefore, management tends to issue management earnings forecasts (Management Earning Forecasts) to mitigate Information asymmetry, and the study attempted to build a bridge between managerial accounting and financial accounting by providing evidence that management incentives and expectation of future performance affect cost behavior

#### **2/2: study (Yiru Yang, 2019)**

This study referred to measuring the effect of accrual-based earnings management and intellectual capital efficiency (IC) on cost behavior, by analyzing the cost behavior of some Australian companies during the period from 1990 - 2016, and the study concluded that asymmetric cost behavior can occur when Companies have a limited ability to manage profits on an accrual basis, and the efficiency of the IC, especially the efficiency of human capital, increases the degree of cost stickiness. The study also concluded that the asymmetric behavior of the cost increased after the application of international financial reporting standards (IFRS).

This study offered important applications for investors because they can take the effects of earnings management and intellectual capital efficiency as determinants of asymmetric cost behavior.



### **2/3: study (Zhang and Yu Lin, 2109)**

The purpose of this study was to examine the existence of a relationship between the operational stickiness of costs and the company's continuity (or survival). The study used a sample of 2000 companies in China, where the survival analysis method was used through studding The relationship between the operational stickiness of costs and the probability of company continuity (probability of survival )

The study concluded that there is operational stickiness, such as inventory stickiness, property and equipment stickiness (PPE), and labor stickiness. The study found that the relationship between operational stickiness and the probability of survival (continuity) is in the form of the letter (U), that is, an inverted relationship, as the company can improve the possibility of a company surviving by maintaining inventory and equipment and property in a moderate way.

### **2/4: study (Lisa Silge and Art W., 2019)**

This study indicated the extent to which asymmetric cost behavior is affected by the company's growth expectations at the long term, using a sample of American companies over a period of time from 1990 to 2014. The study concluded that there is greater cost stickiness when the company has high growth expectations at the long term. The study also concluded that expectations of growth rates differ between companies (high or low) at the long term. Long-term impact affects investors' decisions, as investors react more negatively to sticky cost behavior when the company has long-term growth opportunities, and agency motives lead to more sticky cost behavior.

### **2/5: study (Alini da Silva, et al., 2019)**

This study aimed to analyze the relationship between cost asymmetric behavior and earnings management practices in Brazilian companies The sample included 170 companies during the time period from 2008 to 2017, This study found that these companies' accounting profits are influenced by asymmetric cost behavior and earnings management and the study found that asymmetric cost behavior influences earnings management behavior, where cost asymmetry is an overlapping variable (moderator) affects earnings management, profit management and sticky cost (as independent variables) affect the quality of profits (as a dependent variable).

### **2/6: study (Ibrahim and Ezat, 2017)**

This study aimed to provide further evidence of asymmetric cost behavior (cost stickiness) from an emerging economics such as Egypt. The study also provided empirical evidence of the potential impact of corporate governance on the nature and extent of asymmetric cost behavior. The analysis provided evidence of the asymmetric behavior of the cost of goods sold Cost of Goods Gold (COGS), where the analysis found that the cost of goods sold COGS increased by 1.05% but decreased by 0.85% for equal change of activity by 1% contradicting the traditional cost model which assumes the costs act in a linear manner. In addition, the analysis found that the company's study year, the Roll duality and the high

proportion of non-executives show more cost asymmetry than other companies, while the company's years of falling successive sales, increased economic growth and institutional ownership show lower sticky costs.

### **2/7: Study (Bosch et al., 2017)**

This study aimed to analyze the sticky costs under current profitability and increase sales in the future. When activity falls, companies tend to preserve profitability and adjust resources, while long-term results and preserving surplus resources must be taken into account, which allows building the company's capacities to adapt to external challenges and take advantage of future opportunities. The study found empirical evidence that changes in the company's current profitability and next year's sales significantly increase the impact of resource adjustment in periods of reduced sales. The study also found a moderate impact of changes in profitability as well as an important impact of increased sales in one year on cost stickiness.

### **2/8: Study (Zhang, 2016)**

This study aimed to study the relationship between the Agency's problems and the phenomenon of sticky costs and to assess the impact of competition on this relationship. The results showed that SG&A was a sticky cost and that there was a positive relationship between the Agency's problems and SG&A. In addition, as a complement to corporate governance, reduced competition intensity enhances the impact of agency problems on the stickiness of SG&A costs. However, high competition intensity does not weaken the impact of the Agency's problems on the stickiness of SG&A costs. These results indicated that competition intensity has an external and indirect impact on the Agency's problems and that corporate governance remains important when competition intensity is high.

### **2/12: Study (Wargangara and Tamara, 2014)**

This study aimed to verify the existence of sticky cost behavior of companies listed on the Indonesian Stock Exchange IDX and find evidence of the effects of sticky operating expenses (SG&A sales, general and administrative expenses) on corporate profitability, as this study found that sticky cost behavior exists, and also found that the higher the stickiness of operating expenses the lower the corporate profitability in the future. This study concluded that sticky cost has a negative impact on performance, and therefore companies must be flexible in designing their companies' cost structure.

### **2/13: Study (Anderson et al., 2003)**

This study cannot be overlooked - although it is not up to date - It is one of the first studies to study sticky cost behavior. This study aimed at finding out whether the costs are sticky, i.e. whether the costs rise more when the activity rises than when the activity decreases by a similar amount. The study also aimed to propose a model for this type of cost known as a model (ABJ) This model is therefore the primary and fundamental attempt to measure the degree of cost asymmetry that has been followed by many subsequent models, i.e., it is an alternative model of cost behavior through

which the company's resource managers can deliberately adjust resources in response to changes in the volume of activity. (ABJ) in measuring the stickiness of the cost on the natural logarithm of the rate of change in the cost of sale, general and administrative (SG&A) relative to the change in sales revenue, the results showed that SG&A's sales, general and administrative costs on average increase by 0.55% per sales increase by 1% but only decrease by 0.35% per sales regression by 1%. The analysis also compared the traditional model of cost behavior where costs move proportionately to changes in activity with the alternative model in which sticky costs occur because managers deliberately adjust the specific resources of activities. The results also showed the characteristics of sticky costs and how the degree of stickiness of SG&A's sales, general and administrative costs varies depending on the company's circumstances.

### **Comment on previous studies:**

After reviewing previous studies, the researcher shows that:

- Most studies have been conducted in developed countries, and few have been conducted in the Arab world in general and in Egypt in particular.

- Most of these studies examined the phenomenon of asymmetric costs and their causes for developed countries but did not address their relationship with other factors affecting them such as management expectations, profit management and tax avoidance, as well as factors influenced by asymmetric cost behavior such as accuracy of financial analysts' expectations.

- Most previous studies did not address the impact of asymmetric cost behavior on the accuracy and quality of the information content of management accounting outputs.

- None of the previous studies have addressed the impact of the Department's future expectations (optimistic-pessimistic) on asymmetric cost behavior in light of the degree to which available resources and adjustment costs are exploited, which has given our study particular importance.

Therefore, the present study will complement the literature and previous studies through this research, which aims to verify the impact of managerial expectations and associated factors on cost asymmetric behavior and to analyze various factors affecting cost stickiness that have not previously been considered in a single study such as: The impact of management's expectations - the degree of utilization of available resources - the intensity of assets - the intensity of staff and the impact of employment protection legislation on asymmetric conduct and in the light of a range of governing factors such as: Industry type, company size, growth degree, leverage.

### **The third section: studying and analyzing the asymmetric cost behavior and its impact on the Quality of management accounting outputs**

Managers need to know and understand the behavior of costs to make appropriate decisions regarding planning, controlling and performance appraisal, as a proper understanding of the conduct of cost elements is of great importance in management accounting because it is at the core of management, investment and other decisions.

The study (Anderson et al., 2003) study was one of the first to deal with cost behavior. and clarified that the relationship of changing cost elements' behavior with changing activity size is not necessarily linear, Where some elements of costs have an asymmetric behavior as the size of the activity changes and clearly presented the concept of "sticky" cost behavior as asymmetric costs, Cost behavior was examined using sales, general and administrative costs (SG&A) and sales revenues from 7,629 enterprises over a 20-year period, and this type of cost was found to be sticky, and this study was considered the opening of many subsequent research and studies.

Asymmetric Cost behavior is a complex phenomenon in most cases, that is,

the relationship between costs and levels of activity is not linear and proportionate, but varies in how much it changes depending on the direction of change in the level of activity, whether this change is upward or downward, and the behavior of many types of costs is sticky; That is, they rise in the event of a rise or increase in sales, and decrease by a lower proportion in the event of a regression in sales, Hence, the Department takes into account the costs of retaining resources, especially human resources. and comparing those costs with the costs of dismissal of excess and unused labor, New labor operating and training costs, capital equipment operating costs and rehabilitation costs in the period when sales and activity begin to recover until production reaches the pre-regression level If the resources work in the company and have not been disposed of (Barak, 2017)

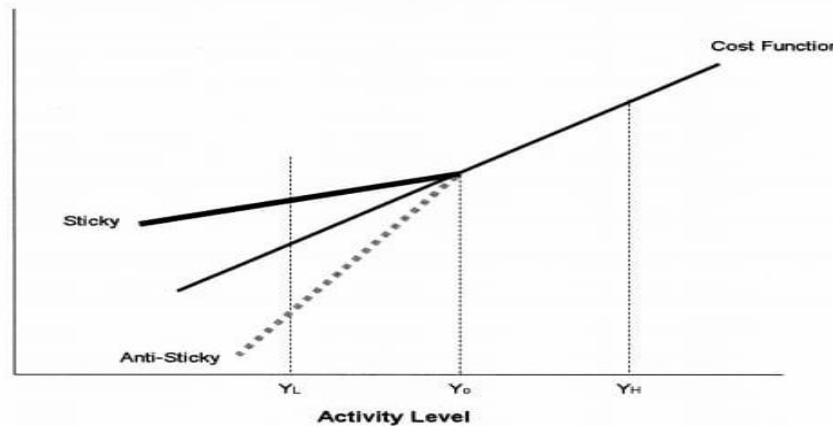
(Weiss, 2010) defined The asymmetric cost as the cost of tracking random behavior to change the size of the activity, that is, it increases as the volume of activity increases more than it decreases at the activity's equivalent regression, when managers have assurance that the regression in activity is ongoing rather than temporary, and that the cost of retaining unused resources is greater than the cost of adjustment Cost (current dispensing and future recovery of the supplier), as they tend more to dispose of unused resources, while with increased activity they prefer to increase the current energy utilization rate before considering increasing it, making the cost increase rate lower than its reduction rate. Most studies have used the term Sticky Cost Behavior (S. C. B) to express the asymmetric behavior of the cost, whether sticky Cost or Anti -Sticky Cost.

asymmetric Cost behavior (stickiness) is associated not only with sales/activity in the coming period compared to the current period but also with activity in the current period compared to the previous period (Abdel-hameed, A., 2015); Costs change at a greater rate with similar changes in the direction of activity for consecutive periods than when the direction of activity varies from period to period; As the activity increases in both the current and the upcoming period, the increase in costs is greater than at the time of the activity's regression in the current period and is followed by an increase in the next period as well as when activity decreases in both the current and the next period, as costs fall further from whether the increase in activity in the current period is followed by a decrease in the next period because managers often interpret this regression as temporary, This requires inheritance in the decision to dispense with resources, resulting in disproportionate

cost behavior ( Ibrahim et al., 2017).

(Weiss, 2010) also attempted to explain this asymmetric cost behavior by examining the relationship between cost and managers' decisions regarding change in the direction of activity under the level of full and incomplete utilization of energy through the following format.

**Figure 1 Relationship between cost and managers' decisions in light of energy utilization level**



Where;

$Y_0$  is Current level of activity and energy utilization

$Y_h$  is the Higher level of activity

$Y_L$  is the Lower level of activity

Assuming a high level of energy utilization at the current level of activity ( $Y_0$ ) and there is an expectation of a regression in the level of activity, managers are reluctant to immediately reduce the cost because of uncertainty about the continuity of this decrease, which limits the rate of cost reduction. While the expectation of an increase in the level of activity (under high energy exploitation) Managers' decisions may overtake the exploitation of available resources to increase energy and in return the cost of resources at a remarkable rate which indicates that the cost response to reduce the level of activity is less than its response to a similar increase in the volume of activity and makes it characterized by asymmetric behavior that is more affected by the increase in activity and is called sticky Cost expressed in bold black in the previous format, Contrary to the above, assuming that the same plant has stagnant power at the current activity level, Managers expect to increase the level of activity. They tend to exploit stagnant energy to accommodate the increase in activity before considering adding new resources, which means limited cost increases, especially fixed ones. while managers' expectations of lower activity levels and successive periods drive them to reduce stagnant energy and thus lower cost, This means that the cost response to reduced activity volume is greater than its response to increased activity volume cost elements (Anti-sticky cost) expressed in intermittent form.

According to many previous studies, some types of costs conduct as sticky cost behavior such as overheads, general and administrative sales costs, cost of goods sold, R&D costs, and operational costs of various kinds, as these elements conduct disproportionately with the change in the size of the cost of the activity.

There are several financial and non-financial internal and external determinants affecting the degree of asymmetric cost behavior, the most important of which are:

### **1-Strength or weakness of the internal control system**

The cost stickiness of companies with weak internal control systems is higher than those with strong ones. A weak internal control system leads to inaccurate financial reporting and low-quality information, This limits managers' ability to expect the future and may delay management's decision to reduce stagnant resources when demand is expected to fall because there is no information on the continuity of the regression and this leads to increasing the degree of the cost stickiness (Kim et al., 2014).

### **2-Strength or weakness of corporate governance mechanisms**

The relationship between the Agency's problems and cost asymmetry is becoming clearer under weak governance mechanisms, as strong governance mechanisms limit managers' over-cost when demand increases and help them eliminate stagnant energy or resources when demand falls, resulting in a lower degree of cost asymmetry (Chen et al., 2012).

### **3- Nature of the enterprise's work**

The degree of cost asymmetry varies between industrial and commercial or service enterprises business ", increasing the degree of cost asymmetry in industrial enterprises owing to the intensity of assets, labor intensity, and inventory, followed by businesses and then services where they are at a lower level than the cost asymmetry of reduced asset intensity and dependence on temporary employment Reimer K. (2019).

### **4. Size of the facility**

The degree of cost asymmetry is affected by the size of the facility, where there is a correlation between cost asymmetry and the increase in the size of the facility, Large enterprises are relatively inflexible when increasing demand and product diversity without a clear increase in cost, especially indirect and has difficulty reducing its resources when demand falls because of the high asset and labor intensity, which increases the degree of cost asymmetry, While SMEs have sufficient flexibility to adapt to fluctuations in volume and type of demand without affecting cost increases (Bosch & Balndeer, 2011).

### **5. Economic environment**

A study (Bozanic, Z.,2018) indicated that the degree of cost asymmetry in financial institutions varies from one environment to another depending on the degree of economic stability. banks operating in an unstable economic environment have a low growth rate and exhibit near-identical behavior of cost

elements as demand increases or decreases, While the degree of cost asymmetry increases in banks operating in a stable economic environment with a high economic rate, in another comparison a study indicated (Banker et al., 2013) To the degree of cost asymmetry in American enterprises differed from Brazilian enterprises, where social problems of unemployment, poverty and unavailability of skilled labor in Brazil restricted managers, made the cost of adjustment or adjustment (dispensing and then recovering) higher than the cost of retaining resources during the period of lower cost of activity And there are other reasons other than economic stability that lead to a different degree of cost asymmetry among States, Labor regulation laws affect the degree of cost asymmetry labor laws to protect the employment they have, and this leads to the decision to keep at the expense of the adjustment decision.

## 6. Administrative decisions

Management decisions as a key driver of asymmetric cost behavior cannot be avoided as a result of an ongoing interaction between an enterprise's potential and expected demand fluctuations, as one researcher sees (Abdel-hameed, A. A., 2015) That the continuation of customary costing systems and tools only correlates the behavior of cost elements with changes in the size of the activity without taking into account the effect of asymmetry on the estimation process, may result in overreaction or diminution of cost lines' response to an increase or decrease in the size of the activity.

## 7. Other causes

There are other causes affecting cost asymmetric behavior that should not be overlooked, such as the degree of use of technology, Different technological choices lead to different adaptation costs when the activity level changes and thus lead to different degrees of cost stickiness and market competition affects the degree of cost behavior , Lower volume of activity as a result of increased competitor's market share may lead managers to take decisions to increase cost (such as cost of sale and distribution) rather than reduced to restore market share and this increases the stickiness of cost despite reduced demand as a result of competition (Homburg, C., A. et al., 2018).

Concerning the understanding of asymmetric cost behavior with managerial accounting outputs, managers need to understand cost behavior to make appropriate decisions about the cost of products, planning and control, and evaluating performance, because a proper understanding of cost behavior is of great importance in management accounting, which is at the heart of management and investment decision-making and other decisions made by the company's direct and indirect stakeholders. There are a lot of internal management decisions in the company that depend on the costs in the process of making decisions such as decisions of new products and decisions the size of activity and setting prices, routine and daily decisions, which mainly affect the continuation and growth of the company, This is because understanding and using asymmetric cost behavior will reflect these management decisions positively s growth, sustainability and competitiveness (Shanon, Lanen & Maher, 2011)

The researcher concludes from the foregoing that the customary cost estimation systems and tools continue to link cost component behavior with changes in the size of the activity without taking into account the degree of cost asymmetry over the estimation process and without taking into account asymmetric cost determinants and cause overstatement or underrepresentation of cost items to increase

or decrease the volume of activity resulting in distortions in the values resulting from the preparation of budgets and performance appraisal, Consequently, the quality of MAS outputs is reduced in its overall sense.

### **The fourth section: Measuring the impact of management's expectations and associated factors on the Asymmetric costs behavior**

Resource allocation decisions are influenced by management's expectations for future demand. These expectations-based decisions have implications for both current and future resource control costs, such as end-of-service payments, disposal costs of existing equipment, training costs, and installation costs of new equipment (Hamm S. J., et al., 2018).

We will therefore address in this examination the impact of management's expectations on cost asymmetries and essentially the tension between resource adjustment decisions based on expectations and the constraints imposed on such decisions through the availability of unused resources and the cost of resource control, Where these factors will be studied, the relationship between them and the degree of cost asymmetry, In addition, the Department's ability to make resource adjustments in the light of future expectations is constrained by both resource adjustment costs and the degree of resources not utilized during the current period.

Examining the relationship between management expectations and associated factors and the degree of cost asymmetry is important because it enhances our understanding of the company's cost structure, which in turn affects profits, in addition, past literature provides ample evidence of the impact of cost asymmetry on a variety of financial variables (For example, analysts' expectations, modeling future profits) (Yiru Yang, 2018)

#### **4/1: Management's future expectations**

The psychological and mental state of the Department towards future events - whether positive or negative - is related to what happens in the future. (Zhang and Yu Lin, 2109) This means that management can take a positive view of what's going to happen in the future and that the company's situation will improve in the future and reflect the crisis it is experiencing from the recession and the regression in its turnover. Or it takes a pessimistic view of what's going to happen in the future and that things are going to continue for an indefinite period or they're going to get worse than they are now, this, in turn, will be reflected in the management's current decisions towards the resources available in the company.

There is no doubt that managers following the trend of sales volume over several consecutive periods creates a degree of optimism or pessimism that affects energy adjustment decisions and thus adjusts the cost upwards or downwards. With optimism for the future volume of demand for the company's products, managers speed up the volume of energy (Cost) upward as a response to increased demand and energy reduction with reduced demand volume increasing the degree of stickiness of costs, and conversely in the case of pessimistic perception managers reduce investments (resources/cost) despite increased



demand, while expanding to eliminate stagnant resources (Cost) When demand volume decreases and consequently the degree of cost asymmetry (Blue, et al., 2013).

Banker, et al., 2014) explain that management optimism and activity resource capabilities influence cost behavior whether in the event of increased or lower sales and that successive changes in the same direction, particularly the state of regression, the order and succession of those periods and the analysis of future sales and GDP expectations, All these factors can be used by management to anticipate uncertain future demand and that these factors will significantly affect the degree of cost asymmetry as the degree of cost asymmetry is the result of fluctuations in demand and changes in activity volume.

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A study (Homburg, C., A. Hoppe,2018) indicated that in the event of management facing the motives of profitability, The impact of these motives on cost asymmetry is likely to become stronger if pessimistic in the case of optimism, Because managers' pessimistic expectations of future demand volume often increase the pressure of profitability drivers, leading to greater reductions in resources (Cost) When sales volume decreases, while optimistic expectations ease the pressure of profitability drivers to reduce resources when demand falls, maintaining an average or low level of cost asymmetry to overcome the impact of drivers on optimism.

Undoubtedly, overly optimistic managers may lead to an excessive state of confidence in the accuracy of their estimates about the future volume of demand and the positive impact of their decisions on profitability and shareholder interests. cost asymmetry ", which could increase cost asymmetry, Considering that overconfident managers may overstate the returns on their investment proposals and thus increase energy as the volume of activity increases, and increased optimism about the future volume of demand may lead to the retention of stagnant resources when demand decreases (Jason V., Chen, et al., 2017), which increases the gap between upward and downward cost behavior changes indicating a high degree of cost stickiness, Managers' practice of options from the company may be used to measure overconfidence As a delay in exercising these options means the current confidence in their future estimates of the size of the demand and the return on activity and thus the possibility of obtaining abnormal returns through investment in cost stickiness (Abdel-hameed, A., 2015).

It is necessary not to rely solely on measuring the impact of prior years' sales trends on managers' expectations The abnormal change in sales, which may not be due to a change in the company's market share, may reflect mergers or investment sales with the need to infer other indicators that support the expected direction of the volume of demand, such as the degree of economic growth, analysts' forecasts and investment promotion laws. (Bozantic, et al., 2018), as increasing the degree of economic growth may increase the degree of optimism and thus increase the degree of cost stickiness in the periods following periods of increased sales volume and reduce the degree of cost asymmetry in the periods following periods of lower sales volume, while in the case of indicators supporting the state of pessimism (e.g. economic regression) leads to a regression in the degree of cost asymmetry in the periods following the period of lower sales (Jason V., Chen, et al., 2017).

To determine management expectations, a scale is built based on the availability of future management information in future financial statements (FLS), where future company data is available by presenting future information. Undoubtedly, positive forecasts in a company's FLS are positively and significantly associated with cost changes related to increased sales and are significantly associated with cost changes related to sales. That is, as expectations become more optimistic, managers increase costs to a greater extent when sales rise and reduce costs to a lesser extent when sales fall, as this conclusion establishes a positive and important correlation between forecasts of future FLS lists) and the degree of cost asymmetry with the availability of verification tools for the measure of management's expectations.

Management expectations are measured through disclosures of future information (FLI), where a study was adopted (Bravo, 2016) In measuring the level of disclosure of future information to calculate the number of times of disclosure of future information (Financial or non-financial) Through the presence of one or more words indicating future information in the annual reports as a unit of measurement, as compared to the sentences set in the annual report, I have also suggested a study (Al- Najjar, 2014) A future information disclosure index consisting of 64 items in two groups containing future information (Financial and non-financial), therefore, the researcher will rely on the ratio of future information disclosures as an indicator of management expectations through the following formula:

$$QNT_i = (FL_i - Min) / (Max - Min)$$

Where:

**QNT<sub>i</sub>** = Quantity of disclosure of future information of the company i

**FL<sub>i</sub>** = Number of future information sentences disclosed by the company i

**Min** = Minimum sentences of future information disclosed by the company during the study period

**Max** = Maximum amount of future information disclosed by the company during the study period

In addition to the above, future information disclosed in financial reports is divided into optimistic information and pessimistic information, indicating optimistic management expectations or pessimistic management expectations. The degree of optimism is measured by the following equation:

**Degree of optimism for administrative forecasts = total number of words or future sentences optimistic ÷ total number of future words or sentences (optimistic and pessimistic)**

It follows from the foregoing that the impact of previous changes in sales affects management's expectations, Optimism increases management's willingness to retain additional resources when increasing current sales and to keep these resources unused when sales fall in the current period, leading to sticky cost elements. A pessimistic view leads to improper behavior of cost elements, If management expects the continuing regression in sales, it is dismissing unused over employment during the recession and thus sacrificing the costs of maintaining over employment to improve the enterprise's current situation.

Based on the foregoing, the first hypothesis is:

**The First hypothesis: There is a positive impact of management expectations on the asymmetry degree of Sales, General and Administrative costs**

#### **4/2: Degree of utilization of available resources**

The degree of utilization of available resources (available energy) is a measure of the effectiveness of investment decisions and an indicator of management's efficiency in using available resources to extract the highest productivity from them. Hence, the degree of energy utilization (Resources) is considered an important determinant of the study of cost behavior by analyzing the management response to changes in activity volume. when there is a surplus energy (Excess Capacity), The resource adjustment response to reduced activity volume is greater than the response to increased activity volume which reduces the cost stickiness level of Anti-Sticky Cost), because lower activity increases stagnant energy and emphasizes the continuity of demand reduction and therefore managers are more inclined to exclude stagnant energy and thus reduce cost significantly, while with increased activity managers prefer to exploit stagnant energy than add new resources, which means a small increase in costs (Abdelhamed, 2015)

resource adjustment (energy) downward while reducing activity is lower than its upward adjustment rate with increased activity volume resulting in a high degree of cost asymmetry. This is because a low

volume of activity under highly exploited energy is often used to relieve pressure on available resources rather than reducing that energy which leads to a slight change in cost.

While increasing the volume of activity exceeds the ceiling of available resources, requiring additional resources and therefore increasing the cost, contrary to the foregoing, natural utilization of resources (energy) makes the cost response to the regression of activity very similar to the response to its increase, which may result in a lack of cost stickiness.

Contrary to the foregoing, a study (Banker et al., 2014 ) stated that cost stickiness does not always arise from the decision to retain unused energy when the volume of demand decreases. It may also arise with the power adjustment or with the adjustment of product sale price to meet the energy demand. This is illustrated by the distinction between full and incomplete stickiness between energy and demand volume ", where managers resort to incomplete interview (retention of unused energy despite reduced demand) when energy adjustment (current exclusion and future recovery) is more expensive than retention.

From the foregoing, it can be concluded that the stickiness of the cost (cost asymmetry) in companies with a high level of resource exploitation (energy) They are higher than in stagnant energy companies. With lower activity volume, the cost regression rate in utilized energy companies is lower than that of stagnant energy companies. Conversely, as activity increases, the cost increase rate in high-utilization companies is higher than in stagnant energy companies.

To measure the degree of utilization of available resources, the Banker et al., 2014 study indicates the use of sales changes to measure the degree of unused resources available at the beginning of the period. Specifically, if managers face an increase in sales in the past, They may have benefited from unused resources to meet increased demand, resulting in a reduction in the level of unused resources available for the current period, This measure is based on the concept that when previous sales rise resources ", managers are more likely to have exhausted existing resources, This results in a reduction in the amount of unused resources at the beginning of the current period relative to the time of the previous sales regression. Conversely, when prior sales decrease, managers are likely to retain some resources, resulting in an increase in the amount of unused resources incurred during the current period, compared with the period when prior sales increased.

Based on the foregoing, the second hypothesis is:

**The impact of management expectations on cost asymmetric behavior increases under a high degree of unused resources.**

#### **4/3: Cost of adjustment (adjustment)**

The theory of cost adjustment deals with the effect of a shock in the economy in general or in the company in particular, Where a company cannot immediately change production factors without an adjustment cost, all companies can incur adjustment costs especially when they seek to achieve greater efficiency, Adjustment costs are therefore considered to be the short-term costs of moving from one state

to another in the company's activity. More precisely, they are the costs of transferring resources from one sector to another if there is a change in the economy, that is, they are costs associated with any changes in the company, and they must be viewed when any adjustment in the company is made as hiring new employment or laying off some Workers and consequent lost production (Bozantic et al., 2018).

The adjustment costs are considered implicit, as they result in a lost product and are therefore not measured and reported in the statement of income and expenses resulting from the company's accounts. Managers may need to increase or decrease committed resources to be incurred (Pichetkun and Panmanee, 2012).

The main reason for the sticky cost was that managers had to make rational decisions regarding the differentiation between the costs of adjusting the company's resources against the costs of retaining unused resources.

Adjustment costs represent costs incurred by the company to reduce available resources or restore committed resources, where these costs include end-of-service bonuses, training costs for new workers when recruited in case of increased activity and disposal costs for existing equipment, Training costs, new equipment installation costs as well as organizational costs such as the loss of morale of the remaining workers as a result of the dismissal of their colleagues and the costs of compensation that could be incurred by the company as a result of cases brought by the dismissed workers.

Managers can use adjustment costs to make decisions close to the same, if they understand the nature and form of adjustment costs, as well as appropriate methods to estimate their size based on accounting information and other data, in addition to a better understanding of the timing of resource commitment decisions. How to deal with their expectations against unexpected changes in sales and the implications of cost stickiness for pricing decisions (Jason V., Chen, et al., 2017).

Companies with cost stickiness are undoubtedly due to managers increasing resources when sales rise but making a deliberate decision to preserve unused resources when they expect the current regression in sales to be temporary. In this way, they seek to reduce current and future adjustment costs, and these findings and those of some studies are consistent with the argument that managers' deliberate decision to control resources in response to both the increase and decrease in sales is the primary driver of asymmetric cost behavior (Banker and Byzalov, 2014).

It can be said that when sales fall and excess resources are maintained, It may temporarily result in lower profits and higher resource disposal costs in the short term But in the long run if sales rebound with the retention of excess resources, This will temporarily lead to higher profits and result in lower costs than the state of disposal and re-acquisition of resources, and hence the company's management has two options: Either pay these costs or retain and pay the salaries and other expenses associated with the existence of these labor to the company until sales improve s expectations in the downturn and regression in demand, It also depends on the degree of skill of the company's existing employment compared to the skill of the labor market and its access to the labor market at an affordable cost In

particular, the employment that is dismissed may go to other competitors, In addition to the impacted morale of the remaining employees in the company as a result of job instability.

In the view of Barak (2017), the decrease in costs is lower than the decrease in sales revenues, by contrast, when sales revenue increases, corporate managers have a lower estimate of the resources to be added to absorb increased sales. This discrepancy in management's estimate results in an asymmetric and sticky cost, as costs fall less when sales fall than if they respond to an increase in sales by a proportion similar to their decrease. Moreover, the large and increased adjustment costs facing companies make their management more willing to retain resources during recessions to avoid incurring such costs in the future. In other words, variations and variations in cost behavior depend largely on the magnitude of the adjustment costs.

Based on the foregoing, the third hypothesis is:

**Third hypothesis: There is a stronger impact of management expectations on cost asymmetric behavior under a high degree of unused resources and increased adjustment costs.**

After this previous discussion, this research will examine whether the impact of management expectations on cost asymmetry varies based on the size of adjustment costs, as well as the degree of unused resources using asset intensity as a measure of the volume of adjustment costs expectations for a greater degree of cost asymmetry when both the volume of adjustment costs and the degree of unused resources are high. Conversely, when both adjustment costs and the degree of unused resources are low, the Department's expectations have a simple impact on the degree of cost asymmetry.

### **The fifth section: Applied study**

This research is based on measuring the impact of administrative expectations, adjustment (adaptation) costs and the degree of unused resources on the degree of asymmetry of cost elements, especially the sales, general and administrative costs component. This component reflects sales and administrative services associated with sales volume, in order to determine the impact of these variables on the degree of cost asymmetry of the sales, general and administrative costs component (SG&A).

**The applied study can be addressed through the following points:**

#### **First: population and Sample Study**

The population of study includes all Egyptian joint stock companies registered on the securities exchange during the period from 2015 to 2018. The companies were selected in the light of the availability of several conditions, the most important of which are:

- The companies will continue to operate from 2015 to 2018.
- The companies have regularly published financial reports with future reports and should not been written off or merged during the study period.

- The companies should not suspend its shares from trading for a period not exceeding six months during the study period.
- The companies have a website and to publish their financial statements continuously on this website.
- The companies are engaged in industrial activity and the have been enrolled in the stock exchange for more than four years and have not made regular losses for more than one year.
- The companies do not belong to the financial services sector because of these companies' special regulations and nature

In light of the above requirements, 36 companies met these requirements during the study period. A sample study from Egyptian companies was identified in the light of the use of statistical methods as follows:

$$\text{Sample size} = N / [ (N-1) B^2 + 1 ]$$

Where:

**n/** Represents the size of the population meeting the preceding requirements

**b/** Represents the allowable error in estimating sample size and represents 5% of the sample size.

$$\text{So the sample size} = 36 / [ (36-1) (0.05)^2 + 1 ] = 33 \text{ companies}$$

The selection of the sample took into account the representation of all key industrial sectors by the classification issued by the General Authority for Financial Control.

During the study period, the researcher relied on the lists, financial reports, supplementary explanations, future reports, and board reports of the selected sample companies (2015-2018) through their websites and numerical website (Argamm.com and direct information site WWW.Mubasher.Info) and the website of Misr for the Dissemination of Information (WWW.egidegypt.com) as well as the Egyptian website (WWW.egx.com.eg)

## **Second: Analysis of the results of the applied study and testing of the research hypothesis**

### **2/1: Study variables**

To illustrate the independent variables and the dependent variables and their measurement methodology, the researcher presents this through the following table:



**Table no.1 :Measuring study variables**

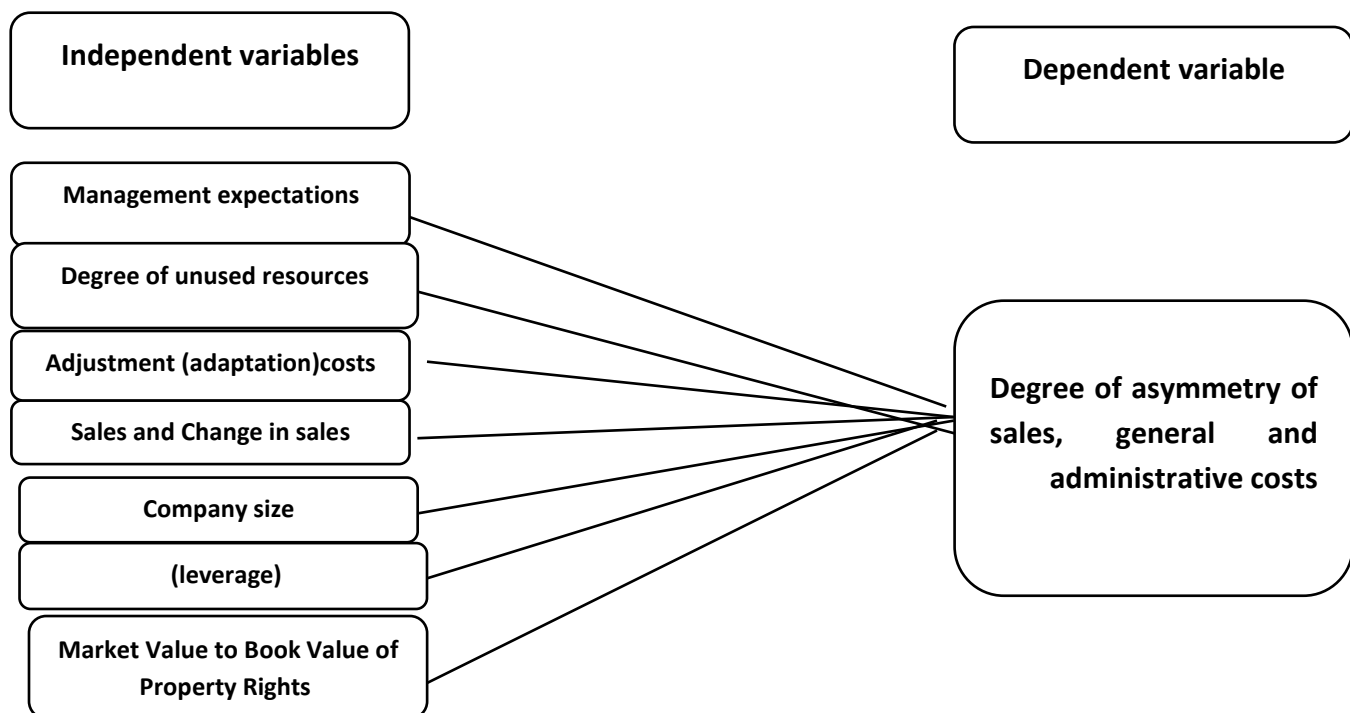
Variable Name	Variable Code	Measurement methodology
Dependent variable (degree of asymmetry of sales, general and administrative costs as a cost element	SG&A	This is a cost element and is linked to the provision of services, marketing, distribution and other general administrative costs. This variable is :measured as follows $\Delta \ln SG\&A_{i,t} = SG\&A_t / SG\&A_{t-1}$
Future Management expectations	EXP	EXP Measured by the number of optimistic future words received in future reports to the total number of future words, taking 1 if the number of optimistic words is greater than the number of pessimistic words
SALES	REV	REV It expresses the extent of future sales increase or shortage, taking the number 1 if $REV_{it} > REV_{i,t-1}$ and zero if the opposite occurs
Change in sales	$\Delta \ln REV$	This variable is measured by the following formula: $REV_{i,t-1} / REV_{it} = \Delta \ln REV$
Degree of unused resources	REVDEC <sub>i,t</sub>	Prior period sales change is used as a key measure to the extent of utilization of available resources at the beginning of the current period, where unutilized resources are considered lower when the previous year's REV sales revenue is higher than the current year ( $REV_{i,t-1} > REV_{it}$ ), taking the number 1 and taking zero if the opposite occurs
Adjustment (adaptation)costs	ASINT <sub>it</sub>	They are measured in terms of asset intensity, where the value of assets is compared to the value of sales revenue :by the following formula $ASINT_{i,t} = \log(Assets_{i,t} / REV_{i,t})$ .
Company size (control variable)	SIZE	It is measured using natural logarithm for the average total market value of assets
Corporate indebtedness (leverage)	LEV	The ratio of total liabilities (liabilities) to total assets in the financial position list shows the degree of risk to the company



Variable Name	Variable Code	Measurement methodology
(control variable)		as a result of high indebtedness and is called leverage
Market Value to Book Value of Property Rights (Regulatory Variable)	MB	Represents the company's growth measure and is expected to have an impact on the degree of cost asymmetry measured using the natural logarithm of the market value of equity to the book value Market-to-Book Value

The relationship between independent variables and dependent variables can also be explained in the following format:

**Figure No. (2)**  
**Relationship between independent variables and dependent variables**



## 2/2: Study models

To achieve the study's objective and test the research hypotheses, a model has been developed for each of the study hypotheses to measure the impact of independent variables on the dependent variable as follows:

**Applied Model I:** Impact of management expectations on the degree of cost asymmetry

$$SG\&A\ D = \beta_0 + \beta_1( EXP_{i;t}) + \beta_2 (REV_{i;t}) + \beta_3 (\Delta \ln REV_{i;t}) + \beta_4 (SIZE) + \beta_5(LEV) + \beta_6(MB) + \epsilon_{it}$$

**Applied model II:** Impact of management expectations and degree of unused resources on the degree of cost asymmetry

$$(SG\&A) D = \beta_0 + \beta_1( EXP_{i,t}) + \beta_2(REVDEC_{i,t}) + \beta_3 (REV_{i,t}) + \beta_4 ( \Delta \ln REV_{i,t}) + \beta_5 (SIZE) + \beta_6(LEV) + \beta_7(MB) + \epsilon_{it}$$

**Applied model III:** Impact of management expectations, degree of unused resources and adjustment costs on cost asymmetry

$$(SG\&A) D = \beta_0 + \beta_1( EXP_{i,t}) + \beta_2(REVDEC_{i,t}) + \beta_3(ASINT_{it}) + \beta_4 (REV_{i,t}) + \beta_5 ( \Delta \ln REV_{i,t}) + \beta_6 (SIZE) + \beta_7(LEV) + \beta_8(MB) + \epsilon_{it}$$

The earlier independent variables can be used to measure the degree of asymmetry of the sales, general and administrative cost through the R<sup>2</sup> determination coefficient. The higher the R<sup>2</sup> value, this means the greater the impact of the independent factors on the degree of asymmetry of the cost and thus subjecting those asymmetric elements to management control, thus increasing the quality of management accounting outputs.

## 2/3: Statistical methods used in data analysis:

Appropriate statistical methods of data analysis have been used using the Statistical Package for Social Sciences (SPSS) (Statistical Package for Social Sciences) version No. 18, where the SPSS program is used in applied and social studies. The selection of appropriate methods has been taken into account in the analysis based on the quality of the data to be analyzed.

The most important methods to be used to achieve the study's objectives and test its hypothesis are:

- Descriptive Statistics. These methods will be used to obtain sample implications using averages, standard deviations and percentages, and to test linear correlation and interference between variables.
- Multiple regression test. This test is used to estimate the factors of independent variables to measure their effect on the dependent variable (the degree of cost asymmetry) according to the following formula:

Degree of cost asymmetry = d (administrative expectations and associated factors)

This is done by:

### 2/3/1: Normal Natural Distribution Test

In the light of the statistical central end theory, the researcher found that the survey data followed natural distribution, as the size of the observations (Views) by the selected sample is 432 views and is greater than the 30 items required by natural distribution. The probability value of the test ((Jarque - bara for all variables was larger than (.05) confirming data followers for natural distribution (Osama, 2013).

## 2/3: Linear Interference Test

Linear interference was examined by calculating the Tolerance coefficient for each independent variable and control variables, and the FIV (Variance Inflation Factor) coefficient was created, which serves as a measure of the impact of the correlation between independent variables, this can be explained by the following table:

**Table No. (2) Linear Interference Test Results**

statement	Model I		Model II		Model III	
dependent variable	(SG&A) D		(SG&A) D		(SG&A) D	
independent variable	VIF Tolerance		VIF	Tolerance	VIF	Tolerance
EXP	6.480	0.123	0.131	6.092	0.135	5.327
REVDEC	-	-	0.147	6.087	0.139	6.153
ASINT	-	-	-	-	0.125	7.324
REV	3.872	0.258	4.204	0.238	5.563	0.180
$\Delta \ln$ REV	4.172	0.208	4.416	0.237	4.810	0.257
SIZE	3.322	0.229	4.008	0.277	4.108	0.210
LEV	3.910	0.267	4.072	0.208	4.582	0.029
MB	3.410	0.327	3.988	0.250	4.572	0.138

The previous table shows that the value (VIF) of all study variables did not exceed 10 (Osama, 2013) Therefore, the three study models do not have the problem of linear overlap, nor does the association between variables have a very statistical and low significance, which demonstrates the strength of the models used to explain the impact of autonomous variables on the dependent variable (the degree of asymmetry of the cost of sale, general and administration).

## 2/4: Descriptive analysis of study variables

Table 3 below provides a statistical description of the data of the independent variables and the dependent variables.

(Descriptive Statistics), where the table shows the arithmetic medium and standard deviation of each variable, the average arithmetic of administrative expectations (0.460) and standard deviations (0.360),

This shows that there is an impact of management expectations on the degree of asymmetry in the cost of sale and administration, although below average, as well as the calculus of sales change (0.070) during the study period and with standard deviations (0.260). This shows that higher sales during the study period have a clear impact on the degree of asymmetry of the cost of sale and administration,

The computational medium has reached the level of utilization of available resources (0.390) with standard deviations (0.470). It shows that unused resources have an impact on the degree of asymmetry of the cost of sale and administration, and the computational medium has reached the intensity of assets as a measure of adjustment costs (0.470) with standard deviations (0.550).

This shows that the effect of the change in adjustment costs on the degree of cost asymmetry is moderate, and the control variables have a variety of effects, some of which are weak and some below average on the degree of cost asymmetry, for the sample of selected companies during the study period.

**Table No. (3) :Descriptive Statistics**

variables	Mean	Median	Std. Dev.
SG&A	375.8	53.6	1882
EXP	0.46	0.51	0.360
REVDEC	0.39	0.01	0.470
ASINT	0.47	0.04	0.550
REV	2183.7	249.6	11.879
$\Delta \ln \text{REV}$	0.070	0.06	0.26
SIZE	8.935	7.812	0.783
LEV	0.368	0.403	0.256
MB	0.148	0.308	0.843

## **2/5: Analysis and discussion of the results of the study's presentations**

To test the validity of the study's hypotheses, the correlation analysis and regression analysis of the relationship between the independent variables and the variable affiliated using the statistical software package (SPSS) were performed as follows:

### **2/5/1: Test the validity of the first hypothesis:**

The first hypothesis stipulates:

**There is a positive impact of management expectations on the asymmetry degree of Sales, General and Administrative costs**

The validity of this hypothesis is tested by:

#### 1-Measuring correlation coefficient between study variables

The Pearson coefficient is used to determine the strength and direction of the relationship between independent variables

(Management expectations - sales - change in sales - the size of company - leverage - the market value of shares compared to book value) and the degree of asymmetry of the cost of sale, general and administrative.

The following table shows the association matrix of study variables.

**Table No. (4) : Correlation transactions between study variables**

Vir.		(SG&A) D	EXP	REV	Δln REV	SIZE	LEV	MB
(SG&A)D	Pearson Correlation	1						
	Sig. (1-tailed)							
EXP	Pearson Correlation	.757**	1					
	Sig. (1-tailed)	.000						
REV	Pearson Correlation	.645**	.576*	1				
	Sig. (1-tailed)	.000	.031					
Δln REV	Pearson Correlation	.537**	.354*	.787**	1			
	Sig. (1-tailed)	.004	.041	.000				
SIZE	Pearson Correlation	.515**	0.329**	.598**	.432**	1		
	Sig. (1-tailed)	.000	.001	.003	.008			
LEV	Pearson Correlation	.377**	.357*	.319**	.320 **	.536**	1	
	Sig. (1-tailed)	.004	.040	.006	.040	.003		
MB	Pearson Correlation	.302 **	.215**	.310*	.350 **	.538**	-.534**	1
	Sig. (1-tailed)	.000	.003	.036	.075	.001	.003	

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

The previous table shows a correlation between the subordinate variable (SG&A) D, which is the degree of asymmetry of the cost of sale, generality and management between the autonomous variables, and between the autonomous variables and each other, but all correlation coefficients are less than one.

There is a positive correlation between administrative expectations (EXP) and sales, general and administrative costs (0.757) and a very high level of morale degree (0.000)

This indicates the impact of management expectations on the degree of cost asymmetry (change in sales and administrative costs), There is also a strong correlation between sales revenue and the degree of asymmetry of the cost of sales and administrative costs ((0.645 and high morale degree (0.000) and the same between the degree of change in sales ( $\Delta \ln \text{REV}$ ) and the degree of asymmetry of sales and administrative costs (SG&A) D. where the ratio of association (0.537%) was lower than 5%. It also notes that all control variables have an association with the dependent variable and this confirms the strength of the effect of the proposed model variables on the dependent variable. There is also a positive correlation between all independent variables and each other except that of the variable (MB) with the variable (LEV) where there is a negative relationship, this is logical, where leverage negatively affects the market value attributable to the book value of property rights.

## 2-Measuring the impact of management expectations on the degree of cost asymmetry

The impact of independent variables on the dependent variable is measured by the first applied model to measure that relationship:

$$\text{SG\&A) D} = \beta_0 + \beta_1(\text{EXP}_{i;t}) + \beta_2(\text{REV}_{i;t}) + \beta_3(\Delta \ln \text{REV}_{i;t}) + \beta_4(\text{SIZE}) + \beta_5(\text{LEV}) + \beta_6(\text{MB}) + \varepsilon_{it}$$

The researcher used the OLS method to formulate the regression model (first applied model) to measure the impact of management expectations on the degree of cost asymmetry as a dependent variable.

Table 5 below shows the results of the regression analysis of the relationship between future management expectations and the degree of asymmetry of the cost of sale, general and administrative.

**Table No. (5): Results of multiple linear regression analysis (according to Model I)**

Dependent variable	( SG&A) D				
	Unstandardized Coefficients		standardized Coefficients		
independent variables	B	Std. Error	Beta	T	Sig.
Constant	0.403	0.027		13.179**	0.000
EXP	0.054	0.008	0.102	7.578**	0.000
REV	0.037	0.005	0.213	6.540**	0.000
$\Delta \ln \text{REV}$	0.046	0.003	0.204	5.965**	0.000
SIZE	0.016	0.009	0.372	5.083**	0.000
LEV	-0.013	0.011	-0.258	-2.784*	0.038
MB	-0.008	0.008	-0.582	-2.569*	0.041
	<b>R= 0.804</b>				
	<b>R<sup>2</sup>=0.674</b>				
	<b>Adjust R<sup>2</sup> =0.602</b>				
	<b>217.081 = (ANOVA )</b>				
	<b>0.000 = ( Sig. )</b>				

a. Predictors: (Constant), EXP., REV ,  $\Delta \ln \text{REV}$  , SIZE, LEV, MB, Dependent Variable: (SG&A)D

The researcher shows from the previous table that the value of Adjust R<sup>2</sup>= 0.602 which reflects the high interpretative power of the regression model, since most changes can be explained by that model, and for the overall morale of the model used, they can be identified through variability analysis. (ANOVA), with a calculated F value of 217,081 and significantly higher than the tabular F value and with a high morale level (0.000), this indicates a higher morale of the model used in the study and thus its validity to achieve the study's objectives.

The results of the regression (shown in the previous table No. 5) shows that Management expectations have a moral effect on the degree of cost asymmetry, as the signal of the regression coefficient was ( $\beta_1$ ) positive and its probability value (Sig. = 0.000), underscoring the strength of the impact of future management expectations on the degree of asymmetry of the cost of sale, generality and administration, consistent with the study (Jason V. Chen et al., 2017) and study (Shipeng Han et.al., 2019) which emphasizes the impact of management expectations on the degree of cost asymmetry.

Previous results also showed a moral impact of both sales volume, the degree of change in sales, the size of the company and the degree of leverage on the degree of asymmetry of the sales and administrative cost of the sample companies.

The regression model for the impact of future management expectations on the degree of asymmetry of the sample companies' sales and management costs can be formulated as follows:

$$(SG\&A)D = 0.403 + 0.054(EXP) + 0.037(REV) + 0.046(\Delta \ln REV) + 0.016(SIZE) - 0.013(LEV) - 0.008(MB).$$

## **2/5/2: Test the validity of the second hypothesis:**

**H2: The impact of management expectations on cost asymmetric behavior increases under a high degree of unused resources.**

The validity of this imposition is tested by

1- Measuring correlation coefficient between study variables:

Pearson coefficient is used to determine the strength and direction of the relationship between independent variables

)Management expectations - degree of unused resources - sales - change in sales - the size of the company - leverage - the market value of shares compared to book value) and the degree of asymmetry of the cost of sale, general and management.

The following table shows the association matrix of study variables:



**Table No. (6) Correlation coefficient between study variables**

		(SG&A) D	EXP	REVDEC	REV	Δln REV	SIZE	LEV	MB
(SG&A)D	Pearson Correlation	1							
	Sig. (1-tailed)								
EXP	Pearson Correlation	.687**	1						
	Sig. (1-tailed)	.000							
REVDEC	Pearson Correlation	.576**	.609**	1					
	Sig. (1-tailed)	.000	.000						
REV	Pearson Correlation	.545**	.475*	-.632**	1				
	Sig. (1-tailed)	.007	.021	.000					
Δln REV	Pearson Correlation	-.574**	.344*	-.732**	.187**	1			
	Sig. (1-tailed)	.002	.040	.003	.010				
SIZE	Pearson Correlation	.515**	0.229**	.483**	.398**	.532**	1		
	Sig. (1-tailed)	.000	.001	.001	.003	.008			
LEV	Pearson Correlation	.377*	.347*	.132	.399*	.420*	.746**	1	
	Sig. (1-tailed)	.034	.040	.603	.040	.020	.002		
MB	Pearson Correlation	.102	.213	.210	.370*	-.230	.657**	-.384*	1
	Sig. (1-tailed)	.120	.073	.578	.042	.086	.002	.021	

\*\* . Correlation is significant at the 0.01 level (1-tailed).-

\* Correlation is significant at the 0.05 level (1-tailed).

The previous table shows a correlation between the subordinate variable (SG&A) D, which is the degree of asymmetry of the cost of sale, generality and management between the autonomous variables, and between the autonomous variables and each other, but all correlation coefficients are less than one.

There is a positive correlation between management expectations (EXP) and sales and administrative costs (0.687) and with very high morale (0.000) This indicates the impact of administrative expectations on the degree of cost asymmetry (change in sales and administrative cost), and there is a strong correlation between a high degree of unused resources and an asymmetry of cost (SG&A) D, where the correlation coefficient (0.576) and in high morale (0.000) There is also a correlation between sales revenue and the degree of asymmetry of sales and administrative cost ((0.545 and in high morale (0.007) and the same between the degree of change in sales (Δ ln REV) and between the degree of asymmetry

of the sales and administrative cost (SG&A) D where the correlation was negative (-0.574) and morally less than 1%, and there is a negative correlation between the degree of unused resources and the volume of sales and the degree of change in sales and in high morale, this is in line with some previous studies such as the study (Jason V. Chen et al., 2017) and study (Shipeng Han et.al., 2019) and also notes that all control variables have an association with the dependent variable except the variable (MB) This confirms the strength of the effect of the proposed model variables on the dependent variable, and there is a positive correlation between all but the variable autonomous variables. (MB) where there are no moral relationships with other independent variables except the size of the company (positive relationship) and with the variable (LEV) where there is a negative relationship and this is logical where leverage negatively affects the market value attributable to the book value of property rights.

2-Measuring the impact of management expectations and the degree of unused resources on the degree of cost asymmetry

The impact of independent variables on the dependent variable is measured by the second applied model to measure that relationship:

$$(SG\&A) D = \beta_0 + \beta_1( EXP_{i;t}) + \beta_2(REVDEC_{i;t}) + \beta_3 (REV_{i;t}) + \beta_4 ( \Delta \ln REV_{i;t}) + \beta_5 (SIZE) + \beta_6(LEV) + \beta_7(MB) + \epsilon_{it}$$

Table 7 below shows the results of the regression analysis of the relationship between future management expectations in the light of the degree of unused resources and the degree of asymmetry of the cost of sale, general and administrative.

**Table No. (7) :Results of multiple linear regression analysis (applied model II)**

Dependent variable	( SG&A) D				
	Unstandardized Coefficients		standardized Coefficients		
independent variables	B	Std. Error	Beta	T	Sig.
Constant	0.348	0.346		3.659**	0.000
EXP	0.059	0.005	0.115	8.021**	0.000
REVDEC	0.048	0.006	0.142	6.863**	0.000
REV	0.033	0.005	0.217	6.490**	0.000
$\Delta \ln REV$	0.043	0.004	0.302	5.835**	0.000

SIZE	0.014	0.010	0.369	5.143**	0.000
LEV	-0.011	0.012	-0.352	-2.834*	0.036
MB	-0.009	0.009	-0.602	-2.649*	0.046
	<b>R= 0.871</b>				
	<b>R2=0. 743</b>				
	<b>Adjust R2 =0.684</b>				
	<b>221.064 = (ANOVA )</b>				
	<b>0.000 = ( Sig. )</b>				

a. Predictors: (Constant), EXP., REVDEC, REV ,  $\Delta \ln$  REV , SIZE, LEV, MB, Dependent Variable: (SG&A)D

According to from the previous table , the value of (Adjust R2= 0.684) which reflects the high interpretative power of the regression model, since most changes can be explained by that model, and for the overall morale of the model used, they can be identified by variability analysis. (ANOVA), with a calculated F value of 221,064 and significantly higher than the tabular F value and with a high morale level (0.000), this indicates a higher morale of the model used in the study and thus its validity to achieve the study's objectives.

The results of the regression were shown in the previous table No. 7. Management expectations in the light of a high degree of unused resources have a moral impact on the degree of asymmetry of cost, as the regression coefficient signal was ( $\beta_1$ ) Positive and its probability value (Sig. = 0.000), underscoring the strength of the impact of future management expectations in light of the high degree of unused resources on the degree of asymmetry of the sale and administrative cost, consistent with the study (Jason V. Chen et al., 2017) and study (Shipeng Han et.al., 2019) that emphasize the impact of management expectations in the light of a high degree of unused resources on the degree of cost asymmetry

Previous results also showed a moral effect for both the degree of unused resources and the size of the Sales, the degree of change in sales, the size of the company and the degree of leverage are the degree of asymmetry of the sales and administrative costs of the sample companies.

Therefore, the regression model for the impact of future management expectations can be formulated in the light of the degree of unused resources to which the sample companies' sales and management cost is asymmetric:

$$SG\&A) D = 0.348 + 0.059( EXP ) + 0.048(REVDEC ) + 0.033 (REV ) + 0.043 ( \Delta \ln REV ) + 0.014 (SIZE) - 0.011(LEV) - 0.009(MB)$$

### 2/5/3: Test the validity of the third hypothesis

The third hypothesis stipulates:

**H3: There is a stronger impact of management expectations on cost asymmetric behavior under a high degree of unused resources and increased adjustment costs.**

The validity of this hypothesis is tested by:

1-Measuring correlation coefficient between study variables

The Pearson correlation coefficient is used to determine the strength and direction of the relationship between the autonomous variables (management expectations - the degree of unused resources - the size of adjustment costs - sales - the change in sales - the size of the company - leverage - the market value of shares compared to their book value) and the degree of asymmetry of the sales, general and administrative cost.

The following table shows the association matrix of study variables.

**Table No. (8) Correlation coefficient between study variables**

		(SG&A) D	EXP	REVDEC	ASINT	REV	$\Delta \ln \text{REV}$	SIZE	LEV	MB
(SG&A)D	Pearson Correlation	1								
	Sig. (1-tailed)									
EXP	Pearson Correlation	.692**	1							
	Sig. (1-tailed)	.000								
REVDEC	Pearson Correlation	.514**	.599**	1						
	Sig. (1-tailed)	.000	.000							
ASINT	Pearson Correlation	.437**	.498**	.413**	1					
	Sig. (1-tailed)	.000	.001	.002						
REV	Pearson Correlation	.485**	.480**	-.601**	.232	1				
	Sig. (1-tailed)	.008	.009	.000	.131					
$\Delta \ln \text{REV}$	Pearson Correlation	-.512**	.317*	-.689**	.204	.277**	1			
	Sig. (1-tailed)	.004	.040	.002	.081	.000				
SIZE	Pearson Correlation	.495**	0.234**	.478**	.342*	.389**	.554**	1		
	Sig. (1-tailed)	.000	.001	.001	.020	.004	.006			
LEV	Pearson Correlation	.387*	.387*	.142	.126	.418*	.473*	.712**	1	
	Sig. (1-tailed)	.021	.030	.103	.090	.030	.030	.003		
MB	Pearson Correlation	.113	.267	.198	.142	.380*	-.250	.676**	-.376*	1
	Sig. (1-tailed)	.150	.063	.878	.092	.040	.083	.001	.024	

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

The previous table shows a correlation between the dependent variable D (SG&A) (that is the degree of asymmetry of sale and administrative cost )and between independent variables, and between independent variables and each other but all correlation coefficients are less than one. Also, there is a positive correlation between management expectations (EXP) and the sales and administrative cost (0.692) at very high morale degree (0.000). This indicates the impact of management expectations on the degree of cost asymmetry (change in sales and administrative cost), and there is a strong correlation between the degree of utilization of available resources and the degree of cost asymmetry (SG&A) D, where the correlation coefficient (0.514) and in high degree (0.000) also between adjustment costs and the degree of cost asymmetry (SG&A) D, where the correlation coefficient (0.437) and in high morale degree (0.000) There is also a correlation between sales revenue and the degree of asymmetry of the cost of sale and management ((0.485 and in high morale degree (0.008) and the same between the degree of change in sales ( $\Delta \ln \text{REV}$ ) and between the degree of asymmetry of the sales and administrative cost (SG&A) D where the ratio was negative (-0.512) and morally less than 1%, there is a negative correlation

between the degree of unused resources and the degree of change in sales and high morale, as well as an correlation between adjustment costs and management expectations and the degree of utilization of available resources and a high morale degree, which is in line with some previous studies such as (Jason V. Chen et al., 2017) and study (Banker, 2014) and also notes that all control variables have an association with the dependent variable except the variable (MB) This confirms the strength of the effect of the proposed model variables on the dependent variable, And there's a positive correlation between all the independent variables, except the variable (MB) . there are no moral relationships with other independent variables except the size of the company (positive relationship) and with the variable (LEV) where there is a negative relationship and this is logical where leverage negatively affects the market value attributable to the book value of property rights.

## 2- Measurement of the impact of management expectations, the degree of unused resources and adjustment costs on the degree of cost asymmetry

The impact of independent variables on the dependent variable is measured by the third applied model to measure that relationship:

$$)SG\&A) D = \beta_0 + \beta_1( EXP_{i;t}) + \beta_2(REVDEC_{i,t}) + \beta_3(ASINT_{it}) + \beta_4 (REV_{i;t}) + \beta_5 (\Delta \ln REV_{i;t}) + \beta_6 (SIZE) + \beta_7(LEV) + \beta_8(MB) + \varepsilon_{it}$$

Table 9 below shows the results of the regressive analysis of the relationship between future management expectations in the light of the degree of unused resources and adjustment costs and the degree of asymmetry of the cost of sale, general and administrative.

**Table No. 9 :Results of multiple linear regression analysis (applied model III)**

Dependent variable	( SG&A) D				
	Unstandardized Coefficients		standardized Coefficients		
independent variables	B	Std. Error	Beta	T	Sig.
Constant	0.478	0.296		4.365**	0.000
EXP	0.053	0.004	0.213	7.096**	0.000
REVDEC	0.042	0.005	0.165	7.071**	0.000
ASINT	0.041	0.006	0.184	5.832**	0.001
REV	0.043	0.006	0.307	5.970**	0.000
$\Delta \ln REV$	0.048	0.005	0.412	6.055**	0.000

<b>SIZE</b>	0.016	0.013	0.389	5.673**	0.000
<b>LEV</b>	-0.012	0.013	-0.382	-3.054*	0.034
<b>MB</b>	-0.007	0.010	-0.592	-3.099*	0.044
	<b>R= 0.941</b>				
	<b>R2=0. 863</b>				
	<b>Adjust R2 =0.786</b>				
	<b>ANOVA =236.058</b>				
	<b>Sig. = 0.000</b>				

Predictors: (Constant), EXP., REVDEC, ASINT, REV ,  $\Delta \ln$  REV , SIZE, LEV, MB. Dependent Variable: (SG&A)D

The researcher shows from the previous table that the value of the adjusted

determination factor (= 0.786 Adjust R2) which reflects the high interpretative power of the regression model, since most changes can be explained by that model, and for the overall morale of the model used, they can be identified by variability analysis. (ANOVA), with a calculated F value of 236,058 which is much higher than the tabular F value and with a high morale level (0.000), this indicates a higher morale of the model used in the study and thus its validity to achieve the study's objectives.

The results of the regression were shown in the previous table No. 9. Management expectations in the light of the degree of unused resources and adjustment costs have a moral impact on the degree of cost asymmetry, as the regression coefficient signal was ( $\beta_1$ ) Positive and its potential value (Sig. = 0.000), underscoring the strong impact of future management expectations in the light of the degree of unused resources and adjustment costs on the degree of asymmetry of the cost of sale, generality and administration, consistent with the study (Banker, 2014) and study (Jason V. Chen et al., 2017) and study (Shipeng Han et.al., 2019) that emphasizes the impact of management expectations in light of the degree of unused resources and adjustment costs to the degree of cost asymmetry.

Previous results also shows a moral impact of both the degree of unused resources, adjustment costs, sales volume, the degree of change in sales, the size of the company and the degree of leverage on the degree of asymmetry of the sales, general and administrative cost of the sample companies.

The regression model of the impact of future management expectations can be formulated in the light of the degree of unused resources and adjustment costs to the degree of asymmetry of the sample companies' sales, general and administrative cost:

$$(SG\&A) D = 0.475 + 0.053( EXP) + 0.042(REVDEC) + 0.041(ASINT) + 0.043 (REV) + 0.048 ( \Delta \ln REV) + 0.016 (SIZE) - 0.012(LEV) - 0.007(MB)$$

The combined impact of management expectations (pessimistic or optimistic) can also be measured against the degree of unused resources (high or low) and adjustment costs (high or low), as the combined impact of both the degree of unused resources available at the beginning of the period and management's expectations of cost asymmetry will be examined.

The use of a single measure to capture the combined impact of both the degree

of unused primary resources and Management's expectations can only shed light on a subset of potential situations where a high degree of initial resources are unused (decrease in prior sales) accompanied by management pessimism, or a low degree of unused primary resources (previous sales increase) accompanied by management optimism (Shipeng Han et.al., 2019) and this will allow for a separate analysis of the distinct and excess effects of unused resources and the Department's cost asymmetry expectations by examining the existence and magnitude of cost asymmetries for all potential situations, including when a high degree of primary unused resources (Decrease in prior sales) accompanied by management optimism (FLS expectations positive), and when a low degree of unused primary resources (Previous sales increase) accompanied by management pessimism (negative FLS forecast), this can be explained through the following table:

**Table No. 10: The Combined Effect of Managerial Expectations, Unused Resources, and Adjustment Costs on the Degree of Cost Asymmetry**

The Degree of Cost Asymmetry	Adjustment costs	
	High	Low
<i>High Unused Resources</i>		
Pessimistic Expectations	0.179***	0.239**
Optimistic Expectations	-0.128**	0.148***
<i>Low Unused Resources</i>		
Pessimistic Expectations	-0.409***	-0.396***
Optimistic Expectations	0.537***	0.437***



The results of the previous table No. 10 show that when the degree of unused resources is high, under the pessimistic expectations, the degree to which management expectations affect asymmetric costs (SG&A) is between 0.179 \* \* \* (high adjustment costs), 0.239 \* \* \* (low adjustment costs), while under the Department's optimistic expectations, the degree to which management expectations affect asymmetric costs (SG&A) is between -0.128 \* \* (high adjustment costs), 0.148 \* \* \* (low adjustment costs), and conversely, where the cost of unused resources is low under management's pessimistic expectations, the degree to which management expectations affect asymmetric costs (SG&A) is between -0.409 \* \* \* (high adjustment costs), -0.396 \* \* \* (low adjustment costs), while under the management's optimistic expectations, the degree to which management expectations affect asymmetric costs (SG&A) is between 0.537 \* \* \* (high adjustment costs) and 0.437 \* \* \* (low adjustment costs).

The researcher draws from this table, which measures the combined impact of the management's expectations, the degree of unused resources and the cost of adjustment to the degree of cost asymmetry D (SG&A), the strongest impact of management expectations on the degree of asymmetry of the sales, general and administrative cost occurs when there is a low degree of unused resources (Low Unused Resources), large volume of adjustment costs (High Adjustment costs), and management has positive expectations about the future (Optimistic Expectations), in contrast, the lowest degree of influence occurs when all three factors work in the opposite direction. To the researcher's knowledge, these findings are considered to be preliminary studies in accounting literature to document the uniform impact of management expectations, unused resources and costs of adapting to cost asymmetric behavior to determine the structure and behavior of Egyptian companies.

## **The sixth Section: Results and recommendations**

### **6/1: Results of the study**

At the end of this study, the researcher came to some results, the most important of which are:

-Asymmetric Cost behavior affects the information content of MAS outputs, as it affects the accuracy of estimates of cost items used in the preparation of budgets and the rationalization of decisions, and thus managers' perception and understanding of asymmetric cost behavior contributes to reducing the information gap for MAS outputs.

-Ignoring the study of asymmetric cost behavior increases the company's profit expectations gap, as the increased degree of cost asymmetry adversely affects current-period earnings and positively affects earnings of increased demand periods. In contrast, the lower degree of cost asymmetry positively affects current-period earnings and negatively impacts earnings of periods of lower demand.

-There is an expulsion relationship linking the degree of asymmetry of cost behavior and a set of economic and managerial determinants Such as: asset intensity and employment, energy exploitation level, economic growth rate, industry growth rate, stringent labor protection laws, free cash flow, management confidence in their outlook for future demand, personal management aspirations, as well as a reverse relationship that links the degree of cost asymmetry with some other determinants such as

Power of Corporate Governance, Drivers of Achieving Profitability Goals, Repeat Demand Decline, Degree of Pessimism for Future Demand.

-This study is one of the first studies in Egypt that discussed the impact of future management expectations on the degree of cost asymmetry, by addressing some of the administrative characteristics in control of cost behavior that have not previously been reflected in accounting thinking.

-The results of the applied study also show that the impact of management expectations on the degree of asymmetric cost behavior is strong when both the level of adjustment costs and the degree of unused resources are high and optimistic management expectations and, in contrast, the impact of management expectations on asymmetric cost behavior is weak when both the level of adjustment costs and the degree of unused resources are weak and pessimistic management expectations. By contrast, when adjustment costs and unused resources are low, management expectations are not strictly linked to analysts' expectations. This finding is relevant to investors who rely on analysts' expectations of corporate profits to make investment decisions, as these investors must incorporate into their decisions the impact of management expectations on asymmetric cost (which in turn affects forecasting accuracy) for companies with high adaptation costs and high unused resources.

-The results of this study are new in accounting literature and agree with the idea that management expectations should be more important for managers who care about resource control costs and who have flexibility due to a greater degree of unused resources. By contrast, management expectations are less important in decision-making when resource control costs are low and managers have less unused resources. This guide supports our expectations that the impact of management expectations on resource allocation decisions and adjustment costs will result in different impacts on cost asymmetric behavior.

-Models that take into account asymmetric costs have greater predictive ability to analyze future profitability, provide more accurate forecasts than other traditional models that use only financial statements items, and companies where costs are more analogous (non-sticky), practice profit management than companies where costs are asymmetric (sticky).

-The study addresses the impact of management expectations on asymmetric cost behavior in the context of resource control costs and constraints on unused resources, as the results of the applied study show that the increased impact of management expectations on cost asymmetries is strongest when adjustment costs and unused resources are high. Conversely, when both are low, the impact of expectations on the degree of cost asymmetry is weak. Moreover, when the degree of unused resources is high, management pessimism is associated with unnecessary cost behavior, but management optimism reflects this relationship and leads to cost viscosity. Also, the degree of cost viscosity is strong under a low degree of unused resources, a large volume of adjustment costs, and optimistic management expectations.

-Despite the accounting thinking's attempts to measure the degree of cost asymmetry, it has not yet provided an integrated framework within which each specific behavior contribution to the asymmetry of cost can be determined, so this study is a major step in reaching this IIF.

## 6/2: Study recommendations

In the light of the study's previous findings, the researcher recommends that:

-Review the methodology for disaggregating and interpreting accepted cost behavior by taking into account other behavior determinants other than the size of the activity, notably decisions to reallocate resources accompanying the change in the size of the activity, particularly with regard to the exclusion or addition of the cost of optional energy.

-The researcher recommends that enterprises should measure asymmetric cost behavior to provide appropriate information for planning, cost control and rationalization of decisions. She also recommends that further research be undertaken on the causes and effects of asymmetric cost behavior to enrich accounting thinking and keep abreast of ongoing changes.

-Academic and professional entities are building further studies and research on the impact of administrative and economic determinants on cost asymmetric behavior, as well as the impact of cost asymmetric behavior on predictive ability to analyze future profitability.

-The researcher believes it will be important to consider additional features of financial reporting such as Studying how allocation decisions are made as well as the effects of such decisions on the structure and conduct of the cost of companies.

-Review the methods and tools for preparing budgets and rationalizing decisions in the context of asymmetric cost behavior, as their continuation in accordance with common accounting thinking may undermine the quality of management accounting content and outputs.

## 6/3: Future research

In the light of the foregoing, the researcher could make some proposals, as future studies to complete Usefulness of this subject.

-Further future research to study the interactive effects of tax avoidance on the asymmetric behavior of Egyptian companies.

-Further future research to study the impact of other factors on the asymmetric behavior of the cost, including labor intensity, the impact of labor laws, inflation levels, and the personal characteristics of managers in the Egyptian environment.

-Studying the influential relationship between cost asymmetry and accounting qualification.

-Measuring the impact of intellectual capital and profit management determinants on cost asymmetric behavior.

-Measuring the impact of ownership structure on cost asymmetric behavior.

-Measuring the impact of asymmetric cost behavior on the efficiency of investment decisions and the value of the company.

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