

# **A STUDY ON VARIANCE ANALYSIS AND ITS EFFECT ON PROFITABILITY AT VARSHA MULTI-TECH RAJAJINAGAR**

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## **ABSTRACT**

The vital area of analysis of variance and its substantial effects on corporate profitability are explored in depth in the current research. One of the most important technique for determining the discrepancy between expected and actual results, providing insight into the efficacy and efficiency of management choices. This study methodically examines the many facets of variations, including both positive and negative departures from expected performance. This study reveals the complex causal links that explain variations in profitability by analysing the complicated interplay among cost, revenue, and operational variances. The paper explains each of the ways that variance analysis effects strategic choice and resource allocation through a thorough examination of pertinent literature and direct observation of various sectors. The results highlight the crucial role variance analysis plays in spotting operational inefficiencies, maximising resource use, and promoting a continuous improvement culture inside organisations. In the end, this study adds to a comprehensive knowledge of how variance analysis functions as a compass for guiding companies towards increased profitability in the face of dynamic and difficult market conditions.

## **INTRODUCTION**

### **MEANING OF VARIANCE ANALYSIS**

This research is the technique of comparing real outcomes or outcomes with predicted or intended results in order to recognise and understand the causes of any inconsistencies or deviations. It is often applied in organisation, accounting, project administration, and multiple other industries to assess the efficacy of strategies, budgets, and strategies. With the usage of analysis of variance, businesses can keep an eye on their operations, manage them, make wise judgements, and take remedial action as required.

### **MEANING OF PROFITABILITY**

Profitability: A company's or an investment's ability to provide a monetary gain or profit is known as profitability. It evaluates how well a business can turn its resources including cash, labour, and materials into profits. Profitability is an important consideration when assessing an organization's liquidity, long-term survival, and ability to provide value for its stakeholders.

Because it helps firms to identify problem areas, make wise judgements, and put the required adjustments into place decide based on information, variance analysis might make a significant impact on profitability.

### **IMPORTANCE OF VARIANCE ANALYSIS**

#### **1. Identify Performance Trends**

Variance analysis is beneficial. businesses identify performance trends using data from actual tests with expected results over time. This helps businesses to any locations where they may be performing well or areas where they need to improve. By identifying these trends, businesses may make knowledgeable choices and take necessary action to improve their financial performance.

#### **2. Improve Budgeting Accuracy**

Variance analysis can aid companies in enhancing budgeting accuracy by identifying any discrepancies between actual and expected results. By analyzing these discrepancies, businesses can improve their budgeting process and ensure that their future financial forecasts are more accurate.

#### **3. Monitor Business Performance**

Variance analysis helps businesses monitor their financial performance and identify any areas of

concern. By analyzing the variances between actual and expected results, businesses can identify any issues or opportunities and take necessary action to improve their performance.

#### 4. Control Costs

Variance analysis may benefit companies control their costs by locating any places where they are overspending or underspending. By analyzing these variances, businesses can take necessary action to reduce costs and improve their financial performance.

#### 5. Make Informed Decisions

Variance analysis provides businesses with the information they need to make informed decisions. By analyzing the variances between actual and expected results, businesses can identify any issues or opportunities and make necessary changes to improve their financial performance.

### **LITERATURE REVIEW**

#### **TITLE: THE IMPACT OF MAJOR COST REDUCTIONS ON LONG-TERM COMPANY PROFITABILITY**

**Author: Nieuwoudt, Jan Mathys (2013-04-30)**

This research examined the economic effects of cost reduction, downsizing, and expense management from the South African experience. It used deductive reasoning and quantitative design to analyze the effect of a cost reduction event on certain ratios and share price performance. Results showed no significant effect.

#### **TOPIC: EFFECT OF COST CONTROL SYSTEM ON CORPORATE PROFITABILITY: A STUDY OF SELECTED INDUSTRIAL PRODUCTS IN NIGERIA 2010-2018**

**Author: Onuora Joshua K.J \* Kenechukwu Edoziuno (1 August 2019)**

This study evaluated the effect of cost control on corporate profitability between 2010-2018. OLS method was used to analyze variables such as return on asset, cost of inventory, cost of labor, and cost of sales. Findings showed that the cost of inventory had a positive sign and was statistically insignificant with corporate performance.

**TOPIC: COST MANAGEMENT-METHOD FOR INCREASING THE PROFITABILITY OF ENTERPRISES, WITH REFERENCE TO THE PRODUCTION SMES IN THE REPUBLIC OF NORTH MACEDONIA**

**Author: Biljana Angelova, Blagica Koleva, Mila Mitreva (23/2021)**

The globalized world has changed the conditions under which companies operate, affecting their profitability. To balance their cost-profit basis, businesses must find the right way to balance costs and profits. This paper aims to analyze the cost management-method used by N. Macedonian companies and the results will help other business entities manage their operations.

**TOPIC: KAIZEN COST MANAGEMENT TECHNIQUE AND PROFITABILITY OF SMALL AND MEDIUM SCALE ENTERPRISES (SMES) IN OGUN STATE, NIGERIA Author: OLABISI Jayeola<sup>1</sup>\* SOKEFUN, OGinni, (2012)**

This study seeks to examine the nature of Kaizen cost management technique to influence the profitability of small and medium scale enterprises in Ogun State, Nigeria. Literature has shown that capital base, workforce, turnover, market shares and efficiency in production are determinants for the profitability level.

**TOPIC: EFFECT OF LOGISTICS OUTSOURCING MANAGEMENT ON COST REDUCTION AND COMPANIES PROFITABILITY OF CONSUMER GOODS INDUSTRIES**

**Author: Omolola Gegeleso, Adebambo Somuyiwa (October 7-8, 2021)**

This paper examines the effect of logistics outsourcing management on cost reduction and profitability of consumer goods industries in Nigeria. Twelve manufacturing companies with 12,054 staff strengths were selected from the list of quoted consumer goods companies. The respondents were chosen from senior staff and directors from the logistics, financial, and procurement departments of the industries due to their involvement in decision-making.

**OBJECTIVES**

- To ascertain the standard material cost and actual material cost of the raw materials used in the production.
- To determine the existing material variance.
- To evaluate the impact of variance on profitability.

## RESEARCH METHODOLOGY

A method of study is a means to describe how a researcher plans to conduct their investigation. It is a rational, methodical approach to a study issue. A methodology outlines a researcher's approach to the study in order to guarantee trustworthy, genuine findings that meet their goals and objectives. Analysing qualitative content effect of variance evaluation on profitability should be extracted as themes and patterns. Quantitative analysis obtain financial information for a given time period from relevant businesses or industries. Gather information on important factors including revenue, expenditures, costs, and profit margins. Assessing actual financial performance to predicted or budgeted levels will yield variance statistics.

## RESEARCH DESIGN

The study will adopt an exploratory research design to understand the connection between variance analysis and profitability. This approach will allow the researcher to acquire more about topic, identify patterns, and generate hypotheses for further investigation.

Sources of Data Collection:

- Primary Data
- Secondary Data

### PRIMARY DATA:

Primary data are the info gathered for the 1<sup>st</sup> time & that is not available in the secondary data source. The primary data is obtained through interaction with the manager and official of the Varsha Multi-Tech.

### SECONDARY DATA:

Annual Reports Financial Reports

Cost Sheet of the company

## SAMPLING TECHNIQUES

Table 3.1

Sampling Techniques	Judgemental Sampling
Sampling Unit	6 Products
Sampling Size	45 Products

## ANALYSIS

Material Cost Variance			
Year	Standard Cost	Actual Cost	MCV
2018-19	356438581.3	4458215.134	351980366.2
2019-20	356438581.3	4068959.445	352369621.9
2020-21	356438581.3	3199891.324	353238690
2021-22	356438581.3	3276510.499	353162070.9
2022-23	356438581.3	2213153.789	354225427.6

Analysis:

The Material Cost Variance (MCV) shows a positive trend from 2018-19 to 2022-23, indicating the organization saved money due to lower actual material costs compared to standard costs.

Interpretation:

The Material Cost Variance remained positive for five years, indicating the business was able to obtain supplies at lower prices. This positive variation was due to cost-control initiatives and favorable market conditions, resulting in material expenditure savings of 354.2 million units of currency in 2022-2023.

Material Price Variance			
Year	SP-AP	AQ	MPV
2018-19	-266.46	2571.21	-685118.69
2019-20	2.51	2777.58	6966.86
2020-21	89.41	2322.09	207626.72
2021-22	10.94	2249.58	24607.86
2022-23	163.60	1697.41	277690.07

Analysis:

The material price variance (MPV) from 2018 to 2022 reveals significant fluctuations in material costs. In 2018-19 and 2020-21, negative MPVs indicated overspending. In 2019-20 and 2021-22, positive MPVs were observed, while in 2022-23, the MPV increased to 277,690.07, indicating challenges in controlling material expenses.

**Interpretation:**

The Material Price Variance for the organization showed significant fluctuations over a five- year period. In 2018-19 and 2020-21, the variance was negative, indicating higher actual material costs than standard prices. However, in 2019-20, 2021-22, and 2022-23, the variance became positive, resulting in gains of 6,966.86 and 277,690.07, respectively. These positive deviates suggest that real material prices were lower than standard rates during these years.

Material Usage Variance			
Year	SQ-AQ	SR	MUV
2018-19	240327.308	1467.438	352665484.907
2019-20	240120.942	1467.438	352362655.041
2020-21	240576.435	1467.438	353031063.304
2021-22	240648.942	1467.438	353137462.987
2022-23	241201.112	1467.438	353947737.494

**Analysis:**

The table displays data on Standard Quantity, Actual Quantity, Standard Rate, and Material Usage Variance for various years. Actual Quantity remains constant at 1467.438 units, while Standard Quantity increases steadily from 2018-19 to 2022-23. Material consumption Variance shows steady swings over time, indicating constant control over production process material consumption.

**Interpretation:**

Over the past five years, material utilisation has increased steadily, with SQ and AQ increasing. Material Usage Variance (MUV) reached 353,947,737.494 in 2022-2023, indicating increased material usage and higher costs than expected. Further investigation is needed to understand the underlying causes and their impact on production costs.

**LIMITATIONS:**

- The analysis only considers Material Variance.
- The study is restricted to labour and overhead variance.
- Data accessibility and quality: The validity and reliability of the validity of information utilised in the study is a key factor.

- Subjectivity in variance analysis: judgements based on departures against the grain or expected performance are made using variance analysis.
- Time and resource limitations: doing a thorough investigation on this subject might take a lot of time and money.

As a result, the analysis's breadth may be constrained by the simplification or omission of key elements.

## **FINDINGS**

- Material Cost Variance shows positive trend over five years, indicating successful cost- saving efforts with lower actual costs.
- Material price variance fluctuates over time, indicating overspending and cost control, with positive variances indicating savings from acquiring materials below standard rates.
- Standard Quantity increased annually, indicating expanding production scale. Material usage variance surged in 2022-2023, indicating intensified consumption and potential cost challenges.
- Positive Material Cost Variance and Material Price Variance in multiple years highlighted consistent efficiency in procuring materials at rates lower than standard expectations, contributing to overall cost reduction.
- Standard and Actual Quantity increase, indicating growing production operation; Material Usage Variance highlights need for closer examination of factors impacting consumption and production costs.

## **SUGGESTIONS:**

- Over five years, Material Cost Variance shows favorable trend, indicating successful cost- saving strategies resulting in lower material costs compared to standard costs.
- Material Price Variance showed fluctuations, indicating overspending and effective cost control, with positive variances indicating savings achieved through procurement at lower rates.
- Standard Quantity increased yearly, indicating production expansion, while Actual Quantity was 1467.438 units. Material Usage Variance surged in 2022-2023, indicating increased material consumption and potential cost-related challenges.
- Positive Material Cost and Price Variance over years indicate efficient material procurement, exceeding expectations and reducing costs.

- Standard Quantity and Actual Quantity show steady growth, but Material Usage Variance upswing highlights need for investigation into factors affecting material consumption and production costs.

## CONCLUSION

In conclusion, variance analysis is a crucial tool for businesses to monitor their financial performance, make informed decisions, and improve their operations. By comparing actual results with expected results, businesses can identify any discrepancies and take necessary action to correct them. Variance analysis helps businesses identify performance trends, improve budgeting accuracy, monitor their financial performance, control costs, and make informed decisions.

By using techniques such as flexible budgeting, standard costing, and variance analysis ratios, businesses can perform a detailed analysis of their financial performance and identify areas for improvement.

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