

G Compute The Underapplied Or Overapplied Overhead.2. Assume That The Company Closes Any Underapplied

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In the realm of managerial accounting, understanding how manufacturing overhead is applied and subsequently adjusted is vital for accurate cost control, financial reporting, and managerial decision-making. A common challenge faced by manufacturing companies is determining whether overhead is underapplied or overapplied at the end of an accounting period. This distinction influences whether adjustments are necessary to reflect true costs accurately. When companies choose to close any underapplied overhead directly to Cost of Goods Sold (COGS), it impacts the financial statements and performance analysis significantly. This article delves into the concepts of underapplied and overapplied overhead, their implications, and the specific practice of closing underapplied overhead to COGS.

Understanding Manufacturing Overhead

Manufacturing overhead includes all indirect production costs that are not directly traceable to specific units of product. These costs encompass expenses such as factory rent, utilities, depreciation, indirect labor, and maintenance. Since these costs are not directly assigned to individual products during production, they are allocated based on predetermined overhead rates.

Application of Overhead

The application process involves estimating overhead costs and allocating them to products using a predetermined overhead rate, typically based on direct labor hours, machine hours, or other cost drivers. The formula for applying overhead is:

Applied Overhead = Predetermined Overhead Rate × Actual Activity Level

This process ensures products absorb a share of indirect costs during production, aligning estimated costs with actual production activity.

Underapplied and Overapplied Overhead: Definitions and Significance

What Is Underapplied Overhead?

Underapplied overhead occurs when the applied overhead is less than the actual overhead incurred during the period. This situation indicates that the company has not allocated enough indirect costs to its products, leading to an understated cost of goods sold and an overstated net income if not adjusted.

Example:

- Actual Overhead Incurred: \$150,000
- Applied Overhead: \$140,000
- Underapplied Overhead: \$10,000

What Is Overapplied Overhead?

Overapplied overhead happens when the applied overhead exceeds the actual overhead costs incurred. This results in an overstated product costs and an understated net income if adjustments are not made.

Example:

- Actual Overhead Incurred: \$150,000
- Applied Overhead: \$160,000
- Overapplied Overhead: \$10,000

The Impact of Underapplied and Overapplied Overhead on Financial Statements

Accurate financial reporting necessitates adjusting for these variances. Failure to do so can distort the true cost of production, affecting gross profit margins and net income.

- Underapplied Overhead increases the actual cost of goods sold when properly adjusted.
- Overapplied Overhead decreases the actual cost of goods sold when properly adjusted.

Key Point: Proper adjustments ensure that the financial statements reflect realistic profitability and cost control.

Closing Methods for Overapplied and Underapplied Overhead

Manufacturing companies have two primary options for handling these variances:

1. Close the variances to Cost of Goods Sold (commonly used when the variances are immaterial)
2. Pro-rate the variances among Work-in-Process, Finished Goods, and Cost of Goods Sold

In this article, we focus on the scenario where the company closes any underapplied overhead directly to COGS, a common practice for simplicity and materiality considerations.

Assumption: The Company Closes Any Underapplied Overhead

When a company adopts the policy of closing underapplied overhead directly to COGS, it simplifies the adjustment process. This approach recognizes that the unallocated overhead is a part of the period's costs and directly impacts gross profit.

Implications of this method:

- The underapplied overhead increases the cost of goods sold, reducing gross profit.
- Overapplied overhead is ignored or closed to the income summary account, depending on managerial preference.
- This method is often used when variances are small and deemed immaterial to financial statements.

Step-by-Step Process for Closing Underapplied Overhead to COGS

1. Calculate the Overhead Variance

Determine whether overhead is underapplied or overapplied:

- $\text{Variance} = \text{Actual Overhead} - \text{Applied Overhead}$

2. Record the Adjustment Entry

For underapplied overhead, the journal entry typically is:

- Debit: Cost of Goods Sold
- Credit: Manufacturing Overhead Control (or the variance account)

This entry increases COGS, reflecting the additional overhead costs incurred but not previously allocated.

Example Entry:

Account	Debit	Credit
Cost of Goods Sold	\$10,000	
Manufacturing Overhead Control		\$10,000

This adjustment ensures the expense reflects the actual costs.

3. Impact on Financial Statements

- Gross profit decreases by the amount of underapplied overhead.
- Net income is adjusted accordingly.
- The balance sheet remains unaffected directly; the adjustment is reflected in the income statement.

Advantages and Disadvantages of Closing Underapplied Overhead to COGS

Advantages

- Simplicity: The process is straightforward, involving a single adjusting entry.
- Timeliness: Provides quick adjustments, beneficial for managerial decision-making.
- Materiality: Suitable when variances are small and not material to financial statements.

Disadvantages

- Potential for Distortion: If variances are large, this method may distort cost figures.
- Lack of Transparency: Does not provide detailed insights into the causes of variances.
- Inaccuracy Over Time: Continuous reliance on this method may obscure underlying cost

control issues.

Additional Considerations and Best Practices

Materiality Threshold

- Companies should assess whether the variance is material.
- Material variances should be analyzed and possibly allocated differently, such as proportionally among WIP, Finished Goods, and COGS.

Periodic Review of Overhead Rates

- Regularly review and update predetermined overhead rates to minimize variances.
- Use historical data to refine estimates, reducing the likelihood of underapplied or overapplied overhead.

Alternative Closing Methods

- Pro-Rata Method: Distribute variances among inventory accounts based on their balances.
- Full Absorption Method: Adjust all inventory accounts, not just COGS.

Conclusion

Understanding and managing underapplied and overapplied overhead are critical components of effective cost accounting. When a company chooses to close any underapplied overhead directly to COGS, it simplifies the adjustment process and aligns expenses with actual costs incurred. However, it is essential for management to periodically evaluate the materiality of variances and the impact of such practices on financial statements. By implementing sound overhead control practices and appropriate adjustment methods, companies can ensure accurate cost reporting, better financial analysis, and improved operational decision-making.

Keywords: Underapplied Overhead, Overapplied Overhead, Manufacturing Overhead, Cost of Goods Sold, Cost Accounting, Variance Analysis, Overhead Adjustment, Financial Reporting, Cost Control, Managerial Accounting

Frequently Asked Questions

What is meant by underapplied overhead in manufacturing accounting?

Underapplied overhead occurs when the estimated manufacturing overhead costs allocated to products are less than the actual overhead incurred during a period, resulting in insufficient allocation in the books.

How is overapplied overhead different from underapplied overhead?

Overapplied overhead happens when the allocated manufacturing overhead exceeds the actual costs incurred, whereas underapplied overhead is when actual costs are higher than allocated amounts.

What is the typical treatment of underapplied overhead when a company closes its books?

According to the assumption, the company closes any underapplied overhead directly to Cost of Goods Sold, increasing expenses and reducing net income for the period.

Why might a company choose to close underapplied overhead to Cost of Goods Sold?

Closing underapplied overhead to Cost of Goods Sold simplifies accounting and aligns expenses with actual costs, providing a more accurate reflection of profitability for the period.

In the context of manufacturing overhead, what are the implications of consistently underapplied overhead?

Consistent underapplied overhead indicates that the company may be underestimating costs, which can lead to underpricing products, lower profit margins, and potential cost control issues.

How can a company prevent or minimize underapplied overhead?

Companies can improve estimates of overhead costs, regularly review and adjust overhead rates, and monitor actual expenses to ensure more accurate allocation and reduce underapplied overhead.

Additional Resources

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In the realm of managerial accounting, understanding how manufacturing overhead is applied, and subsequently adjusted, is crucial for accurate product costing and financial reporting. A common challenge companies face involves managing the differences between estimated overhead costs and actual incurred overhead, leading to either underapplied or overapplied overhead. When these discrepancies occur, companies often choose to close the balance—particularly underapplied overhead—to the Cost of Goods Sold (COGS), simplifying financial statements and maintaining consistency. This article delves into the concepts of underapplied and overapplied overhead, their significance, how they are computed, and the implications of closing underapplied overhead.

Understanding Manufacturing Overhead and Its Application

What is Manufacturing Overhead?

Manufacturing overhead, sometimes called factory overhead or indirect manufacturing costs, includes all manufacturing expenses that are not directly traceable to specific units of production. Examples encompass:

- Indirect materials (e.g., lubricants, cleaning supplies)
- Indirect labor (e.g., maintenance workers, supervisors)
- Utilities for the manufacturing facility
- Depreciation on factory equipment
- Factory rent and property taxes

These costs are essential to the production process but do not directly become part of the final product's cost unless allocated appropriately.

The Process of Applying Overhead

Since many overhead costs are indirect, companies allocate or apply estimated overhead to products using a predetermined overhead rate. This rate is usually based on a cost driver such as direct labor hours, machine hours, or production units.

Calculation of Predetermined Overhead Rate:

$$\text{Predetermined Overhead Rate} = \frac{\text{Estimated Total Manufacturing Overhead}}{\text{Estimated Total Cost Driver}}$$

Once established, this rate is used throughout the period to assign overhead costs to products:

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$$\text{Applied Overhead} = \text{Predetermined Overhead Rate} \times \text{Actual Cost Driver}$$

This process ensures costs are allocated systematically and consistently, facilitating inventory valuation and profitability analysis.

The Discrepancy: Underapplied and Overapplied Overhead

Despite the systematic approach, the applied overhead often differs from actual overhead incurred due to variances in estimates or operational conditions. This discrepancy results in either underapplied or overapplied overhead.

Defining Underapplied and Overapplied Overhead

- Underapplied Overhead: Occurs when the applied overhead is less than the actual overhead incurred during the period.
- Overapplied Overhead: Occurs when the applied overhead exceeds the actual overhead incurred.

Mathematically:

$$\text{Underapplied Overhead} = \text{Actual Overhead} - \text{Applied Overhead}$$

$$\text{Overapplied Overhead} = \text{Applied Overhead} - \text{Actual Overhead}$$

Both situations have implications for the company's financial statements, especially concerning the accuracy of cost calculations and profit margins.

Calculating Underapplied and Overapplied Overhead

Step 1: Gather Data

- Actual manufacturing overhead costs incurred during the period.
- Total actual activity related to the cost driver (e.g., actual machine hours).
- Predetermined overhead rate used during the period.
- Total applied overhead (calculated as above).

Step 2: Compute Applied Overhead

$$\text{Applied Overhead} = \text{Predetermined Overhead Rate} \times \text{Actual Cost Driver}$$

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Step 3: Determine Variance

- Variance (Over/Underapplied):

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$$\text{Variance} = \text{Actual Overhead} - \text{Applied Overhead}$$

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- If the result is positive, the overhead is underapplied.
- If negative, it is overapplied.

Implications of Underapplied and Overapplied Overhead

Understanding how these variances impact financial statements is essential, especially in decision-making and performance evaluation.

Impact of Underapplied Overhead

- Expenses are understated; costs assigned to products are lower than actual costs.
- Resulting gross profit and net income are overstated if the variance remains unadjusted.
- Reflects inefficiencies or inaccurate estimates that might need managerial attention.

Impact of Overapplied Overhead

- Expenses are overstated; costs assigned are higher than actual costs.
- Can lead to understated gross profit and net income.
- Might indicate overestimation of overhead rates or efficiencies in production.

Closing Underapplied Overhead: The Company's Approach

Why Companies Close Underapplied Overhead

Many companies opt to close underapplied overhead directly to Cost of Goods Sold at the end of the period. This approach simplifies accounting and provides a more accurate reflection of expenses, especially when the variance is immaterial or deemed to be a normal part of operations.

Advantages of Closing Underapplied Overhead:

- Simplifies the closing process.
- Ensures costs are fully accounted for in the period.
- Avoids the creation of an unadjusted over/underapplied overhead account on the balance sheet.

The Journal Entry for Closing Underapplied Overhead

When a company decides to close the underapplied overhead, the following journal entry is typically recorded:

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Debit: Cost of Goods Sold

Credit: Manufacturing Overhead (or Overapplied Overhead account)

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This entry increases COGS, reflecting the additional expense needed to cover the underapplied overhead. It effectively transfers the variance from the overhead account directly into expenses.

Practical Example: Closing Underapplied Overhead

Suppose a manufacturing company incurred actual overhead costs of \$150,000 during a period. The predetermined overhead rate led to applied overhead of \$140,000, resulting in an underapplied overhead of:

$$\begin{aligned} & \backslash \\ & \$150,000 - \$140,000 = \$10,000 \\ & \backslash \end{aligned}$$

Since the company closes underapplied overhead to COGS, the journal entry would be:

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Debit: Cost of Goods Sold \$10,000

Credit: Manufacturing Overhead \$10,000

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This action increases the COGS, aligning expenses with actual costs and ensuring accurate profitability analysis.

Broader Considerations and Best Practices

Variance Analysis and Management

Regularly analyzing overhead variances helps management identify operational inefficiencies and improve future estimates. Understanding the causes of underapplied overhead can guide process improvements, better budgeting, and more accurate rate setting.

Materiality and Adjustments

Deciding whether to close the variance depends on its materiality. Small variances might be absorbed into normal operations, while significant discrepancies warrant adjusting financial statements or revising estimates.

Impact on Financial Ratios

Adjusting COGS affects gross margin, net income, and key financial ratios, influencing decision-making by investors, creditors, and management.

Conclusion

Managing manufacturing overhead is a fundamental aspect of cost accounting that directly impacts a company's financial health and operational efficiency. Recognizing whether overhead is underapplied or overapplied provides insight into cost control and process effectiveness. When companies choose to close underapplied overhead to COGS, they simplify their accounting and ensure expenses reflect true costs. However, continuous variance analysis remains essential for refining estimates, improving operational performance, and maintaining accurate financial reporting. As manufacturing environments evolve, so too must the strategies for overhead application and adjustment, ensuring companies remain competitive and financially transparent.

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