

POHR (Predetermined Overhead Rate) Is Based On Two Estimates: Total Expected MOH, Total Expected Cost Driver. 1. How

POHR (Predetermined Overhead Rate) Is Based On Two Estimates: Total Expected MOH, Total Expected Cost Driver. 1. How Understanding the foundation of the Predetermined Overhead Rate (POHR) is crucial for effective cost management and accurate product costing in manufacturing and service industries. The POHR is a vital component in allocating manufacturing overhead costs to products or job orders, enabling businesses to determine product costs accurately and set appropriate selling prices. This article explores the two essential estimates on which the POHR is based – Total Expected Manufacturing Overhead (MOH) and Total Expected Cost Driver – and explains how these estimates influence the calculation and application of POHR for better financial planning and control.

What Is the Predetermined Overhead Rate (POHR)?

The Predetermined Overhead Rate (POHR) is a rate used to allocate manufacturing overhead costs to products or jobs during a specific period. Unlike actual overhead rates, which are calculated after the period ends, the POHR is estimated beforehand, providing a consistent basis for assigning overhead costs throughout the accounting period.

Key features of POHR include:

- It is established before the accounting period begins.
- It simplifies the costing process.
- It aids in budgeting and cost control.

Understanding the Two Core Estimates for Calculating POHR

The accuracy of the POHR hinges on two critical estimates:

1. Total Expected Manufacturing Overhead (MOH)
2. Total Expected Cost Driver

Let's examine each in detail.

1. Total Expected Manufacturing Overhead (MOH)

Manufacturing Overhead encompasses all indirect manufacturing costs that cannot be traced directly to a specific product or job. This includes expenses such as:

- Factory rent
- Utilities
- Depreciation of equipment

- Indirect labor
- Maintenance and supplies

Estimating Total Expected MOH involves:

- Analyzing historical cost data
- Considering upcoming changes in overhead expenses
- Using industry benchmarks or management forecasts

Importance: Accurate estimation ensures overhead costs are allocated properly, preventing cost distortion and helping managers make informed decisions.

2. Total Expected Cost Driver

A Cost Driver is a factor that causes changes in the cost of an activity. The total expected cost driver represents the anticipated level of activity that will influence the overhead costs. Common examples include:

- Machine hours
- Labor hours
- Number of units produced
- Number of setups

Estimating the Total Expected Cost Driver involves:

- Reviewing past production data
- Forecasting future activity levels based on sales projections
- Incorporating planned operational changes

Importance: The selected cost driver directly impacts the rate calculation and the fairness of overhead allocation.

How to Calculate the POHR Using These Estimates

The calculation of the Predetermined Overhead Rate follows a straightforward formula:

POHR Formula:

$$\text{POHR} = \frac{\text{Total Expected Manufacturing Overhead (MOH)}}{\text{Total Expected Cost Driver}}$$

Step-by-step process:

1. Estimate Total Expected MOH: Sum all anticipated indirect manufacturing costs for the period.
2. Estimate Total Expected Cost Driver: Determine the expected total units of activity or measure (e.g., total machine hours).
3. Divide MOH by Cost Driver: Calculate the rate to be applied per unit of activity.

Example Calculation:

Suppose a manufacturing company estimates:

- Total Expected MOH = \$500,000
- Total Expected Machine Hours = 10,000 hours

Then,

$$\text{POHR} = \frac{500,000}{10,000} = \$50 \text{ per machine hour}$$

This rate means that for every machine hour used, \$50 of overhead will be allocated to the product or job.

Why Are These Estimates Critical?

The reliability of the POHR depends heavily on how accurately these two estimates reflect reality. Poor estimates can lead to:

- Overcosting or undercosting products
- Misleading profit margins
- Ineffective cost control strategies
- Budgeting inaccuracies

Benefits of Accurate Estimates:

- Facilitates consistent and fair overhead allocation
- Enhances planning and decision-making
- Supports pricing strategies
- Improves financial statements' accuracy

Factors Influencing the Estimates

Several factors can influence the accuracy of the expected MOH and cost driver estimates:

- Changes in production volume
- Fluctuations in indirect costs
- Technological advancements
- Market conditions
- Management's forecast accuracy

Strategies to improve estimates include:

- Using detailed historical data
- Adjusting estimates regularly based on actuals
- Incorporating industry benchmarks
- Engaging cross-departmental input for comprehensive forecasts

Advantages and Limitations of Using POHR Based on Estimates

Advantages:

- Simplifies overhead allocation process
- Allows for timely product costing
- Facilitates budgeting and planning
- Helps in identifying variances between estimated and actual costs

Limitations:

- Relies on estimates, which may be inaccurate
- Potential for overhead over- or under-absorption
- Less effective in highly volatile or unpredictable environments

- Needs periodic review and adjustment for accuracy

Implementing and Managing POHR Effectively

To maximize the benefits of the POHR based on these estimates, organizations should:

- Regularly review and update estimates: Reflect changes in cost structures and production levels.
- Monitor variances: Compare actual overhead costs and activity levels against estimates.
- Adjust the rate as needed: Recalculate during the period if significant discrepancies occur.
- Use flexible costing systems: Incorporate activity-based costing (ABC) for more precise overhead allocation when appropriate.
- Train staff: Ensure accounting and production teams understand the importance of accurate estimates.

Conclusion

The Predetermined Overhead Rate (POHR) is a fundamental tool in cost accounting that hinges on two crucial estimates: the total expected manufacturing overhead and the total expected cost driver. These estimates form the backbone of the calculation, ensuring overhead costs are allocated systematically and fairly across products or jobs. Accurate estimation and diligent management of these components enable organizations to maintain cost control, set appropriate prices, and improve overall financial performance. By understanding how these estimates influence the POHR, managers and accountants can make more informed decisions, optimize resource utilization, and achieve greater operational efficiency.

Keywords for SEO optimization:

- Predetermined Overhead Rate (POHR)
- Manufacturing Overhead (MOH)
- Cost Driver
- Overhead Allocation
- Cost Estimation
- Cost Accounting
- Overhead Rate Calculation
- Manufacturing Cost Management
- Budgeting and Planning in Manufacturing
- Cost Control Strategies

Frequently Asked Questions

How is the Predetermined Overhead Rate (POHR) calculated using the two estimates?

The POHR is calculated by dividing the total estimated manufacturing overhead (MO) by the total estimated cost driver (such as direct labor hours or machine hours).

What are the two key estimates required for determining the POHR?

The two key estimates are the total expected manufacturing overhead (MO) and the total expected cost driver (e.g., total direct labor hours or machine hours).

Why is it important to base the POHR on accurate estimates of MO and the cost driver?

Accurate estimates ensure that overhead is allocated properly to products, leading to more precise product costing, pricing, and profitability analysis.

How does the choice of the cost driver impact the calculation of POHR?

Choosing an appropriate cost driver that accurately reflects overhead consumption ensures a more accurate and fair allocation of overhead costs to products or jobs.

When should a company update its POHR based on new estimates?

A company should update its POHR periodically, especially when there are significant changes in overhead costs or the estimated total cost driver, typically at the beginning of a new accounting period.

Additional Resources

POHR (Predetermined Overhead Rate) Is Based On Two Estimates: Total Expected MOH and Total Expected Cost Driver

In the realm of managerial accounting and cost control, the Predetermined Overhead Rate (POHR) stands as a fundamental tool for allocating manufacturing overhead costs to products or job orders. Its strategic use permits companies to estimate costs with a degree of foresight and consistency, facilitating budgeting, pricing, and financial analysis. However, the calculation and application of POHR are far from straightforward; they hinge critically on two key estimates: Total Expected Manufacturing Overhead (MOH) and Total Expected Cost Driver. Understanding the underpinnings of these estimates, their accuracy, and their influence on cost management is vital for managers, accountants, and financial analysts alike.

This comprehensive review explores the intricacies of how POHR is derived based on these two estimates, examines the methods for determining them,

analyzes their impact on cost control, and considers potential pitfalls and best practices. By delving into these facets, we aim to provide a thorough understanding of the mechanics, implications, and strategic importance of the POHR in modern manufacturing environments.

Understanding the Predetermined Overhead Rate (POHR)

At its core, the POHR is a rate calculated prior to the period's production activities, used to apply manufacturing overhead costs to products or jobs. Unlike direct costs such as direct materials or direct labor, manufacturing overhead encompasses indirect costs like utilities, depreciation, factory supplies, and supervisory wages.

Definition:

> The Predetermined Overhead Rate is a percentage or rate used to allocate manufacturing overhead costs to products based on a chosen activity base or cost driver, calculated before the actual period begins.

Purpose:

- To facilitate timely product costing
- To aid in budgeting and financial planning
- To enable consistent cost application across periods

Basic Formula:

$$\text{POHR} = \frac{\text{Total Expected Manufacturing Overhead}}{\text{Total Expected Cost Driver}}$$

This formula underscores the reliance on two critical estimates, which, if inaccurate, can distort product costs and influence managerial decisions.

The Two Pillars: Total Expected MOH and Total Expected Cost Driver

The calculation of POHR is anchored firmly on estimating two components:

1. Total Expected Manufacturing Overhead (MOH)
2. Total Expected Cost Driver

Each component warrants a detailed examination to understand its significance, estimation process, and potential sources of error.

1. Total Expected Manufacturing Overhead (MOH)

Definition & Components:

Manufacturing overhead encompasses all indirect manufacturing costs that cannot be traced directly to specific products but are necessary for

production. These include:

- Factory utilities
- Maintenance and repairs
- Factory supervisor wages
- Depreciation of manufacturing equipment
- Factory supplies
- Insurance and property taxes related to manufacturing facilities

Estimating Total Expected MOH:

Estimating MOH involves analyzing historical data, adjusting for anticipated changes, and considering upcoming production levels.

Methods:

- Historical Analysis: Using past overhead costs to project future costs.
- Budgeted Figures: Incorporating planned expenditures for the upcoming period.
- Incremental Analysis: Adjusting previous figures for inflation, changes in utility rates, or new equipment.

Challenges:

- Variability in overhead costs due to factors outside managerial control.
- Changes in production technology or processes.
- Seasonal or cyclical fluctuations.

Implications:

An over- or underestimation of total expected MOH can lead to inaccurate cost allocations, affecting pricing strategies, profitability analysis, and performance evaluation.

2. Total Expected Cost Driver

Definition & Role:

The cost driver is an activity or factor that causes changes in the cost of manufacturing overhead. The total expected cost driver quantifies the volume or level of activity that will influence overhead costs.

Common Examples:

- Direct labor hours
- Machine hours
- Number of units produced
- Number of setups
- Number of batches

Estimating the Total Expected Cost Driver:

This involves projecting the total level of activity for the upcoming period based on:

- Production schedules
- Capacity planning
- Historical activity levels

- Anticipated process improvements

Challenges:

- Accurate forecasting of production activity.
- Changes in manufacturing techniques reducing or increasing activity levels.
- External factors impacting production volume.

Implications:

Misestimating the total expected cost driver affects the rate's accuracy, leading to over- or under-costing of products, which can distort profitability assessments.

How Are These Estimates Determined in Practice?

A detailed and methodical approach is necessary for reliable estimation.

Data Collection and Analysis

- Historical Data Review: Analyzing previous periods' overhead costs and activity levels.
- Forecasting: Using sales projections and capacity plans to estimate future activity.
- Adjustments for Known Changes: Incorporating expected inflation, technological innovations, or process improvements.

Collaborative Planning

- Engaging department heads and production managers to gain insights.
- Cross-functional analysis to align cost estimates with operational plans.

Scenario Planning

- Developing multiple estimates under different scenarios to account for uncertainty.
- Sensitivity analysis to understand the impact of estimate variations.

Impacts of Estimation Accuracy on Costing and Decision-Making

The choice and accuracy of the two estimates directly influence the effectiveness of the POHR and, consequently, managerial decision-making.

Advantages of Accurate Estimates

- Precise product costing
- Better pricing strategies
- Improved profitability analysis
- Enhanced budgeting and control

Risks of Inaccurate Estimates

- Overestimation: Leads to inflated overhead rates, causing products to appear more costly than they are, potentially pricing them out of the market.
- Underestimation: Results in under-applied overhead, understating product costs, and risking losses if prices are set too low.

Cost Distortion and Its Consequences

Inaccurate POHRs can cause cost distortion, affecting:

- Product line profitability analysis
- Cost control efforts
- Performance evaluations
- Strategic planning

Advanced Considerations and Modern Approaches

While traditional POHR calculation relies on static estimates, modern manufacturing environments increasingly adopt dynamic approaches.

Activity-Based Costing (ABC)

- Uses multiple cost drivers to allocate overhead more accurately.
- Reduces reliance on a single, broad estimate.
- Provides detailed insights into overhead consumption.

Flexible Budgeting and Variance Analysis

- Regular updates to estimates based on actual data.
- Control mechanisms to identify deviations and adjust estimates accordingly.

Integration with Manufacturing Execution Systems (MES)

- Real-time data collection for more accurate estimation.

- Continuous updating of overhead and activity levels.

Best Practices for Estimating POHR Components

To optimize the accuracy and usefulness of the POHR, organizations should consider the following best practices:

- Use multiple years of historical data for trend analysis.
- Collaborate across departments to incorporate operational insights.
- Regularly review and adjust estimates as actual data becomes available.
- Incorporate risk assessments and scenario planning.
- Leverage technology for real-time data collection and analysis.

Conclusion

The POHR (Predetermined Overhead Rate) is an essential tool for effective cost management, predicated on two critical estimates: Total Expected MOH and Total Expected Cost Driver. These estimates must be carefully developed, regularly reviewed, and adjusted as needed to ensure accurate product costing and sound managerial decision-making.

While the calculation might seem straightforward, the underlying complexities reflect the dynamic nature of manufacturing environments. Variability in overhead costs, fluctuating production levels, and technological changes all influence the accuracy of these estimates. Therefore, organizations must adopt meticulous estimation procedures, leverage modern data analytics, and foster cross-functional collaboration to refine their POHR calculations continually.

By understanding and managing the estimation process's nuances, companies can better control their costs, set competitive prices, and enhance profitability. In an increasingly competitive landscape, mastering the mechanics behind the POHR is not just an accounting exercise but a strategic imperative for sustained success.

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