

Good example of
report on total
material cost =
 $2150000 + 1280000 = 3430000$, total wa...

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- Apportionment, Allocation, and Absorption of Overhead

Total overhead=€650000, Thus overhead as percentage of Direct material cost= $650000/3430000*100= 18.95\%$.

Thus overhead to be absorbed to Econo bikes at 18.95% of €2150000=€407425, and to Luxi 18.95% of €1280000=€242575

**Under the blanket overhead absorption rate as was the practice, the €650000 overhead absorbed between Econo and Luxi was $2000/3000*650000=€433333$ and $1/3*€650000=€216667$

1. After all the service department costs are apportioned to the production departments, the next step is to spread the factory overhead to the different products or job produced. This is termed as overhead absorption in cost accounting. The Institute of Cost and Management Accountant (UK) define overhead absorption as “ the allotment of overhead to cost units”. Known by different names such as recovery, overhead application, overhead costing, levy, burden rate etc. the term absorption implies the expenses pertaining to a producing department or cost centre are finally charged to or absorbed in the cost of products, job etc. passing through it. As a result of absorption, the cost of each unit of product of the producing department includes an equitable share of the total overhead of that department. (Izar and Hontoir, 2000)

Methods of absorption:

In cost accounting it is difficult to know the exact amount of overhead that will be charged to products or jobs. This problem arises because of the nature of the overhead cost, which is particularly impossible to trace or identify all overhead costs to a specific job or products. Therefore, some <https://assignbuster.com/good-example-of-report-on-total-material-cost-215000012800003430000-total-wages432000360000/>

method of overhead absorption has to be applied to absorb the overhead to individual products or jobs on some equitable basis. (Horngren, 1981)

This rate which is charged to absorb overhead costs is known as overhead and absorption rate. The following are some of the recognised methods of overhead absorption rates:

(i) Percentage of direct material cost:

In some manufacturing concerns a study of past cost will reveal a correlation between the direct material cost and the amount of factory overhead cost incurred. Therefore an absorption rate based on direct material cost might be applicable. This method takes overhead cost as percentage of direct material cost. Thus overhead absorption rate will be, $\frac{\text{Overhead cost}}{\text{Direct material cost}} \times 100$. Each product or job will be charged on the basis of that % of direct material cost of that product or job. Thus if direct material cost is €M and the overhead as % of direct material cost is D%, then overhead charged to that product or job will be D% of €M. (Polimeni, 2000)

The relationship between direct material cost and overhead cost lies primarily in the method of production. (a) If material cost consists of a significant amount, then overhead cost's amount will be high as costly plant and equipment will be needed to process or work on the costly materials. Thus maintenance cost will be high.

(a) Supervision cost will be higher for expensive plant machinery

(b) Warehousing cost will be more for costly material than less costly material because greater security and protection will be needed to guard the materials from pilferage, damage, theft, obsolescence, fire, flood, etc.

(Nadiri and Schankerman, 1980)

(c) Material handling cost will be more for expensive material than less expensive material, e. g. the cost to handle parts and components in a motorcycle factory will be certainly higher than that of handling jute bails in a jute factory. (Gietzmann and Monahan, 1996, pp. 409--429)

(d) Insurance cost will be higher for expensive material than less expensive materials. It might be noted in this regard that techniques of material cost management like Economic Order Quantity, Maximum level, Minimum level, Reordering quantity and others are to be applied. Effective implementations of such techniques will also entail cost. (Ehrenberg and Mykula, 1999)

Advantages of direct material cost percentage cost method

The percentage of direct material cost method is simple, easy to understand and apply. This method will give correct overhead figures where prices of raw material does not differ significantly, when quantity and cost in each product is uniform. (Woolf and Tanna et al., 1985)

However this method has some disadvantages;

(i) The correlation between direct material costs cannot be empirically proved.

(ii) Material prices often fluctuate and this will give higher or lower overhead figures individually, although total overhead will remain unchanged.

(Harington, 1992)

Most of the overhead expenses vary with time. For example, a product or job may require low material cost but long period of processing will absorb more overhead than a product or job requiring costly material but less processing time. Thus most overhead cost accrues on time basis and not on material

consumed. Use of direct material cost ignores the time factor for allocation/ apportionment and absorption of overhead costs. (Lucey, 2002)

(ii) Percentage of direct wages:

This method is widely used in such factories where the process of production is labour intensive; production is uniform and all the workers in the factory work on uniform wage rate and number of workers are equitably distributed among various departments or cost centres. Under this method the overhead absorption rate is $\text{Overhead}/\text{Direct labour} \times 100$.

This method is simple to operate and understand. This method takes in to account the time factor. More over labour rate fluctuates less frequently than material rate.

However this method has some drawbacks. It depends on the cost of direct labour that may not correctly reflect the contribution of overhead in the cost of production. (Woolf, 1987)

(iii) Prime cost % method:

Under this method overhead is absorbed as % of prime cost. Thus overhead is rate is $\text{Overhead cost}/\text{prime cost} \times 100$. This method is simple to operate; it considers both material and labour cost in charging overhead costs. However if cost of material is a significant part of prime cost then this method ignores time factor. It is suitable in those departments where type of material and value of material used are constant. (Horngren and Datar et al., 2012)

(iv) Labour hour/ production hour rate method:

Under this method factory overhead is absorbed as Factory overhead/Direct labour hours.

Useful when direct labour is dominant in the production method. It also considers the time factor. But this method requires accumulation of direct labour hour by job, product or department. This method cannot be used where machines are extensively used. (Gietzmann and Monahan, 1993)

(vi) Machine hour rate method:

Similar to labour hour rate, here overhead is Factory overhead/machine hours. This method is suitable for machine intensive production method. This method requires additional clerical cost. (Drury, 1998)

2. Key findings and limitations.

In the previous system overhead absorbed to two models of bike namely Econo-bike and Luxi-bike were €433333 and €216667 respectively. Here blanket numbers of units produced were applied. This method is not very suitable because it does not take in to account other factors that influence overhead. In the instant case, direct material cost is a significant part of the total cost, implying material intensity of the production process. As a result it will not be very un-prudent to apply Direct Material cost % method to absorb the overhead costs. Hence it is suggested that in preparing budget and comparing actual cost with budgeted figures % of direct material cost might be applied. By applying this method share of overhead cost will be €407425, and €242575 respectively for Econo-bike and Luxi-bike respectively. Thus, more overhead was charged to Econo and less to Luxi. This is eliminated by using direct material % method.

However the limitations of this method are;

- (i) If material prices for the two models differ largely then this method will not reflect correct figure of absorption.
- (ii) This method is not proper if some parts are processed in all processes and some in few processes.
- (iii) Both high cost and low cost materials may go through same processes. This is ignored here.
- (iv) Time factor, the important driving force of overhead is ignored here.

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