Assignment to 2.4.3

Given are the following data:

$AdmCost = 300000$	Administration cost
$CapAss = 30000$	Capitalized Assets
$IC\_FP = 10000$	Change in inventory of finished goods
$IC\_UP = -6000$	Change in inventory of unfinished goods
$CapCost = 100000$	Cost of capital
$LabCost = 600000$	Cost of labour
$MatCost = 200000$	Cost of material
$Sales = 1000000$	Sales [currency units]
$SalesCost = 100000$	Sales costs
$TCOP = 900000$	Total cost of production

There are no other items which influence profit.

Establish from these data a profit & loss statement

1. according to the total cost results accounting with as many items as possible
2. according to the total cost results accounting with as few items as possible
3. according to the cost-of-sales results accounting with as many items as possible
4. according to the cost-of-sales results accounting with as few items as possible

Assignment to 2.4.3

Solution:

In such cases it is quite practical to establish first some relationships which are not shown above but which should come into our mind if we look at those data.

It should firstly be clear that

$$TP = Sales + CapAss + IC\_FP + IC\_UP \qquad \text{Total performance}$$

$$TP = 1034000$$

Total cost, on the other hand, can be looked at from the point of view of productive factors used:

$$TCOP = MatCost + LabCost + CapCost$$

$$TCOP = 900000 \qquad \text{(which makes above definition unnecessary; TCOP can be calculated from the other data)}$$

From this profit or loss can be calculated quite easily according to the guidelines of assignment 2:

$$Result = TP - TCOP$$

$$Result = 134000$$

Inserting the details of TP and TCOP gives the solution of assignment 1:

$$Result = Sales + CapAss + IC\_FP + IC\_UP - MatCost - LabCost - CapCost$$

$$Result = 134000$$

Of course the result must be the same.

A profit & loss statement according to cost-of-sales results accounting requires the cost of sales, which are not yet known. But we know that for cost-of-sales results accounting all costs have to be redistributed in order to show for which functions they were used:

$$TCOP = MCOP + AdmCost + SalesCost$$

Unfortunately the manufacturing cost of goods produced (MCOP) have not yet been defined. But MCOP can be defined by using this equation:

$$MCOP = TCOP - AdmCost - SalesCost \qquad \text{Manufacturing cost of goods produced}$$

$$MCOP = 500000$$

Unfortunately again, the cost-of-sales method does not require the manufacturing cost of goods produced, but the manufacturing cost of goods sold. How could we get there?

We simply deduct from the manufacturing cost of all goods produced those cost which were not used for the goods sold. What are they?

Besides for goods sold manufacturing costs arose for capitalized assets, for change in inventory of finished goods and for change in inventory of unfinished goods, which three items are just valued at their manufacturing cost. If IC_FP or IC_UP is negative (i.e. goods sold were taken from stock in so far) it is clear that by subtracting a negative figure from MCOP then MCOGS will exceed MCOP. This is logical, since more goods were sold than they were produced, and the costs of goods sold exceed the cost of goods produced. Unfortunately the cost of production are often referred to as "total" costs and it may be misleading that the so called total cost are less than the costs of goods sold. Anyway, we have:

l243e02.mcd

Assignment to 2.4.3

$$MCOGS = MCOP - CapAss - IC\_FP - IC\_UP \quad \text{Manufacturing cost of goods sold}$$

$$MCOGS = 466000$$

Now we can proceed to calculating profit or loss according to the cost-of-sales results accounting, giving full details, which is the solution to assignment 3:

$$Result = Sales - MCOGS - AdmCost - SalesCost$$

$$Result = 134000$$

If we finally define

$$TCOGS = MCOGS + AdmCost + SalesCost \quad \text{Total cost of goods sold}$$

$$TCOGS = 866000$$

the result can be defined according to the requirements of assignment 4:

$$Result = Sales - TCOGS$$

$$Result = 134000$$

l243e02.mcd