

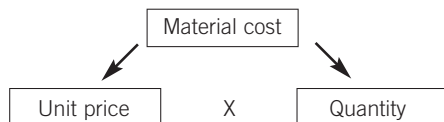
FORMULA WON

In the first of a three-part series, Mary Ofili explains standard costing and direct materials price variance

STANDARD DIRECT MATERIALS

The standard cost of direct materials is made up of:

- The quantity of materials expected to be used; and
- The unit cost of materials



Where standard costing is used in an organisation for setting its budgets, this will have to be compared with the actual costs incurred and thereby the variances can be calculated. The direct materials variance is the difference between the standard total cost of materials for the actual level of production and the actual cost of materials incurred in the production.

This is simply measuring the difference between what the materials should have cost for the actual level of production and what it actually cost.

The total direct materials variance can be split into the following two variances:

- Direct materials price variance.
- Direct materials usage variance.

These two variances will enable management to be able to narrow down and identify what would have caused the variance – whether it is the unit price or the quantity of materials used in the production process.

I will be covering the direct material price variance in this article and will follow this with the direct materials usage variance in the next edition and then the direct materials variance.

DIRECT MATERIALS PRICE VARIANCE

This is the difference between the standard price due to be paid for the actual quantity of materials used and the actual price paid. Notice that this compares how much should I have paid per unit and how much I actually paid per unit, for the quantity of materials used in the production.

It focuses on the price, so the difference between the standard unit price and the actual price paid for the quantity of materials purchased.

	£
Standard cost of actual quantity used	X
Actual cost of actual quantity used	<u>X</u>
Material price variance	<u>X</u>

Where we have the standard cost and actual cost of the same quantity of materials actually used in the production being compared, any difference arising can only be as a result of the unit prices of the material.

If the actual cost is less than the standard cost, then the variance will be favourable and if the actual cost is more than the standard cost, then the variance will be adverse. This will mean that:

ACTUAL unit price > STANDARD unit price = ADVERSE variance

ACTUAL unit price < STANDARD unit price = FAVOURABLE variance

Where there is a favourable direct material price variance, it indicates to management that there was some efficiency in the unit purchase price of materials and where there is an adverse variance it indicates that there was some inefficiency in the unit purchase price of materials, which has contributed to the total material variance.



For example, if the standard cost of materials for a product called 'Product F' is as below:

1 unit of Product F	Quantity	Cost per yard (£)	Total cost per unit (£)
Materials	3.2 yards	16.00	51.20

So 4,200 yards of materials that cost a total of £76,860 was used for the production of 1,300 units during the month. What will be the material price variance?

SOLUTION

STANDARD COST	ACTUAL COST
£67,200 £16.00 X 4,200 yards	£76,860 £18.30 X 4,200 yards

Direct materials price variance:

Standard cost of actual quantity used (4,200 yards x £16)	£67,200
Actual cost of actual quantity used	<u>£76,860</u>
Direct materials price variance	<u>£9,660</u> Adverse**

Also:

Standard unit price	£16.00
Actual unit price (£76,860 / 4,200yards)	<u>£18.30</u>
Materials unit price variance	<u>£2.30</u> Adverse

Material price variance = £2.30 x 4,200 yards = £9,660 Adverse**

Note:

You may have noticed that the standard unit cost was budgeted to be £16.00 per yard but the actual materials were purchased for £18.30 per yard, which establishes an adverse unit price variance since the materials were purchased for a higher unit price than budgeted. This is then multiplied by the actual quantity of materials used, and with this, you arrive at the materials price variance. **PQ**

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Parts 2 and 3 of this article will feature in the next two issues of PQ