**Unit 19**
**Standard Costs: Theory**

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## ILO1. Standard Costs: Introduction

Industries often use benchmarks, or standards as a method to measure performance. Industries such as manufacturing, food, service, and non profit organizations use 2 types of benchmarks one based on price, the other simpler standard is based on quantity.

To begin with, price standards suggest the costs for each resource required for input. All hospitals and schools have standard costs such as canteen food, laundry requirements etc. Also, those involved in construction and the building industry have standard labour costs for subcontractors, carpenters, plumbers etc. Likewise in the manufacturing industry, companies have very sensitive costing systems to determine quantity and price benchmarks for each individual material/component, labour, and overheads.

The second type of standard is based on quantity, and exactly how much material/component is required to make the final product. For example, a car mechanic garage provided tuneup services have predetermined labour time standards for the task. In the fastfood industry also, McDonalds has precise standards for the quantity of beef in their burgers.

One challenge facing the application of standard costs is to define them. The first part of this problem comes from determining the direct materials standards. The standard quantity per unit should only be set in consideration of the amount of material necessary to complete the final product. For the standard price per unit for direct materials, this must be in line with aggregate costs of delivered resources used for production.

The second problem is associated with the direct labour standards. This looks at the standard rate per hour usually for manual labour or minimum wage employment. But may also include benefits, or miscellaneous labour costs. In this case, the standard hours per unit represents the hours of labour needed to produce one unit. While direct labour and direct materials can be determined though activity levels as mentioned, they can also be calculated by the required time to complete a task, or through time and motion estimations.

The final issue is in regard to variable manufacturing overhead standards. This incorporates the price standard for such manufacturing that’s generated from the variable segment of the approximated overhead rate. While the quantity standard for variable manufacturing overhead is found by either the number of machine hours or direct labour hours used in production, and that is allocated in the predetermined overhead rate.

To help overcome such difficulties, a standard cost card is used detailing the standard amounts of direct components; material, labour and variable overhead inputs, needed for production. One is included below for your perusal.

| Inputs | A<br>Standard Quantity or Hours | B<br>Standard Price or Rate | A x B<br>Standard Cost per Unit |
|---|---|---|---|
| Direct materials | 3.0 lbs. | $ 4.00 per lb. | $ 12.00 |
| Direct labor | 2.5 hours | 14.00 per hour | 35.00 |
| Variable mfg. overhead | 2.5 hours | 3.00 per hour | 7.50 |
| Total standard unit cost | | | $ 54.50 |

Fig 19.1 Standard Cost Card Example

## ILO2. Using Standards in Flexible Budgets

To use these standards in flexible budgets we consider activity and spending variances, and price and quantity variances. For activity and spending variances, standard costs per unit for those manufacturing components such as direct labour, direct materials, and variable manufacturing overhead are used. In contrast to this, spending variances become more applicable by factoring them into their price and quantity components. We have produced the model for standard cost variance for your analysis.

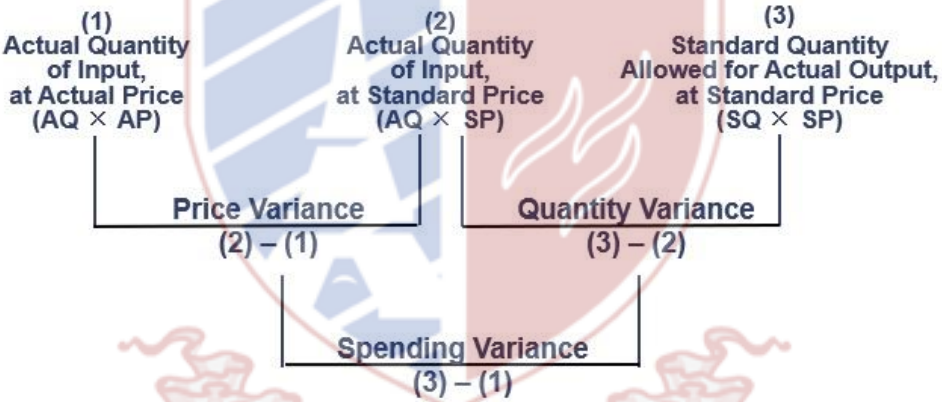


Fig 19.2 Model for Standard Cost Variance Analysis

We can break down our model into components of price and quantity variances, and price and quantity standards. We will use the variance concept again in the future units, so to reiterate, price variance represents the difference between the standard price and the actual price, multiplied by the actual number of inputs bought. Whereas the quantity variance highlights the difference between how much of an input was used for the actual level of production against how much should have been used. This amount is then measured in dollars using the standard input price.

As industry usually have different manager responsible for purchasing and for production, so price and quantity standards must be determined individually. For example the purchase officer controls raw material prices, while production managers control the quantity of those raw materials being used. These activities more often than not, occur at different times reinforcing the necessity to establish these standards separately.

**ILO3. Standard Costs - Managerial Implications**

As these standard costs are used throughout manufacturing, its important to realize the advantages and disadvantages of them. To start with, standard costs represents a core element of management. Secondly, these standards equip managers with information allowing them to pursue efficiency and economies of scale. Furthermore, its reduces difficulty in record keeping and promotes responsible document preparation.

Conversely, standard costs have a number of limitations. For instance, these reports are not produced in a timely manner, meaning that data or information can be outdated. From an operating floor perspective, enforcing such standards can have a negative affect on worker morale. Labour variance is also based on two loosely held assumptions. First of all they assume if employees work faster then it will increase output; disregarding potential costs due to higher risk of injury. Also, they wrongly consider labour as a variable cost which can be outdated as human resources are slowly being replaced by automated manufacturing. In other circumstances, a favourable variance can have the same or worse effect than an unfavourable variance. And finally, placing too much emphasis in meeting a standard overshadows increasing quality, punctual delivery, customer satisfaction, and more importantly meeting standards negates the possibility of continuous process improvement that is necessary in an ever increasing competitive environment.

**References**:


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