

VARIANCES AND VARIANCE ANALYSIS IN MANAGERIAL ASSESSMENT

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Sales Price Variance refers to the difference a business's budgeted sales revenues and the actual sales revenues at the market price. This difference comes in from the sales projections that a company makes in the beginning of an accounting or marketing period, from which the company's books are estimated and planning is based. While the company will always plan ahead of its curve and make marketing projections, sometimes the projections are not realized (Cicala, 2020). In some cases, the differences may arise as a result of the company's management being too ambitious about a product or service, such that the conditions in the market fail to live up to the expectations in terms of demand and prices.

The result will usually be the company selling a much lower number of units compared to the projected one, which then affects the revenues raised through sales (Kenton, 2019). In other cases, the conditions in the market may be such that they favor the company's projections in terms of pricing and demand which means that the company ends up making more revenues than it initially projected. Companies stand to benefit most when the difference is favorable and the revenue raised is more than the projected one, which makes it easier for the company to meet all its budgetary needs (Kenton, 2019).

Calculating the sales price variance is essential because it enables the firm to find out which commodities and services perform better than others, thus enabling the marketing management to label the products according to their importance to the business (Kenton, 2019). The formula used to calculate the sales price variance is given as:

$$SPV = (AP - SP) \times \text{Total Number of units sold}$$

Where:

SPV is the sales price variance

AP is the real selling price

SP is the projected selling price

The sales price variance for the two commodities X and Y sold by XLG company can be calculated as follows:

Commodity X:

$$\text{SPV} = (\text{AP} - \text{SP}) \times \text{Total units sold}$$

$$= (37 - 30) \times 750$$

$$= \mathbf{5,250}$$

Commodity Y:

$$\text{SPV} = (\text{AP} - \text{SP}) \times \text{Total units sold}$$

$$= (45 - 35) \times 850$$

$$= \mathbf{8500}$$

The sales volume variance or the sales quantity variance refers to the difference between projected or budgeted quantity of the units of a commodity that a business makes and the actual number of units of the commodity that the firm sells within a specified period of time (Jan, 2019). The sales volume variance can also refer to the actual number of units sold at a standard market price and the projected number of units at the standard price (Cicala, 2020). This difference is computed using the formula for sales volume variance given as:

$$\text{Sales volume variance} = (\text{Actual number of units sold} - \text{budgeted number of units sold}) \times \text{Budgeted price per unit}$$

For the firm XLG, the sales volume variance for commodities X and Y are given as:

Commodity X:

Budgeted selling price = £35

Actual sales volume = 850

Budgeted sales volume = 595

Sales volume variance = $35 \times (850 - 595)$

= 8925

Commodity Y:

The sales volume variance for product Y is given as:

Budgeted selling price = £30

Actual sales volume = 750

Budgeted sales volume = 595

Sales volume variance = $30 \times (750 - 595)$

= 4650

Material Price planning variance

The material price planning variance refers to the difference in the revenues and profits of a business due to the errors that are made by the management in the process of planning. Such

differences also arise as a result of inaccurate standards that may be applied during the planning process (Fandel, Hofmann and Schreck, 2020). In some cases, when the management of a company makes incorrect price projections or bases the planning process on the wrong prices of their commodities and the raw materials they use to manufacture their commodities, the outcome of the process of manufacturing and selling the commodities tends to differ from the planned one. This occurs when the company spends more on the raw materials than the management initially projected, making the expected returns from the entire manufacturing process to be much lower than the projected ones (Fandel, Hofmann and Schreck, 2020). In other cases, however, the management makes the correct predictions, but then the demand and supply factors of the market influence the profits that the company can make. Such cases include instances when the projected prices are higher than the actual prices due to low demand or increased supply of the same commodity in the market (Fandel, Hofmann and Schreck, 2020).

For instance, in the case of the company XLG which manufactures the commodities X and Y, the material price planning variance can be introduced by the differences in sources of raw materials used to manufacture the two commodities. In this essence, the company initially has a projected source of FamaQ from Brazil before the Covid-19 pandemic brought about logistic challenges that necessitated a different source of the chemical. The differences have to arise because the price of the chemical has to increase due to increased transportation charges and also due to the decrease in normal supply of the chemical in the market since the law of demand and supply states that a decrease in supply will cause an increase in price and vice versa (Hornngren, Datar and Rajan, 2015).

The formula for computing the material price planning variance is given as:

$$\text{Material Price Planning Variance} = (\text{Actual Quantity purchased} \times \text{Actual Unit Cost}) - (\text{Actual Quantity Purchased} \times \text{Standard Unit Cost})$$

Therefore, the material price planning variance for XLG's commodities is given as"

Commodity X:

$$\begin{aligned}\text{Material Price Planning Variance} &= (850 \times 3.70) - (850 \times 2.50) \\ &= 3145 - 2125 \\ &= 1020\end{aligned}$$

And for Commodity Y:

$$\begin{aligned}\text{Material Price Planning Variance} &= (750 \times 3.70) - (750 \times 2.50) \\ &= 2775 - 1875 \\ &= 900\end{aligned}$$

The material price operational variance refers to the differences in price performance of products of which managers of a business do not have control. A good example of this would be the price hikes of essential commodities that were experienced in the wake of the lockdowns and restrictions in movement by governments as they sought to best control the spread of the coronavirus and the disease at large (Fandel, Hofmann and Schreck, 2020). XLG experienced such a price hike as the company had to reconsider the decision to source its FamaQ raw material from Brazil amid the difficulties in international shipping. The material price operational variance for XLG's products X and Y can be computed as:

Commodity X:

$$BP = £2.50$$

$$AP = £4.50$$

$$AQ = 850$$

Thus;

$$\text{Material price variance} = (2.50 - 4.50) \times 850$$

$$= \underline{-1700}$$

Commodity Y:

$$BP = £2.50$$

$$AP = £4.50$$

$$AQ = 750$$

Thus;

$$\text{Material price variance} = (2.50 - 4.50) \times 750$$

$$= \underline{-1500}$$

Using Variance Analysis to Assess Managerial Performance

In management, the actual performance of a firm and the targeted or planned performance of the firm vary in most cases and rarely do businesses achieve what they had planned in the exact fashion they had planned it (Kim et al., 2015). Variance analysis places

specific attention on these differences and as such, when used to assess the performance of a manager, helps shed light on the individual's efficiency in the utilization of the resources availed to them to achieve the maximum benefits for the firm. Variance analysis also helps to identify the areas where the managers needed to make adjustments to achieve maximum efficiency (Kim et al., 2015). Due to these qualities, the method can be used to assess how able a manager is to predict and plan ahead of time the trends that are expected to take place in the company's respective industry. Good managers will be able to read the direction the market is taking and align their businesses with the current trends to achieve maximum benefits before the tide changes or more businesses exploit the opportunity (Matsuoka, 2018).

There are merits and demerits of using variance analysis as a method of managerial performance assessment. One of the demerits is that it usually takes a lengthy period for the results of the method to be produced, analyzed, and applied (Marzlin Marzuki and Ismail, 2019). Essentially, when gauging the performance of a manager using the variance analysis method, the assessors have to wait till the end of a long period, such as a quarter or financial year, for them to analyze the trends that took place throughout the specific period and how the firm performed throughout the same period (Marzlin Marzuki and Ismail, 2019). Since the market trends are highly dynamic, it is almost impossible to accurately predict what the future of the market will be like if the one predicting is only provided with past trends and information. Therefore, the changes that may be associated with the trends highlighted by variance analyses may not be effective in future as different solutions may be necessitated by the existing conditions in the market at the time (Marzlin Marzuki and Ismail, 2019).

When using variance analysis, it is almost impossible to rely on the company's performance projections since these are made at the beginning of an accounting period. Also, the

projections are informed by the market trends at the time when they are made (Bai, 2016). As a result of this nature of the projections, the budgeting does not always allow a lee way for market dynamics. Managers also have to deal with resource scarcity in their firms and, therefore, they rarely have enough resources to make amendments to the original budgets. Managers may be able to predict the market trends which the company may be able to capitalize on and benefit in great ways, but the budgeting process may leave them with inadequate resources to achieve maximum benefits (Bai, 2016). In some cases, the resources they need may be availed to them after some time, which may be too late to make the most out of a market boom. Thus, it would be inappropriate to consider such a manager to be weak due to his or her inability to capitalize on the boom since what was necessary to do so may be beyond their capabilities at the time (Teplicka, n.d).

Part 2:

The management of the XLG company should base their decision whether to import FamaQ from Brazil or use the one made in house in the United Kingdom on the fact that what matters most to the business of the company is a supply of the chemical that is both dependable and sufficient. The decision has to be made regarding which of the two sources of the chemical favors the company in terms of financial savings as well as time savings. However, given that the chemical is the primary raw material used to manufacture both of the company's products X and Y, the management of XLG needs to ensure the source of FamaQ chosen is one that will not interrupt the production of the two products at any given time (Teplicka, n.d).

This is a difficult decision for the management to make because of two things: On one hand, the supply from the United Kingdom saves the company on time and production cost, which makes it a favorable option for XLG in the short term so that the company can take full

advantage of the surge in demand for both of its products. On the other hand, however, the source from Brazil does not include savings in time and costs of production, but it is one whose certainty and dependability is assured since the company has used it for years before the pandemic-caused travel and shipping restrictions.

In addition to FamaQ being XLG's primary raw material for manufacturing chemicals X and Y, it is also the ingredient that gives the company significant competitive advantage in the market with regards to the sales of the two products. During the current pandemic, the demand for hygiene products has skyrocketed and the companies that make these products want to make the full advantage of the boom in the market despite the hard economic times caused by the pandemic. This makes it even more essential that the XLG production line keeps pace and produces high quality products to remain the choice of the consumers. In order to maintain its competitiveness and market share, the company needs to ensure that it does not experience a break in production of both chemicals X and Y. This can only be assured of by a continuous supply of FamaQ regardless of savings on time and money (Taschner and Charifzadeh, 2016).

While the management of the company seeks to make the decision on which source to use for their production, it would not be out of order to consider the possibility of striking a compromise between the two sources in question. This means that XLG can use FamaQ made in both the UK and imported from Brazil at the same time. There are various benefits and demerits of using this choice as a solution to the company's production problem. On the pro side, striking a compromise between the two sources such that the company receives the chemical from both ensures that the company's production line will not have to experience downtime because when one source fails to meet the demand for the raw material, the other one covers up the deficit (Shaikh, Khatri and Dhavale, n.d.).

The compromise also means that the company can increase its production by continuing to import FamaQ from Brazil for its normal production and then using the FamaQ sourced from the UK to meet the demands of the increased production. This would enable the company to make the most out of the market boom created by the increased demand for hygiene products as a result of the ongoing global pandemic. Therefore, the management can make the in-house source from the UK a short-term solution to the current market condition and once the boom is over, the production line can resume operations as it normally did before the pandemic. However, the compromise also has a downside to it, given that it could be a risky move for the company to incorporate a new source of the raw material into its existing processes without regard for differences in quality of the material and the products (Shaikh, Khatri and Dhavale, n.d.).

The company's market advantage stems from its use of FamaQ, imported from Brazil, and the quality of this raw material as well as its products are among the things that give XLG a reputation in the market. Thus, compromising the quality of the raw material could have an impact on the quality of the end products X and Y. This impact could spell danger to the company given the current need for high-quality hygiene products as the population is increasingly getting aware of the need for proper sanitation in all places. At such a time, a product could be doomed if the general public deems it inadequate to meet the sanitation demands and guidelines provided by health officials. This means that should the incorporation of the in-house source of FamaQ from the UK have a negative impact on the quality of products X and Y, it is highly likely that the reputation of XLG in the market could be affected and that could make the company lose its share of the market to its competition.

With the market research in this industry indicating that the demand for products X and Y will be sustained at around 45% in the future, one can already see the need for increased

production of both products. However, it is also likely that the demand bubble will not be sustainable for a long future. XLG should invest in the current boom in demand and make the most out of it while also retaining its normal market production for the longer term when the boom comes to an end. A compromise between importing FamaQ from Brazil and sourcing it locally seems to be the most probable way for the company to achieve maximum benefits of the current market conditions.

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