Free Mock – Suggested Answers

CIMA Operational Case Study – May & August 2024

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Section 1

Activity based costing (ABC)

With ABC, we need to look at all processes in the department and identify the overhead costs. For example, the cutting machines will have power costs and set up costs. Each item of cost will need to be identified and listed.

Then we need to consider what causes the cost, that is, what activity 'drives' each cost. Costs that have the same cost driver can be grouped together in the same cost pool and the cost per driver calculated. This will tell us that each time that activity named in the cost driver is carried out there will be causal link to the cost. This has benefits for both planning and control.

Applying ABC to the Webbing Department

The process begins with Storage and Inventory Management, where the webbing materials are received, stored, and recorded. The cost driver for this stage is the number of material batches handled, with associated costs pooled into inventory handling and storage expenses, with "per batch" serving as the cost driver.

Next, during the Cutting and Preparation stage, webbing is measured and cut according to the specifications for different saddle models. The length or number of pieces cut serves as the cost driver here, and related expenses are pooled under webbing preparation costs. Thus, the cost driver could be "per meter" or "per cut piece".

In the Assembly stage, the cut webbing is attached to saddles through sewing and riveting. The cost driver is typically the number of saddles assembled, and these costs are accumulated in the assembly labour and machinery cost pool. The cost driver is "per saddle".

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In Quality Control, costs are allocated based on the number of inspections or tests conducted to assure quality standards. A fitting cost driver here could be "per inspection" or "per saddle tested," providing a direct link to the quality assurance activities. These costs are then allocated to the 'quality assurance' cost pool.

Finally, saddles that pass the quality checks are transported to the finishing department in the Dispatch to Finishing Department stage. The cost driver for this final stage is the number of deliveries made, and costs are assigned to the dispatch and transportation cost pool. The cost driver is “per group/batch of saddles dispatched”.

The cost of the Manager, who heads webbing operations is not directly related to any particular activity and would be seen as a “facility level” cost. However, it is a production overhead and should be absorbed by the products on a fair and equitable manner. Perhaps “per saddle” would be easiest and appropriate.

By employing ABC, we would no longer distribute costs merely based on output volume. Instead, we would link them to the actual activities that generate those costs. This connection allows us to identify the true cost of each activity, paving the way for better decision-making such as optimizing batch sizes or adjusting production schedules.

It is a transformative shift that aligns cost assignment with the complexity and resource demands of each model, particularly for the higher-end Comet saddles, thus facilitating more accurate and equitable cost absorption across products.

Training and development program

The following steps can be carried out when conducting training sessions for our employees in the assembly department.

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Identifying training & development needs

Under this stage, we need to identify the training and development needs of the employees. Since we are focusing on manufacturing employees, we need to identify the issues with their performance and design training programs to bridge areas of underperformance.

Setting training & development objectives

We should set the objectives for our training and development program and these objectives should be in line with the achievement of efficiency in manufacturing operations. Thus, the objectives should be clear, specific and measurable.

Planning the training & development sessions

After setting the objective, we could plan the training and development process. This will include plans pertaining to training methods, sources, budgets, the location and providers of training and the division of responsibilities.

Delivering & implementing training & development initiatives

The execution or delivery process will include the combinations of formal, informal, internal, and or external training methods which are going to be used as planned. During the whole process, we need to examine training sessions to make sure that we are achieving our training objectives.

Evaluating training & development sessions

After the delivery of the training, the whole process needs to be evaluated to track the effectiveness. If there are any errors, we need to rectify them by listening to feedback from trainers and production staff members.

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Characteristics of an effective KPI

Key performance indicators are the measures that we need to focus on to identify the achievement of the vital components which are important in achieving our business objectives. (Critical Success Factors; CSFs).

In terms of KPI as a company, we must focus on setting effective KPIs thus ensuring achievement of our corporate objectives. This process is important since if we don't set the right KPI for the right element, we might end up measuring the wrong factors. To set the right KPIs, businesses need to understand the characteristics of an effective KPI, which are as follows.

KPIs should be set by the strategic level, and it should flow to the management and operational levels after that. Thus, we will achieve goal congruence throughout Kanann by setting KPIs. As an example, if we are going to set a KPI for the marketing function, the KPI setting process should start to form the marketing strategies and then, tactical and operational strategies must be developed and KPIs determined for each area.

KPIs should be challenging but achievable. If this is so, the employees will be motivated to achieve each KPI. If it is difficult to reach, then employees will be demotivated and that would hinder existing performance. Conversely, if the KPI is too easy to reach, then employees would not be motivated to perform over that level. Hence, it is vital to keep the KPI at a challenging yet achievable level.

The employees should have control over each KPI. If the employees can't control the KPI, they will be demotivated since their performance will be evaluated on elements over which they don't have controllability. Further, the employees should have a solid understanding of each KPI and performance measure as well.

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KPIs need to be smart. This means that each KPI needs to be specific, measurable, achievable, relevant, and time bound. The achievement of the KPI must be rewarded so the employees will see value in the achievement of the KPI and the reward will motivate them to enhance their performance level as well.

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Section 2

Capitalization of expenditure on new eco-friendly machines

IAS 16 Property Plant and Equipment states that to capitalize the expenditure incurred as part of property, plant, and equipment (PPE), an asset must have been created. There are two criteria that must be met to recognize an asset.

Firstly, it is probable that the expenditure will result in future economic benefits to our business and secondly, the expenditure can be reliably measured. Both are met since the new machines will generate future economic benefit in the form of profit, and as the expenditure is cash related, it can be reliably measured.

IAS 16 further states that the asset must be held for the supply of goods and services and will be held for more than one accounting period. Clearly, the new machines are to be used for operations by our company and we intend to keep them for more than a year.

Treatment of items in the schedule

IAS 16 also states that expenditure associated with an item of property, plant and equipment can be capitalized if it is either part of the purchase price (including import duties) or directly attributable to getting the asset ready for its intended use.

From the schedule, the purchase price of machines clearly falls into this first category. As Kanann is not VAT registered, the purchase price of the machines that can be capitalized should be inclusive of VAT.

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The directly attributable costs include building costs required to modify the operations bay to accommodate new machines, and their essential modification costs. The building costs are necessary since it is essential to upgrade the operations bay to start using these new machines. Similarly, the machines need to be modified before they can be brought into use. Therefore, this cost will be capitalized.

The training costs are unlikely to be incurred to get the asset ready for its intended use. The machines are likely to be ready for its intended use, even if staff need to be trained to use them. These costs will therefore be treated as revenue expenditure and charged to the statement of profit or loss.

Ongoing costs of maintenance and servicing of machines cannot be capitalized as they are not directly attributable to getting the asset ready for its intended use. These costs will be treated as revenue expenditure and charged to the statement of profit or loss.

Similarly, the interest costs will not be capitalized as it is merely a cost of financing the asset and therefore, should also be charged to the statement of profit or loss.

Useful life of the new equipment

IAS 16: Property, plant and equipment is also relevant here and states that the useful life of an asset is either the period over which the business expects it to be available for use or the number of production units expected to be created from using the asset.

In this case, Jack expects that the cutting head will need to be replaced in 05 years' time and therefore 05 years is potentially the equipment's useful life because this is the period over which we expect it to be available for use.

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We should not depreciate the equipment over 10 years just because this spreads the cost over more years; useful life needs to be based on a proper assessment of how long the asset will be used. However, before firmly deciding that 05 years is appropriate, we need to consider how Jack has reached this conclusion.

As the Production Manager, Jack is perhaps best placed in the business to make this judgement, but it will be important to understand his rationale.

It is possible to change the useful life of an asset after the initial assessment, if there is evidence that a different life is more appropriate. This would be known as a change in accounting estimate and would result in a change to the annual depreciation charge going forward, which would be calculated as the carrying amount of the asset at the date of the change divided by the new remaining life at that date.

KPIs: Retailers & Wholesalers

Sales Volume: This KPI measures the quantity of Kanann's products sold by each retailer or wholesaler, calculated by the total number of Kanann's products sold during a specific period. This KPI is crucial as it directly reflects the retailer's or wholesaler's ability to sell Kanann's products, impacting overall revenue and market presence.

Order Fulfilment Rate: This KPI assesses the proportion of Kanann's orders successfully fulfilled by the retailer or wholesaler. It is calculated by dividing the number of orders fulfilled by the total number of orders placed and multiplying by 100. A high fulfillment rate indicates operational efficiency and reliability in meeting customer demand, essential for maintaining customer satisfaction and brand reputation.

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Payment Timeliness: evaluates the punctuality of payments made by the retailer or wholesaler within the agreed credit period. It is calculated by dividing the number of payments made within the credit period by the total number of payments and multiplying by 100. Timely payments are crucial for Kanann's cash flow management, and this KPI assesses the financial discipline of the retailer or wholesaler, ensuring they adhere to the agreed credit terms and contribute positively to Kanann's financial stability.

Inventory Turnover Rate: This is a crucial metric that evaluates how efficiently the retailer or wholesaler manages their inventory of Kanann's products. It is calculated by dividing the Cost of Goods Sold (COGS) of Kanann's products by the average inventory value of Kanann's products. This KPI provides insights into the speed at which inventory is sold and replenished. A higher inventory turnover rate indicates effective inventory management, reducing the likelihood of overstocking.

Customer Satisfaction Score (CSS): measures the satisfaction level of end customers purchasing Kanann's products from the retailer or wholesaler. It is determined by averaging customer ratings on a scale, such as 1 to 5, based on their satisfaction with Kanann's products. Customer satisfaction is a key indicator of the quality of service and products offered by the retailer or wholesaler. A high CSS suggests that end customers are pleased with their purchase of Kanann's products, as well as the level of service offered by the retailer or wholesaler, leading to potential repeat business, positive word-of-mouth, and a strong brand reputation for both Kanann and the retailer or wholesaler.

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Section 3

Variance Analysis

Variable Overhead Expenditure Variance (Favourable): Despite the need for overtime work due to increased production, the actual variable overhead costs were lower than budgeted. This suggests that the company benefited due to the reduction in electricity tariffs. In fact, it appears that the reduction in electricity tariff has outweighed the impact of the additional overtime.

Variable Overhead Efficiency Variance (Adverse): The company used more variable overhead resources per unit of output than planned. This could be because the new employees were not as experienced or efficient as the existing ones, leading to higher overhead costs per direct labour hour. Additionally, the increased production volume might have strained resources, causing inefficiencies.

Fixed Overhead Expenditure Variance (Adverse): The actual fixed overhead costs exceeded the budgeted amount. This increase could be due to unexpected expenses, such as leasing extra equipment, the wages paid to the newly recruited employees & supervisors and hiring external maintenance engineers to fix the sewing machine issues. These additional costs contributed to the adverse variance.

Fixed Overhead Efficiency Variance (Adverse): The production department was less efficient in using its fixed overhead resources than planned. The faults in the industrial sewing machines disrupted production flow, and the time taken to train new employees likely reduced overall efficiency, leading to higher fixed overhead costs per unit of output.

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Fixed Overhead Capacity Variance (Favourable): The production department utilized its capacity more than anticipated, as shown by the actual production exceeding budgeted figures. The decision to hire more employees and increase production volumes resulted in better utilization of fixed resources, such as machinery and facilities, leading to a favourable capacity variance.

Responsibility accounting

In a responsibility accounting system, it's essential to hold managers accountable only for variances they can control or influence. Regarding the fixed production overhead expenditure variance, several factors contributed to its occurrence, not all under Jack Newman's control.

For instance, the adverse variance partially arose from decisions to hire additional employees and supervisors, at the same time, lease extra equipment to support workforce expansion. These decisions were made by the Managing Director and were beyond Jack's authority.

Jack's responsibility for machine maintenance is a key consideration. He should be held accountable if machinery failures were due to regular wear and tear or preventable issues. However, he should not be held accountable for maintenance lapses beyond his control or resulting from higher-level decisions.

Moreover, the workforce expansion and the addition of supervisors increased production capacity, as reflected in the capacity variance. Managing this extra capacity and ensuring the efficiency of the absorption base (direct labour hours) are within Jack's responsibilities.

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The fixed production overhead efficiency variance was adverse in June, partly due to machinery downtime and the slower work rate of new employees. While Jack might not control machinery downtime (unless it was preventable or due to wear and tear), he could be accountable for inefficiencies resulting from the integration of new hires, as worker satisfaction within the department is largely within his control. However, if worker dissatisfaction was due to poor pay rates, that would be outside his control.

Short-term options to utilize the cash surplus

As per our SOFP, we have outstanding amounts to be settled for trade payables, which has increased by 5% relative to last year. If we can get discounts by settling these early, then this is one option we should consider. The benefit of the discount can be annualized to compare whether it is beneficial for us to settle early, relative to our annual cost of borrowing. In addition to the financial gain through discounts, it will also improve the relationship with our suppliers.

A short-term investment option we could consider is to invest in money market deposits. These are invested in money markets through banks. Money market deposits generally offer an attractive interest rate which could increase our net income. However, the money cannot be withdrawn until the deposit matures and we need to carefully budget our cash flows to determine the amount we can invest and the maturity period.

Treasury bills is another short-term option we can consider. Since these are issued by the government, they carry extremely low risk. They are also liquid since we can convert them into cash before the maturity period, should a cash requirement arise. However, the interest paid on treasury bills is generally lower than the rate offered for money market deposits due to the low level of risk.

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Section 4

Working Capital Position: Moody's

Moody's inventory days were, until 2022, consistent with that of the industry. However, in 2023, inventory days have almost halved to 18 days. We need to investigate as to why the company might have reduced inventory holding suddenly, given that packaging material does not become obsolete fast.

In fact, Moody's has maintained inventory days in and around 30 days in 2021 and 2022, aligning with the industry average. Therefore, the reduction in inventory days might be due in part to Moody's rapid growth in revenue and its lack of cash. Perhaps Moody's is not able to purchase enough raw material inventories needed to produce packaging material.

Receivable days have grown across the three-year period and in 2022 and 2023, is higher than the industry average. Moody's has a standard credit term of 30 days and therefore it would appear that the company is not as efficient at credit control as it should be.

There has been significant growth in revenue over the same period and therefore it is possible that extended credit terms have been offered to attract new business which will have lengthened receivable days. Note that Kanann might be able to benefit from this.

Payable days have also grown across the three-year period, which could be a symptom of overtrading. Perhaps Moody's has been unable to pay its suppliers as quickly as it would like, given its poor cash position.

However, even when it had cash, Moody's was slower to pay its suppliers compared to the industry average and this could indicate that the business has taken advantage of its suppliers.

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Moody’s working capital position: Risks

There are indications that this business is overtrading, given the significant and quick growth in revenue, depletion of cash, paying suppliers late and a worsening of credit control. The business appears not to have had enough resources to manage the rapid growth and consequently cashflow has suffered.

The risk associated with this is that Moody’s might not be able to continue to trade as it will be unable to pay its liabilities unless it secures finance to support cashflow. Clearly this could have serious consequences for our business if we become reliant on this supplier, yet alone pursuing a single sourcing agreement with Moody’s.

There is a risk that Moody’s will not be able to fulfill all our packaging material needs. Its inventory levels are relatively low which means that the risk of Moody’s not being able to meet orders or delaying delivery is quite high.

Additionally, the payable days suggest that Moody's may have exploited its suppliers, which is unethical and could negatively impact Kanann's brand reputation."

Constructing a flexible budget

Flexible budgeting would allow us to predict the impact of changes in sales volumes on our budgeted profit.

To construct a flexible budget, we would need to establish our selling price per unit for each type of product and determine whether this selling price would remain constant at different activity levels. We can then determine the sales revenue at different activity levels by multiplying the selling price per unit by the activity level.

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We would also need to establish whether our costs are variable or fixed in nature. A variable cost will vary with the level of activity. In many cases the activity level will be sales or production volume. Direct material and direct labour costs are assumed to be variable costs and will change in direct proportion to changes in production volumes. The budget for variable costs, such as direct material, can be flexed by calculating the cost per unit, and multiplying this by the revised volume of output.

Production overheads contain a mixture of fixed and variable costs, and it would be necessary to separate these costs into their fixed and variable elements. We would then calculate a revised budget for all costs affected by the change in activity (variable costs), and add the fixed costs which, by definition, would not vary with the different levels of activity under consideration.

We would also need to understand if any of the fixed costs are stepped fixed costs, which would increase when a particular level of activity is reached.

Benefits of flexible budgeting

Flexible budgeting is helpful as it allows us to understand the impact on profit at differing levels of activity. There is a high level of uncertainty on sales volumes, and this is likely to have significant implications for our material and labour cost budgets.

The use of flexible budgeting will help us to better plan our resources and to put contingency plans in place if the budgeted level of activity is not achieved or exceeded.

Whilst the use of flexible budgeting will create additional work, it will ensure that we understand the consequences of differing activity levels and will result in a more appropriate budget. This is likely to deliver benefits to our organization.

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The principal budget factor

This is the main item that limits a company's operations, and this factor is usually considered to be sales. The same applies to Kanann as well. Meeting sales demand could be tough for the organization, since demand for Kanann could vary in each country we sell, mainly depending on different tastes and needs of customers.

Functional budgets and principal budget factor

Functional budgets are financial plans which are created for individual functions of a business. Usually, the amalgamation of these functional budgets forms the master budget. Therefore, master budgets can be considered as a budget which covers all areas of an organization.

The first step of preparing a master budget is forecasting the principal budget factor (in our case, forecasting sales demand), since all other budgets depends on the principal limiting factor.

Once we understand the forecasted level of sales, it is easy to determine the level of production of saddles. This would help us forecast manufacturing costs for the period. Based on these data, we can prepare budgets for each production process, based on our predictions of sales demand.

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