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# Answers

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Section C

Medical Temp Co

(a) Market size and market share variances

The market size and market share variances are a breakdown of the sales volume variance. The sales volume variance shows the effect on profit of the actual sales level being different from the budgeted sales level. However, without considering how the market itself has changed, it is difficult to draw conclusions about performance from the sales volume variance. Therefore, the sales volume variance is broken down into its two components. By doing this, it is possible to assess the extent to which changes in profit are as a result of:

- (i) A change in the size of the market as a whole, which is beyond the control of the sales manager; and
- (ii) A change in the share of the market which the company holds, which is deemed to be within the control of the sales manager.

Consequently, the variances become far more meaningful for performance management as businesses can identify external and internal factors which can influence the results and what was controllable and uncontrollable.

(b) Variances

Quarter 2 original budgeted sales volumes and contribution

	Nurses	Doctors
National Q1 sales volume (no. of weekly contracts)	14,000	4,000
Percentage of market	30%	40%
Budgeted sales volume	<u>4,200</u>	<u>1,600</u>
	<b>\$'000</b>	<b>\$'000</b>
Budgeted revenue for MTC	4,200	3,200
Standard contribution	80%	80%
Budgeted standard contribution	<u>3,360</u>	<u>2,560</u>

Quarter 2 revised budgeted sales volumes and contribution

National Q2 sales volume (no. of weekly contracts)	18,900	4,100
Percentage of market	30%	40%
Revised sales volume	<u>5,670</u>	<u>1,640</u>
	<b>\$'000</b>	<b>\$'000</b>
Budgeted revenue for MTC	5,670	3,280
Standard contribution	80%	80%
Revised standard contribution	<u>4,536</u>	<u>2,624</u>

Quarter 2 actual results

	<b>\$'000</b>	<b>\$'000</b>
Actual revenue in quarter 2	5,300	3,600
Standard contribution	80%	80%
Actual sales volume at standard contribution	<u>4,240</u>	<u>2,880</u>

Market size variance (planning)

(Budget v revised contribution)

	<b>\$'000</b>	<b>\$'000</b>
Budget contribution for MTC	3,360	2,560
Revised budget contribution for MTC	4,536	2,624
Variance	<u>1,176 F</u>	<u>64 F</u>

Total market size variance = \$1,176,000 + \$64,000 = \$1,240,000 F

	Nurses	Doctors
<b>Market share variance (operational)</b>		
<b>(Revised contribution v actual)</b>		
	<b>\$'000</b>	<b>\$'000</b>
Revised budget contribution for MTC	4,536	2,624
Actual sales volume at standard contribution	4,240	2,880
Variance	<u>(296) A</u>	<u>256 F</u>

Total market share variance = \$(296,000) + \$256,000 = \$(40,000) A

**(c) Cheat Co**

The sales director at Cheat Co has deliberately manipulated the market size figures to make the market for doctors and nurses look smaller. Now, instead of being the actual market size of 18,900 weekly contracts (\$18.9m/\$1,000) and 4,100 weekly contracts (\$8.2m/\$2,000), they will be much lower at 13,230 and 2,870 respectively. This means that the revised budgeted sales volume figures used to calculate Cheat Co's variances were far lower. This behaviour is unethical and may well lead to the sales director getting a bonus which he does not deserve.

As a consequence of this, the market size variances are highly adverse, so it looks like Cheat Co's original budgets are very wrong. The sales director will not care about this since he will not be held accountable for that variance; instead he will be responsible for the favourable market share variance of over \$2m. This makes the sales director's performance look really good, but the reality is that it only looks this high because the budgeted sales figures include revenue for maternity units and the revised budgeted figures do not. This does not reflect the sales director's real performance for the quarter.

**Medcomp**

- (a)** The balanced scorecard uses four perspectives: financial, customer, learning and growth and internal business process.

<b>Financial</b>	<b>CSF:</b> The critical success factor identified for this perspective is most likely to be positive cash flow.
	<b>KPI:</b> The most appropriate performance indicator is total donations less operating costs.
	<b>Performance analysis:</b> Total donations in 20X8, 20X7 and 20X6 are \$1,710,000, \$1,605,000 and \$1,475,000 respectively and when the operating costs are deducted, the net cash flows are \$(20,000), \$55,000 and \$45,000 respectively. This shows that for the current year Medcomp is not achieving a positive cash flow. However, this is a relatively small cash deficit for the year and does not suggest that the charity has any real problems. The size of the donations has risen considerably over the years and the number of businesses donating has fallen. This could indicate that the fundraisers have focused their efforts on a smaller number of more affluent businesses.
<b>Customer</b>	<b>CSF:</b> The critical success factor identified for this perspective is most likely to be medical effectiveness.
	<b>KPI:</b> The best performance indicator for this perspective is the percentage of successful treatments.
	<b>Performance analysis:</b> For the years 20X8, 20X7 and 20X6 these are 77%, 86% and 87% respectively. As treatment for cataracts is a relatively simple procedure, a high success rate would be expected but the results in 20X8 show a significant deterioration. The reasons for the recent fall in effectiveness could be the result of factors outside the control of Medcomp, such as variations in the disease or the advanced condition of the disease when presented. However, it could be also linked to the lack of efficiency of the new treatments.

<b>Internal business process</b>	<b>CSF:</b> The critical success factor identified for this perspective is most likely to be functional efficiency.
	<b>KPI:</b> The performance indicator for this perspective could be: 'average number of days to deliver drugs and equipment to treatment centres'.
	<b>Performance analysis:</b> This has remained at seven days since 20X6 and in some ways this can be expected as the 12 treatment centres have been at the same location for many years and the logistics of the delivery well established. It should be noted that this measure is an average lead time and will also vary on location. However, as Medcomp rarely experiences shortages at the treatment centres, it can be surmised that transport costs are managed as efficiently as possible and this means an average seven-day lead time.
<b>Learning and growth</b>	<b>CSF:</b> The critical success factor identified for this perspective is most likely to be innovation.
	<b>KPI:</b> The performance indicator for this perspective is the new procedures as a percentage of total procedures from the table.
	<b>Performance analysis:</b> It is clear that Medcomp has made several changes to the existing protocol in 20X8. One in five procedures administered are new and have been introduced within the past 12 months. This is a clear improvement on 20X7 and 20X6 as the CSF is for new treatments. However, the new treatments have not improved the efficiency of the treatment, as evidenced by the percentage of successful treatments, and this will need to be monitored.

- (b) The benefits to an organisation of using the balanced scorecard to assess performance instead of relying solely on financial measures are as follows:

Not all organisations have profit or financial return as the main objective. In an altruistic not-for-profit charity such as Medcomp, the objectives are based on delivering a service which can be measured in benefit to people who are unable to pay for the service. Therefore, it is necessary to have measures which are not purely financial to reflect the different emphasis of the mission and supporting objectives.

Financial performance indicators are 'lagging' indicators. This means that the events and decisions which caused these indicators occurred long ago. The balanced scorecard includes 'leading' indicators. For example, the learning and growth perspective may encourage spending on training or techniques which will depress profits or increase costs in the short term, but will have much greater benefits in the future.

The balanced scorecard helps to align key performance measures with strategy at all levels. This means that all employees will be able to link their individual goals to those of the organisation as a whole. The benefit of this is that it ensures that what gets measured is important to the organisation.

Financial measures used in isolation are relatively easy to manipulate in the short term. For example, a high return on investment figure may be considered an indicator of good performance whereas it may have been caused by a manager delaying the purchase of a necessary asset. The balanced scorecard provided a range of indicators which makes this type of manipulation more difficult to conceal.

Section C

Maximum marks    Marks awarded

Medical Temp Co

(a)	Market size and share variances are breakdown of sales volume variance/need to consider change in size of market	1
	Description of market size/market share variances/reference to controllability	3
		<u>4</u>
(b)	Original budget (1 mark each doctors and nurses)	2
	Revised budget (1 mark each doctors and nurses)	2
	Actual sales volume at standard contribution (0.5 each doctors and nurses)	1
	Market size variance – doctors	1
	Market size variance – nurses	1
	Total market size variance	0.5
	Market share variance – doctors	1
	Market share variance – nurses	1
	Total market share variance	0.5
		<u>10</u>
(c)	Discussion – up to 2 for each well discussed point. Must address both parts of the requirement	6
		<u>20</u>

Medcomp

(a)	Identification of CSF for each perspective (0.5 each)	2
	Identification of KPI for each perspective (1 each)	4
	Analysis of performance using the KPIs (max 4 for any perspective)	10
		<u>16</u>
(b)	Benefits of balanced scorecard – up to 2 for each well discussed point	4
		<u>20</u>

