
Answers

Section C

Health Nuts

(a)(i) Gym

Break-even point

Average sales revenue per customer	\$
Gym entry	8.40
Car park expected value (0.8 x \$1)	0.80
	9.20

Variable cost 1.20

Contribution per customer 8.00

Total fixed costs 48,000

BEP (in customers) **6,000**

Margin of safety

Total number of customers per day	330 (80 + 40 + 20 + 90)
Number of days in the month	30
Total customers for June	9,900

Margin of safety (in customers) 3,900 (9,900 - 6,000)

Margin of safety (%) **39.39%** (3,900/9,900)

(a)(ii) Café

Break-even point

Average contribution per customer:	\$
Drinks	0.792 (\$2.20 x 60% x 60%)
Food	0.352 (\$2.20 x 40% x 40%)
	1.144
Total fixed costs	3,600
BEP (in customers)	3,147 (\$3,600/\$1.144)

Margin of safety

Total customers for June	4,950
Margin of safety (in customers)	1,803 (4,950-3,147)
Margin of safety (%)	36.43% (1,803/4,950)

(b)

The gym needs 6,000 customers per month and the café needs 3,147 customers per month in order to cover its fixed costs.

Each \$1 of contribution after this point generates profit.

Whether or not these figures are particularly high can be gauged by comparing them to the expected (or, in this case, actual) customers in one month and this is where the margin of safety is useful. Both the margin of safety for the gym and the café are quite similar, at approximately 39% and 36% respectively. This tells Health Nuts the extent to which it can feel confident about covering its fixed costs and making a profit. In this instance, its margin of safety is such that, even if its customer numbers went down by over one third it could still cover its fixed costs.

(c)

Total sales/contribution from gym

Original number of customers	330
New customers	120
Total number of customers per day	450
Number of days in the month	30
Total customers for the month	<u>13,500</u>
	\$
Entry fee	8.40
Car park	0.80
	9.20
Total sales from gym entry/car park	<u>124,200</u>
Contribution per customer	\$
Sales revenue	9.20
Less: variable cost	1.20
	<u>8.00</u>
Total contribution	<u>108,000</u>

Total sales/contribution from creche

Total customers using the creche per day	120
Number of days in the month	30
Total customers for the month	3,600
Number of children per customer	2
Total number of children per month	7,200
	\$
Price per child	4.00
Total sales from creche	<u>28,800</u>
	\$
Contribution per customer	
Sales revenue	4.00
Less: variable cost	0.50
	3.50
	<u></u>
Total contribution	<u>25,200</u>
Total contribution from gym and creche	133,200
Total sales from gym and creche	153,000
Weighted average C/S ratio	87.06%
	\$
Budgeted profit per month with creche	
Total contribution from gym and creche	133,200
Less: total fixed costs	56,000
Budgeted profit	<u>77,200</u>

(d)

	\$
Total contribution from gym	79,200
Total contribution from café	<u>5,663</u>
	<u>84,863</u>
Less total fixed costs	<u>51,600</u>
Profit for June	<u>33,263</u>

With the creche, profit will increase from \$33,263 to \$77,200 per month, an increase of \$43,937. Therefore, from a purely financial point of view, the crèche would seem like a good idea.

However, there are various other factors that need to be taken into account:

Details of how much the conversion from the café to the creche will cost has not been provided. The investment would need to be appraised using a technique like NPV to assess its financial viability.

The research for the revised customer numbers is only initial. Is this data realistic and can it be relied on? There is no information about how Health Nuts got this research.

The opening of a creche could put off other customers, who want to exercise in a child-free environment, from using the gym during the day. There is no indication that Health Nuts have taken this into account.

Similarly, closing the café could upset many other customers at all times of day and lead to the loss of their business.

The calculations so far performed are not therefore enough to make this decision.

Tonford School

(a)

The primary objective of commercial organisations is to maximise the wealth they generate for their owners (shareholders). In contrast, the objectives of NFPO's are often non-financial and reflect the interests which the various stakeholders have in an organisation. These stakeholders often have varying interests in the organisation, meaning that the organisation will also have a number of different objectives.

These conflicts may make it difficult to set clear objectives on which all stakeholders agree. Consequently, the organisation's management will face a dilemma when trying to decide which objectives are most important and therefore prioritised in the course of strategic planning and decision-making. This can be a particular problem when different objectives make different demands on resources or require different courses of action.

Another problem is that these organisations often do not generate revenue but simply have a fixed budget for spending which they have to keep to and are often subject to strong external influences which will influence the setting of objectives e.g. political factors.

(b)

Note: This solution is longer than one which candidates would need to produce to score the marks available. However, it is intended to illustrate the range of relevant points candidates could have identified from the scenario, and therefore the number of marks potentially available in this question.

Objective 1 – Strive for continuous improvement in performance standards.

The percentage of pupils achieving the target grades is not only below the national target, it is also lower than Tonford School achieved five years ago. As such, the school's does not appear to be achieving continuous improvement.

However, exam results alone are not necessarily an accurate indicator of a school's performance. For example, exam results will reflect the underlying ability of the pupils, as well as the quality of the teaching they receive.

There is a danger that if Tonford School focuses only on exam results it will become 'selective' and will only accept the most academically gifted pupils. However, such an approach would contradict the objective to provide 'all children'

with access to high quality education, regardless of their background.

Pupil progress may be a more valuable measure than exam results, because the extent to which pupils' performance improves provides an indication of the value added by the school, rather than pupils' inherent ability.

Given the typical range of scores, Tonford School's performance in this respect (+0.4) is significantly above the national target (+0.25) and is at the upper end of the range.

The fact that pupil numbers have increased seems likely to suggest that the school is becoming more popular with parents. Given that parents can choose which school to select for their children, the increase in pupil numbers is likely to reflect a perception among parents that the school is performing well.

The results of the recent inspection visit would seem likely to reinforce this perception.

Note: An alternative interpretation could be that all the other schools in the area are already full, and Tonford has spare capacity, which is why its pupil numbers increased. However, such an explanation seems less likely given the context of the other performance indicators.

Objective 2 – Provide a supportive learning environment, which encourages a high standard of pupil achievement.

The 'pupil progress' score suggests the school is providing children with a high quality education and a learning environment which encourages a high standard of pupil achievement. The fact that Tonford School's 20X7 score is higher than its 20X2 score also suggests an improvement in the learning environment (although here again, to some extent the scores may reflect pupils' aptitude for learning as well as the efforts of the school).

The school's inspection grade is higher than five years ago, and is above the national target, which suggests the school is improving, and is performing relatively well. Although there is no indication that the DoE gives any more weighting to any single aspect of the performance data compared to other areas, the inspection grades could potentially be the most important indicator of how well as school is performing.

However, although Tonford School's grading is 'Very good' this suggests there is still room for further improvement, because the school did not achieve the top grade: 'Excellent'.

Tonford School's teacher/pupil ratio has remained essentially the same over the last five years – at 19 pupils per teacher, which is favourable compared to the

national target of 22 pupils per teacher.

20X7: 662 pupils/35 members of teaching staff =18.9 pupils per member of staff

20X2: 627 pupils/33 members of teaching staff = 19 pupils per member of staff

Having a low teacher pupil ratio is likely to be beneficial because it will allow teachers to give more time to each pupil, thereby providing a supportive learning environment.

Given that the school is funded by the DoE, it seems likely that the DoE would have had to authorise the budget needed to recruit the additional teachers. On this basis, the fact that Tonford School has been able to increase the number of teachers it employs suggests that the DoE is pleased with the way it is performing, and therefore authorised the additional budget.

Objective 3 – Ensure pupils are prepared for adult life and have the skills and character necessary to contribute to society and the economy.

The inspector has highlighted Tonford School's 'strong sense of community values and citizenship'. This suggests the school is performing well in relation to the objective of preparing students for adult life, and developing their social skills.

Exam results and the 'pupil progress' scores in compulsory subjects indicate that the school is making a significant contribution in providing pupils with core knowledge and skills necessary for adulthood.

Objective 4 – Provide all children with access to high quality education, regardless of their location or background

The inspector's report has highlighted that pupils at Tonford School come from diverse backgrounds' and awarded the school an improved grading over the last five years. Coupled with 'pupil progress' scores, this indicates that the school is fulfilling the objective to provide children which access to high quality education, regardless of their background.

(c)

In order to assess any organisation's performance against its objectives, performance information needs to be available, and, in many cases, this information is obtained by measuring aspects of performance relevant to the objectives.

Difficulties of measurement

However, one of the inherent difficulties with qualitative objectives compared to quantifiable objectives is how to measure them.

For example, exam success rate (% of pupils achieving 5 grades A-C) is quantifiable, and relatively easy to measure, using exam results data. However, trying to measure the overall quality of education in a school or whether a school provides a 'supportive learning environment' is potentially much more difficult, because there aren't any specific outputs (e.g. results) which can be measured.

So, while exam results and pupil progress metrics are indicators of pupil achievement in schools – which can be measured – assessing them only provides a partial assessment of whether schools are providing children with 'access to high quality education' or whether they are providing 'supportive learning environment which encourages a high standard of pupil achievement.'

A related problem is that the aspects of performance which are monitored end up being the ones where performance can most easily be measured, rather than those which are most important in ensuring that the objectives are achieved.

The DoE has recognised these issues though and acknowledged the need for inspectors to visit schools on a regular basis, to gain an insight into the aspects of performance which cannot be reflected in statistical measures.

Subjectivity

Another major problem with assessing qualitative aspects of performance is that they tend to be subjective. For example, people are likely to have different expectations of what constitutes a high quality of education, a supportive learning environment, or the extent to which students are prepared for adult life.

In this respect, one of the key things the DoE has to ensure is that its inspectors are consistent in their grading of schools. For example, if one inspector rates a school as 'Good', but another inspector would have rated the same school as 'Excellent', this inconsistency would significantly reduce the validity of the performance data which is produced.

			<i>Marks</i>	<i>Marks</i>
Marking Scheme				
Health Nuts				
(a)	(i)	Calculation of breakeven point for the gym	2	
		Calculation of margin of safety for the gym	1	
	(ii)	Calculation of breakeven point for the gym	1.5	
		Calculation of margin of safety for the cafe	<u>0.5</u>	<u>5</u>
(b)		Explanation relating to the breakeven points calculations	1.5	
		Explanation relating to the margins of safety	<u>1.5</u>	<u>3</u>
(c)		Calculation of the weighted ave. C/S ratio for the gym and creche	5.5	
		Calculation of the budgeted profit for the gym and creche	<u>0.5</u>	<u>6</u>
(d)		Advice as to the viability of closing the café and opening the creche	<u>6</u>	<u>6</u>
Total marks				<u>20</u>

	<i>Marks</i>	<i>Marks</i>
Tonford School		
(a) Discuss the performance of Hammocks		<u>4</u>
(b) Performance assessment of Tonford School		<u>12</u>
(c) Explanation of difficulties in qualitative objectives		<u>4</u>
Total marks		<u>20</u>