

Accounting and financial management

[Finance](#)



Question 1:

If the NGA were operated on the basis of a privately owned firm, it would aim at earnings covering the cost of its capital, which is \$256 million ($8\% \times \3.2 billion). If we assume all its earnings are from ticket sales revenues, and expenses are zero, its earnings would equal its sales revenue, which would have to be at least \$256 million to cover the cost of capital. However? since expenses are certain to be greater than zero, revenues would have to exceed \$256 million.

However, because the NGA is a government operated and funded organization dedicated to serving the public, its capital costs can be covered by government subsidies. To carry out its public mission to “serve the public by enhancing understanding and enjoyment of the visual arts”, the NGA would focus its attention on making the art work accessible to the public. It would therefore aim at lower ticket prices in order to increase the number of visitors, even if that were to result in lower revenues.

Whether the NGA needs to increase revenues in order to cover its capital cost would be dependent on political and social conditions influencing the size of the government budget or the generosity of private donors. For example, budget cuts passed by a fiscally conservative government would require that the NGA increase its ticket sales revenues. On the other hand, private donors may be willing to make donations for political purposes—for example, a donor may wish to promote the display of a certain pieces of artwork for a political purpose.

Social and cultural factors are also of great importance in determining the number of visitors to the NGA and whether the NGA would be able to meet its sales target. The number of visitors to the NGA would depend largely upon the cultural tastes of the general public and their interest in viewing artwork held by the NGA. The number of visitors to the NGA would also depend heavily on economic conditions influencing their purchasing power. For example, in the time of economic recession, the reduced purchasing power of consumers would result in the public being less willing to pay the admissions fee and result in fewer visitors.

The above-mentioned factors will also have a large effect on the market value of the art held by the NGA. For example, a shift in tastes could lead to a rise in the demand for the artwork held by the NGA and a large appreciation of its market value. Likewise, a change in economic conditions would result in a shift of demand for artwork and have an effect on its market value. As it is a part of the balance sheet, changes in the market value would also have an effect on the level of ticket sales revenues required by the NGA to cover its capital cost.

Assuming 1.3 million adult visitors attend the NGA annually, a ticket price of \$200 would be required to cover the cost of capital, or \$256 million.

Kerin's proposal would double the number of visitors attending the NGA to 2.6 million and also double sales revenue, assuming ticket prices were originally \$20. Annual revenues would increase from 1.3 million * \$20 = \$26 million to 2.6 million * \$20 = \$52 million.

This would still be far from the amount required to cover the cost of capital (\$256 million), but would help serve NGA's public mission by doubling the number of visitors. To cover the cost of NGA's capital, the government would need to provide a subsidy of \$180 to the NGA for each paying NGA visitor and \$200 for each of the visitors receiving free admission.

The scheme in (iii) would create annual profit of $2.6 \text{ million} * \$20 = \52 million .

Question 2:

Total Cost = Average Cost * Total Number of OP Documents = $\$28.1364 * 412 = \11592.20

1. Resource Consumption Rate for Computers = $32,960 \text{ lines} / 412 \text{ documents} = 80 \text{ lines per document}$.

Resource Consumption Rate for Telecommunications = $1236 \text{ Minutes} / 412 \text{ documents} = 3 \text{ Minutes per Document}$.

Total cost of Invoice and Collections Staff = Total Cost - Cost of Computers - Cost of Order Desk Staff - Cost of Telecommunications = $\$11592.20 - \$988.80 - \$6800 - \$803.40 = \$3000$

Total Labor Hours of Order Desk Staff = Resource Consumption Rate of Order Desk Staff * Number of Documents = $0.5 \text{ Labor Hours per Document} * 412 \text{ Documents} = 206 \text{ Labor Hours}$

Activity-based cost of the three primary activities in the order processing department given by:

80 computer lines + .5 invoice & collection staff hours + .25 order desk staff hours + 3 minutes telecommunications

With the new union agreement, the company will not be able to meet its processing needs. With a total of 509 documents (19 order changes, 190 returns, and 300 orders), Southeast Distributors will need $509 \times .25 > 120$ hours for order desk staff and $509 \times .5 > 240$ hours for invoice & collection staff. Since the union agreement limits each staff member to 120 hours per month, there is not enough labor time for either order desk staff or invoice & collection staff to meet the processing needs.

If the staff labor pool cannot meet processing needs in November, the management can attempt to shorten the labor time required by order processing. Only a small savings in labor time (<5%) would allow the staff labor pool to meet the processing needs.

Question 3:

1. The first option (operating a special train) is more profitable to Grand Canyon compared with the second option (adding a car to an existing train) as the profits gained from the higher passenger fare and the lower fuel cost is greater than the additional expense resulting from hiring the engineer and the depreciation of the engine.

For the first option, total profits are given by $\text{total revenues} - \text{total cost} = \text{total revenues} - \text{fuel costs} - \text{labor costs} - \text{depreciation cost} = \$30 \text{ per passenger} \times 30 \text{ passengers} \times 20 \text{ trips} - \$2.2 \text{ per mile} \times 65 \text{ miles} \times 20 \text{ trips} - \$400 \text{ per engineer} \times 20 \text{ trips} - \$150 \text{ per tour guide} \times 20 \text{ trips} - \$20000 \text{ engine depreciation cost} - \$5000 \text{ passenger car depreciation cost} = -\$20860.$

For the second option, total profits = \$15 per passenger * 30 passengers * 20 trips - \$20 per mile * 65 miles * 20 trips - \$150 per tour guide * 20 trips - \$40 hook-up cost * 20 trips - \$5000 passenger car depreciation cost = - \$25800.

The costs of hiring a tour guide and the depreciation costs of one passenger car are the same for each option and are therefore irrelevant to the decision.

To decide whether to accept the first option, Grand Canyon should not consider any fixed costs (such as the costs of the passenger cars). By choosing the first option, revenues = \$30 per passenger * 30 passengers * 20 trips = \$18000) variable costs = fuel costs + labor costs = \$2.2 per mile * 65 miles * 20 trips + \$400 per engineer * 20 trips + \$150 per tour guide * 20 trips = \$13860). Because revenues can cover variable costs, Grand Canyon should accept the proposal for option 1.

Question 4:

1. The stakeholders involved in the purchase and installation of water pumping machines by Banderoo Shire include the following:
 1. The residents of Outback who will receive the benefits of the water pumping machines.
 2. Banderoo Shire council members who will make the decision to purchase the water pumping machines. This includes members of the accounting staff such as Ellen Keely and Frederick Wong, and other members of the shire council who will have an input in the decision.

3. The suppliers of machines to Banderoo Shire, which is either Perpetual Pumps Pty Ltd or Arndale Engineering Ltd. This would include employees and owners of the supplier such as Ellen's brother-in-law.

The ethical issues in this case involve the duties of the assistant accountant, Frederick Wong, towards his supervisor, Ellen Keely, his duties owed towards his employer, the Banderoo Shire council, the Banderoo Shire community at large, and keeping the integrity of the accounting profession (see Appendix 1, p. 65-66). By redoing his calculations, Frederick Wong would be acting against the integrity of his role as an accountant for Banderoo Shire.

Doing so would also be against the financial interests of his employer, the Banderoo Shire council, who represent the Banderoo Shire community at large. Furthermore, doing so may harm the interests of the beneficiaries of the water pumping purchase decision, the residents of Outback if it results in the poorer choice of supplier. On the other hand? loyalty to his supervisor may require that Frederick Wong follow her wishes?

Following the decision model of Langerderfer and Rockness (Langerderfer and Rockness, p. 65-66), Frederick Wong should take the following steps:

- What are the facts of the case?

In this case, the facts known to Frederick Wong include the following: 1. Arndale Engineering Ltd. is a better choice than Perpetual Pumps Pty Ltd. for supplying water pumps to Banderoo Shire based on an analysis of the cash flow. 2. Ellen Keely informs him that? Perpetual Pumps is a better choice of supplier based on qualitative factors that she does not specify

3? Ellen Keely' s brother-in-law is a primary shareholder and employee of Perpetual Pumps Pty Ltd?

2? What are the ethical issues?

See answer to Part B above?

3? What are the norms? principles and values?

Keeping the integrity of his role as an accountant for Banderoo Shire as opposed to his duties towards his supervisor?

4? What are the alternative courses of action?

? a? Following his supervisor and redoing his calculations to favor Perpetual Pumps over Arndale Engineering as the choice of supplier?

? b? Refusing to follow his supervisor and present his original findings favoring Arndale Engineering over Perpetual Pumps to the Banderoo Shire council?

? c? Investigate factors not accounted for by his original calculations in deciding between Arndale Engineering and Perpetual Pumps prior to deciding between ? a? and ? b??

- What is the best course of action consistent with the principle of integrity?

The best course of action is probably that identified in ? b? above? He would then not be guilty of breaching any community standards of integrity?

- What are the consequences of the possible courses of action identified in 4? above?

Choice ? a? is the most consistent with the principle of integrity but may damage Frederick Wong' s relationship with his supervisor and possibly result in his dismissal? Choice? b? is to follow the wishes of his supervisor and redo his calculations? The benefits may result from gratitude of his supervisor whereas the costs may result from the eventual discovery that he had falsified his calculations?

Choice ? c? would very likely provide him with information that would favor choice? b??

7? What action should the accountant take?

From an ethical point of view, the best course of action is for Frederick Wong not to redo his analysis. However, from the point of view of personal costs and benefits, it may be beneficial for Frederick Wong to follow the wishes of his supervisor and redo his calculations. Frederick Wong would very likely harm the relationship with his supervisor and this may be costly to him. On the other hand, it may be very unlikely that anyone would discover that Frederick Wong had acted unethically by redoing his calculations and the potential cost of doing so is very low.

References?

H. Q. Langenderfer and J. Rockness, *Ethics in the AccountingCurriculum: Cases and Readings* , American Accounting Association, Sarasota, 1990.