THE TIMES 100
BUSINESS CASE STUDIES

Teacher guide

Decision trees - CIMA

Where does the lesson fit?

This session would fit in a Strategy or Managing People module. It could follow learning about different types of decisions (strategic, tactical, operational) and could be followed by sessions about other types of decision making tools such as Critical Path Analysis or Statistical Process Control.

Suggested resources & activities related to Decision Trees and CIMA

- Full CIMA case study
- Decision Trees PowerPoint
- Ratio Analysis lesson resources
- CIMA crossword
- CIMA word search

Suggested timings for the session

10 mins	Starter e.g. crossword
5 mins	Use the Decision Trees PowerPoint to discuss the topic
5 mins	Read the case study
10 mins	Questions
20 mins	Task ï drawing up a decision tree
10 mins	What have you learned?

Answers to questions

1. What is a decision tree?
   A decision tree is an outcome and probability map of a scenario

2. Describe when firms are likely to use decision trees.
   Firms are likely to use decision trees when they have to choose from a number of options.

3. Explain how decision trees are used.
   Decision trees look at the likely outcomes of a range of options. They consider the probability of these outcomes and the initial cost of the investment, in order to put a numerical value on each alternative option. The option with the highest likely financial return is the one which decision tree analysis suggests is the best choice.

4. Analyse whether the use of a decision tree would be appropriate for a firm that is thinking of expanding its operations into another country.
   On one hand:
   A decision tree would help a firm to make the decision whether to expand into another country, and the way it should go about doing this e.g. buy up existing businesses in other countries, open up new outlets etc.
   However:
   Once the decision has been made to expand into other countries, another type of decision making tool could be used to aid the process e.g. critical path analysis.

Task

1. Open up a restaurant. This would cost £120,000 set up. If successful it could increase profits by £400,000 but if not it could lose £50,000. The probability of success is 0.8.

   (400,000 x 0.8) + (-50,000 x 0.2) - £120,000 = **£190,000**

2. Open up a farm shop. The cost of this would be £20,000. The probability of success if 0.7 and is likely to benefit the business by £300,000. If unsuccessful it would only make an extra £40,000.

   (£300,000 x 0.7) + (£40,000 x 0.3) - £20,000 = **£202,000**

3. Do nothing

   £0

   Based purely on decision tree analysis, the best option is option 2 ï open up a farm shop.

What have you learned?

Expected learning is likely to include:

- Definition of decision tree
- How to construct a decision tree
- When decision trees are used
- Benefits of decision trees
- Limitations of decision trees