Decision tree

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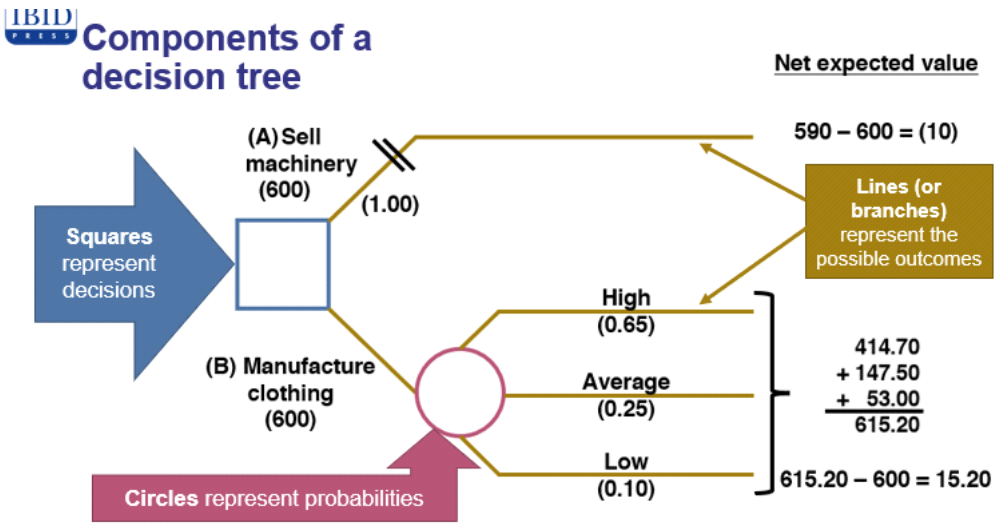
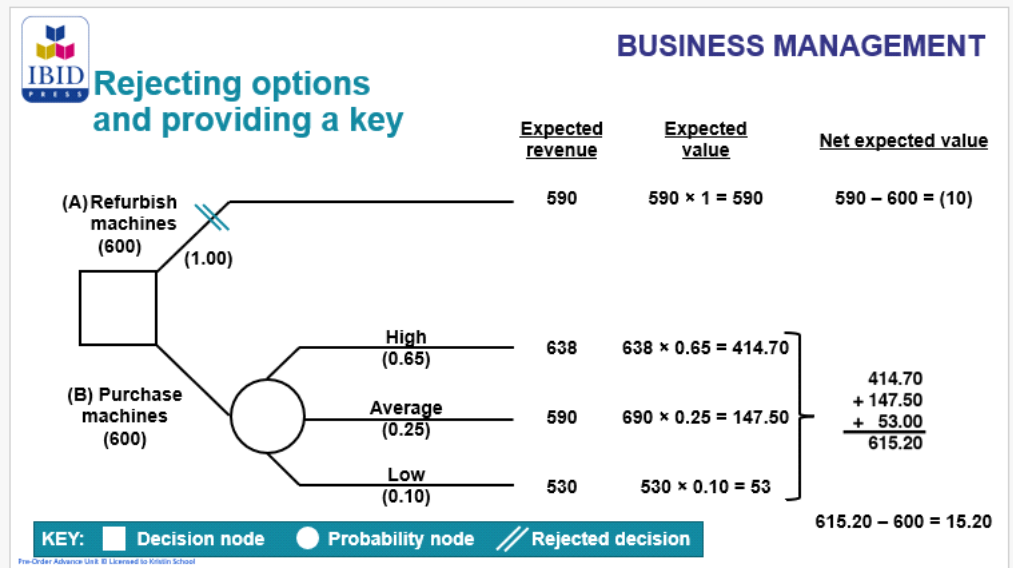
Decision tree is a diagrammatic representation of the different option a manager can select



- Indicate the decisions using decision nodes (squares) and branches.
- Label the branches with the decisions and their costs.
- Probability in a branch must add up to 1.



Calculating expected values : expected revenue * probability of achieve = expected values
Calculating net expected values: Total expected value of each option - cost of option = net expected value

The double line shows the decision - the rejected decision

When construct the decision tree - we have to write the key
Decision node, probability node, rejected decision

Advantage and disadvantage of decision tree

Advantage:

- Presents problems clearly and logically
- Speeds up decision making

- Considers risks and rewards
- Enables more scientific and objective decision-making
- Visual stimulus offers tangible insights

Disadvantage:

- Probabilities can only be estimated - less reliable because its opinion
- Probabilities can be subject to bias from management preferences
- Does not necessarily reduce risks
- Time lag between decision making and project execution can void data used in the decision tree
- Qualitative data is ignored