

## **Case Study: Toys Galore**

Toys Galore is a major manufacturer of toys which faces uncertainty about demand for its toys during the Christmas season.

If there is a high demand for toys, and if Toys Galore is fully able to meet this demand, then it makes additional revenue of \$4m. If it is partly able to meet this demand, then it makes additional revenue of \$3m. If it is able only to supply at a low level, then it makes no additional revenue. If, however, there is low demand, then it makes no additional revenue.

In July, Toys Galore has the option of expanding production. An expansion will cost \$2m. If it expands in July, then it will be fully able to meet a high demand at Christmas. If it decides not to expand production in July, then it has another chance to expand in October. An expansion in October also costs \$2m, but this late expansion does not leave the company sufficient time to fully meet high demand at Christmas; it can only partly meet any high demand.

In October, however, the ABS announces the latest national income figures. Past experience suggests that income figures are high half the time and low half the time. Past experience also suggests that if there is a high national income figure, then there is a 80% probability of high demand, and if a low national income figure, a 80% probability of low demand for toys at Christmas.

To summarise: by expanding production in July, Toys Galore is able to fully meet high demand for Christmas toys, if that occurs. By waiting until October, however, it can make the expansion decision on the basis of better information about Christmas demand.

- a. Draw an influence diagram for Toys Galore's decision.
- b. What would you advise Toys Galore to do? Since the probability figures are based on past evidence and the past is not an accurate guide to the future, suggest to the company to what extent your advice depends on the probabilities.