

- **How does an individual decide whether to continue her education?**
- **How do changes in the costs and benefits of education affect the investment decision?**

Problem 1: Getting a Master's Degree

Amanda is 22 and has just finished university with a degree in economics. She has received a job offer that pays \$10,000 per year for the first two years and \$20,000 per year afterward. Alternatively, Amanda could spend two years going to ANU to get her Masters Degree in economics.

Fees and books at ANU will cost Amanda \$5,000 per year. After she completes her Masters degree, Amanda's annual salary will be \$50,000 per year. At the same time Amanda may fail all of her classes at ANU in her first year in which case she drops out and her earnings would be the same as if she had never enrolled in ANU's Masters Program. The market rate of interest is 3% and whether she gets her Master's Degree or not, Amanda has decided to retire at age 27.

1. If Amanda believes that there is **no** probability (i.e., $p = 0$) of failing her Master's coursework at ANU will she choose to go to enroll in ANU's Master's program? (You must show your work and you may round to whole dollars).
2. How high will the probability of failing (p) have to be in order for Amanda to decide not to enroll? (Show your work)

Problem 2: The Optimal Amount of Education

Use a graph like the one we discussed in lecture to answer the following question.

Sarah is a college student trying to decide whether to attend university. What happens to the probability that she will attend university if:

1. University fees double.
2. The earnings of college graduates increase, while those for university graduates remain the same.
3. The market rate of interest falls.
4. Parliament passes legislation that delays retirement until age 70.
5. There is a recession and college graduates have difficulty finding jobs.