ECO316: Applied Game Theory

Problem Set #8 Solutions

1. **Disclosure Game:**

   (a) When no other seller produces evidence, the expected quality (and thus price) is equal to the prior:

   $$P_0 = \beta Q_G + (1-\beta)Q_B$$

   If a good seller chooses to produce evidence, she instead receives price $P_G = Q_G$. Thus, the maximum she would pay for evidence is:

   $$P_G - P_0 = (1-\beta)(Q_G - Q_B)$$

   If a bad seller discloses evidence, she receives $P_B < P_0$, so would never choose to disclose. As such, a bad seller would never pay for evidence.

   (b) If γ good sellers are producing evidence, the posterior probability that a seller is good after seeing no evidence is:

   $$\frac{(1-\gamma)\beta}$$