ECN 275/375 Environmental and natural resource economics
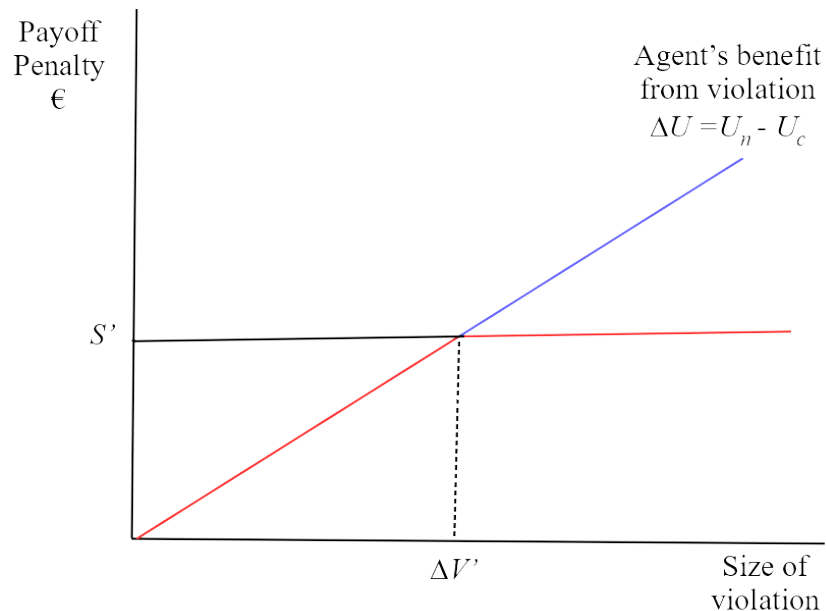# Exercise set 7

Exercise 7.1 – The basic equation of monitoring and enforcement

$\rho = \dfrac{U_n - U_c}{S}$ is often referred to as the basic equation for monitoring and enforcement.

(a) Explain the terms in the equation.

(b) Derive the equation from the behavioral rule the expected payoffs from compliance must at least exceed the expected payoffs from non-compliance.

(c) How would you introduce a compliance rent into the basic equation? Show that this gives lower monitoring probability than without a compliance rent.

(d) How is Gary Becker's "hang the prisoner with probability zero" implemented in the basic formula for monitoring and enforcement?

(e) What are the main difficulties with the "hang the prisoner with probability zero" proposition?

Exercise 7.2 – The importance of a well founded penalty function

Assume that the penalty was fixed regardless of the magnitude of the violation. The figure belowt provides an illustration.

Explain how this figure demonstrates the problem of fixed penalties, i.e., penalties that are insensitive to the seriousness of the violation.