

ECON-A4000 - Economics of Global Challenges

Instructor: Matti Liski

TA: Max Toikka

Return method: through mycourses by the deadline

Problem set 1: Question 4

Let's talk about discounting.

1. In this (*video*), you can find directions for the question
 - Using the material from lecture 3 (see the slides), recall how the discount rate leads to a discount factor and write the formula for the present value sum.
 - Please use your formula to obtain the present-value sum of the damages in your file that you obtained by following the directions in the video. You can start with 1% discount rate and with the assumption that the number of time periods is 50 (i.e, take only 50 rows in the calculation).
 - Consider the following experiment. First, obtain the present-value damages for 50 time periods. Second, add an additional 50 time periods to the calculation. How much higher is the present value in the second case? The answer gives you one idea of how important the future is when evaluating the climate externality.
 - Consider then the same experiment as in the previous item but now with 5% interest rate. How much higher is the present value in the second case? What is your conclusion?