Case 1:

Two states: initial, finished

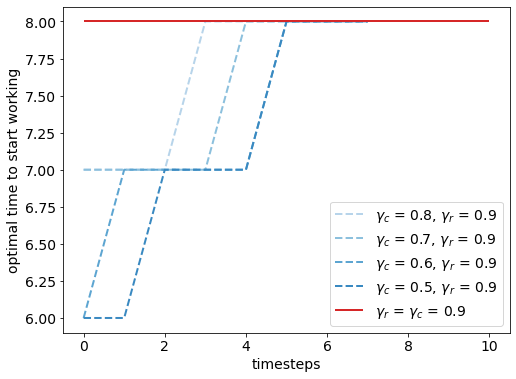
Actions: DO or DON’T in initial state, no choice in finished state

Rewards: effort cost for DO, reward for finished state with a delay at the deadline (no distraction rewards). This is a minimal version of the first case we discussed previously.

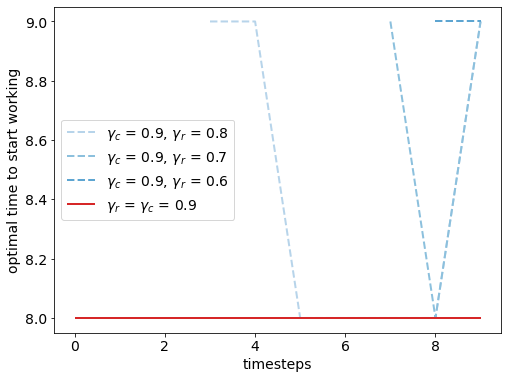
Transitions: Probability of completing on Doing

Parameters: reward\_completed = 4, effort\_do = -1, efficacy = 0.7

When γcost = γreward , there is only planned procrastination. When γcost < γreward , there are defections (to delay more than what was planned) due to preference reversals:



When γcost > γreward , there is the opposite kind of reversals where the agent starts earlier than initially planned or starts despite planning on abandoning.



Case 2:

Almost the same as case 1 but immediate rewards on completing instead of delayed rewards.

Parameters: reward\_completed = 1.5, effort\_do = -1, efficacy = 0.7 (reward needs to be smaller than in case 2 to get any delays; with big rewards, it is always worth working despite differential discounting)

Case 3:

A common hyperbolic discounting scenario with