1)

SOE ① ROW ② vs clean energy ① dirty energy ②

2) $U_A = f(C) - \Psi E$ → Negative Ex.

$$f_A = A_g K_g^{\alpha} L_g^{1-\alpha}$$
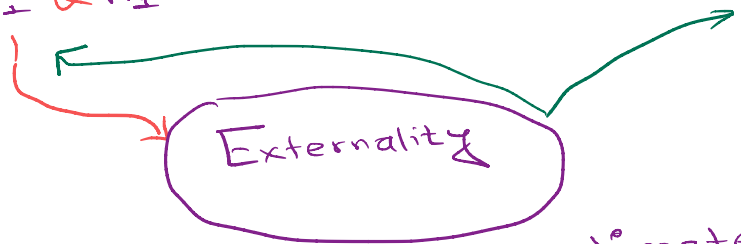
$$A_{g+1} = A_g + L_{g+}$$ → Positive Production Ex
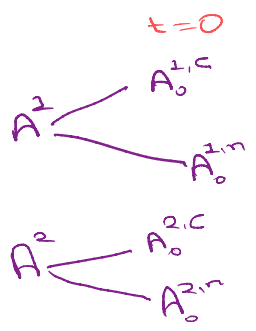
Negative production externality

$HH_1: U_1$

$HH_2: U_2$

$Firms_1: F_1 \propto A_1$

$Firms_2: F_2 \propto A_2$

Externality

3) Divide total TFP into climate/NC for each country.

$t=0$ $t=1$

$A^1 \begin{cases} A_0^{1,c} \\ A_0^{1,n} \end{cases}$

$A^2 \begin{cases} A_0^{2,c} \\ A_0^{2,n} \end{cases}$

$A_1^{1,c} = g(\alpha_0^1)$

$A_1^{1,n} = A_0^{1,n} + E$

$A_1^{2,c} = g(K_0^1)$

$A_1^{2,n} = A_0^{2,n} + E$

Model from Social Planner's prospective where polluting agent 1 isn't aware about his action's externality.

4) Why is this important/different?

- We are affecting the probability of events instead of existing linear effects.

5) Questions to Andres:

1) Why you didn't incorporate production in your setting?

2) Relevance of the idea; we want to explore under which conditions, we arrive to different results vs. the linear TFP approach.