2. Objective:
- I propose a theoretical model that might explain the world distribution of environmental performances through educational choices.
- Replicate the main stylized facts mentioned above.

3. Key Mechanisms:
- Relation 1: agents decide on whether to invest in additional human capital, according to their expectations with respect to the future environment.
- Relation 2: the higher education, the higher willingness to pay for the environment, through a longevity effect.
- Relation 3: the distribution of skills within the population determines the political outcome, that is the effort of public environmental protection.

⇒ dynamic interactions between economic and political spheres ⇒ may generate multiple equilibria, differing by the quality of the environment.

Structure of the Model

2- Political Equilibrium:
- Vote on poll tax, \( \tau \), devoted to public maintenance;
- Optimisation: \( \tau^* = (\tau^*; \theta) \rightarrow \)
- Higher education ⇒ / Willingness-to-pay;
- Single-peaked preferences: the political outcome depends on the median voter’s feature

\[
\begin{align*}
\tau^* &= \tau^* \iff E_{T+1}^s < E \\
\tau^* &= \tau^* \iff E_{T+1}^s \geq E
\end{align*}
\]
where \( E \) solves the equation \( \beta(E_{T+1}^s) = 1/2 \)

The Dynamics

Plugging micro choices into the dynamics of environmental quality, we obtain a dynamical system:

\[ E_{t+1} = \begin{cases} 
\psi(E_t, E_{T+1}^s) & \text{if } E_{T+1}^s < E \\
\psi(E_t, E_{T+1}^s) & \text{if } E_{T+1}^s \geq E
\end{cases} \]  \hspace{1cm} (1)

1- Educational choices:
- An individual invests in additional human capital if \( U_t^i \geq U_{pl} \)
- Threshold value on: \( z(\xi(E_{T+1}^s)) \), such that if \( z < \xi(E_{T+1}^s) \) agents educate, otherwise \( 0 \).
- Key role played by anticipations ⇒ if agents anticipate a clean environment, they are prone to invest in human, through a longevity effect.

Conclusion
- Propagation of education and sharing on the political equilibrium:
  - Economic and pollution micro choices lead to a political micro equilibrium.
  - Policy on pollution and public investment on environmental quality lead to environmental improvement.

Microeconomic Choices

Policy Implications

- It is possible to select the highest equilibrium \( \Rightarrow \) is it possible to coordinate agents’ expectations ?
- Starting from the development trap, a public policy in favour of education is implemented;
- Design of the policy: a share \( \alpha \) of receipts are devoted to education from date \( T \) – those receipts finance a "subsidy to education"; that is a reduction in the fixed cost \( \lambda \)
- The distribution of skills within the population might change ⇒ new political equilibrium.

Main results:
- Starting from \( E_T^s \), if the government implements a public policy in favour of education at date \( T \), environmental quality deteriorates at date \( T+1 \).
- An initial deterioration of environmental quality might help to reach a cleaner environment in the long-run.
- Public policy in favour of education as a complementary tool to environmental policy.