Development Economics

Slides 4

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Warwick, Summer 2014

- Two More Traps
- Missing capital markets
- Behavioral issues

Missing or Imperfect Capital Markets

- Distinguish between borrowing for physical and human capital
- Features common to both:
  - adverse selection
  - moral hazard
  - enforcement problems
- Features peculiar to human capital
  - harder to put up collateral (no slave economy)
  - harder to hold children liable for debts incurred by parents

- Optimal growth viewed as a model of bequests (Loury 1981)

- Emphasis on inequality; say each date is a generation

$$y_t = c_t + k_t,$$

- y is income, c is consumption, x is bequest.

$$y_{t+1} = f(k_t) \text{ or } f(k_t, \alpha_t)$$

- Examples of f:

- Standard production function as in growth theory

- Competitive economy: $f(k) = w + (1 + r)k$.

- Returns to skills or occupations: for example,

$$\begin{aligned} f(k) &= \underline{w} \text{ for } k < \bar{x} \\ &= \bar{w} \text{ for } k > \bar{x}. \end{aligned}$$

- May be exogenous to individual, but endogenous to the economy

- Preferences

- WG. Warm Glow. $U(c_t, k_t)$.

  - See, e.g., Banerjee and Newman (1993).

- CB. Consumption-Based. $U(c_t, c_{t+1})$.

  - See, e.g., Arrow (1973), Bernheim and Ray (1986).

- Income-Based. $U(c_t, y_{t+1})$.

  - See, e.g., Becker and Tomes (1979, 1981).

- NP. NonPaternalistic. $U(c_t, V_{t+1})$, where V_{t+1} is lifetime utility of generation $t+1$.

  - See, e.g., Barro (1978) and Loury (1981).

- Note. WG problematic when production function is endogenous.

Monotonicity Principle

- Will take a decision on modeling altruism later. Meanwhile:

$$\mathbb{E}_{\alpha} U(c, \Psi(k, \alpha)),$$

  - where $\Psi(k, \alpha)$ is some nondecreasing map.

- Nests all the altruism models discussed so far. Assume:

[U]: U differentiable and strictly concave in c, and $U_{12}(c, \Psi) \geq 0$.

  - Can be written "ordinally" as a supermodularity condition.

- Theorem. Assume [U]. Let h be the optimal policy correspondence that describes all optimal choices of k for each y, subject to $c = y - k$.

- Then if $y > y'$, $k \in h(y)$, and $k' \in h(y')$, it must be that $k \geq k'$.

Proof.

- Suppose assertion is false for some (y, y', k, k'). Then $k' > k$.
- Note: k' feasible for y and k feasible for y' (why?). So:

$\mathbf{E}U(y-k, \Psi(k,\alpha)) \geq \mathbf{E}U(y-k', \Psi(k',\alpha))$ and $\mathbf{E}U(y'-k', \Psi(k',\alpha)) \geq \mathbf{E}U(y'-k, \Psi(k,\alpha))$

- Adding these inequalities and transposing terms:

$$\mathbf{E}\left[U(y-k,\Psi(k,\alpha)) - U(y'-k,\Psi(k,\alpha))\right] \geq \mathbf{E}\left[U(y-k',\Psi(k',\alpha)) - U(y'-k',\Psi(k',\alpha))\right]$$

- $U_{12}(c,\Psi) \geq 0$, so replace $\Psi(k',\alpha)$ on right by $\Psi(k,\alpha)$:

$$\mathbf{E}\left[U(y-k,\Psi(k,\alpha)) - U(y'-k,\Psi(k,\alpha))\right] \geq \mathbf{E}\left[U(y-k',\Psi(k,\alpha)) - U(y'-k',\Psi(k,\alpha))\right]$$

- Now draw a diagram: strict concavity of U is contradicted.

Corollary. Under perfect certainty, all paths converge (or go to infinity), but final outcomes may depend on initial conditions.

- Let's keep things bounded: assume f crosses 45^0 for every α.

- On preferences, let's follow Loury and do NP:

$$u(c) + \delta \mathbf{E} V,$$

- where $\delta \in (0, 1)$ and V is the value function.

- For every y, a parent chooses $k \in [0, y]$ to maximize

$$u(y-k) + \delta \mathbf{E}_\alpha V\left(f(k, \alpha)\right)$$

- Value function solves the Bellman equation:

$$V(y) = \max_{0 \leq k \leq y} \left[u(y-k) + \delta \mathbf{E}_\alpha V\left(f(k, \alpha)\right)\right].$$

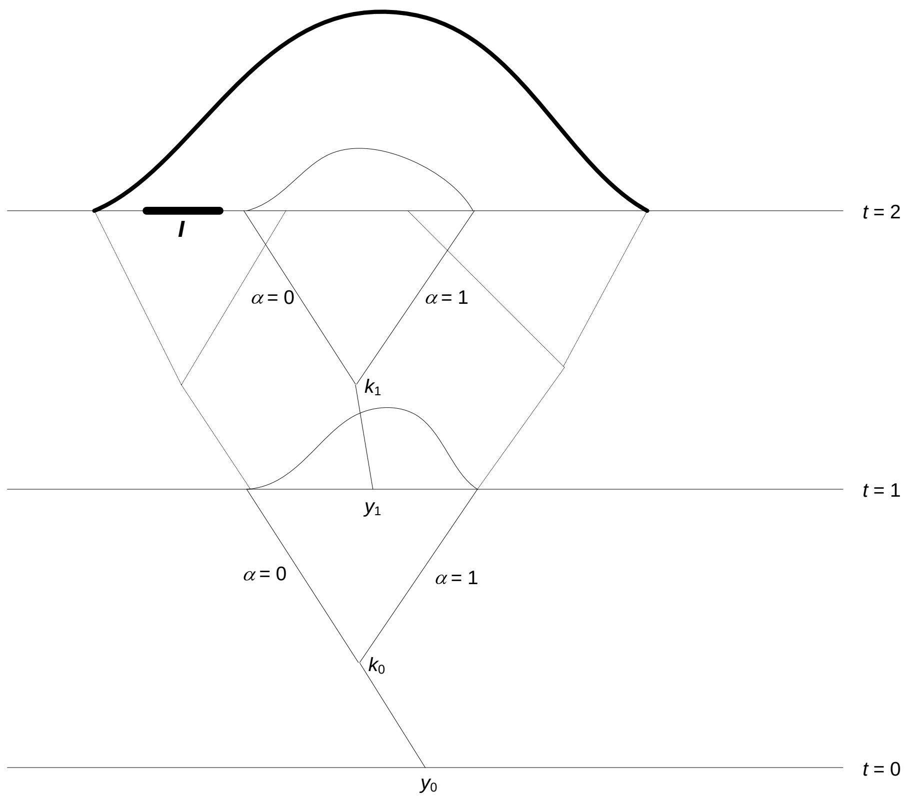
- Existence and continuity of V proved using standard contraction mapping arguments.

- How stochastic shocks negate history:

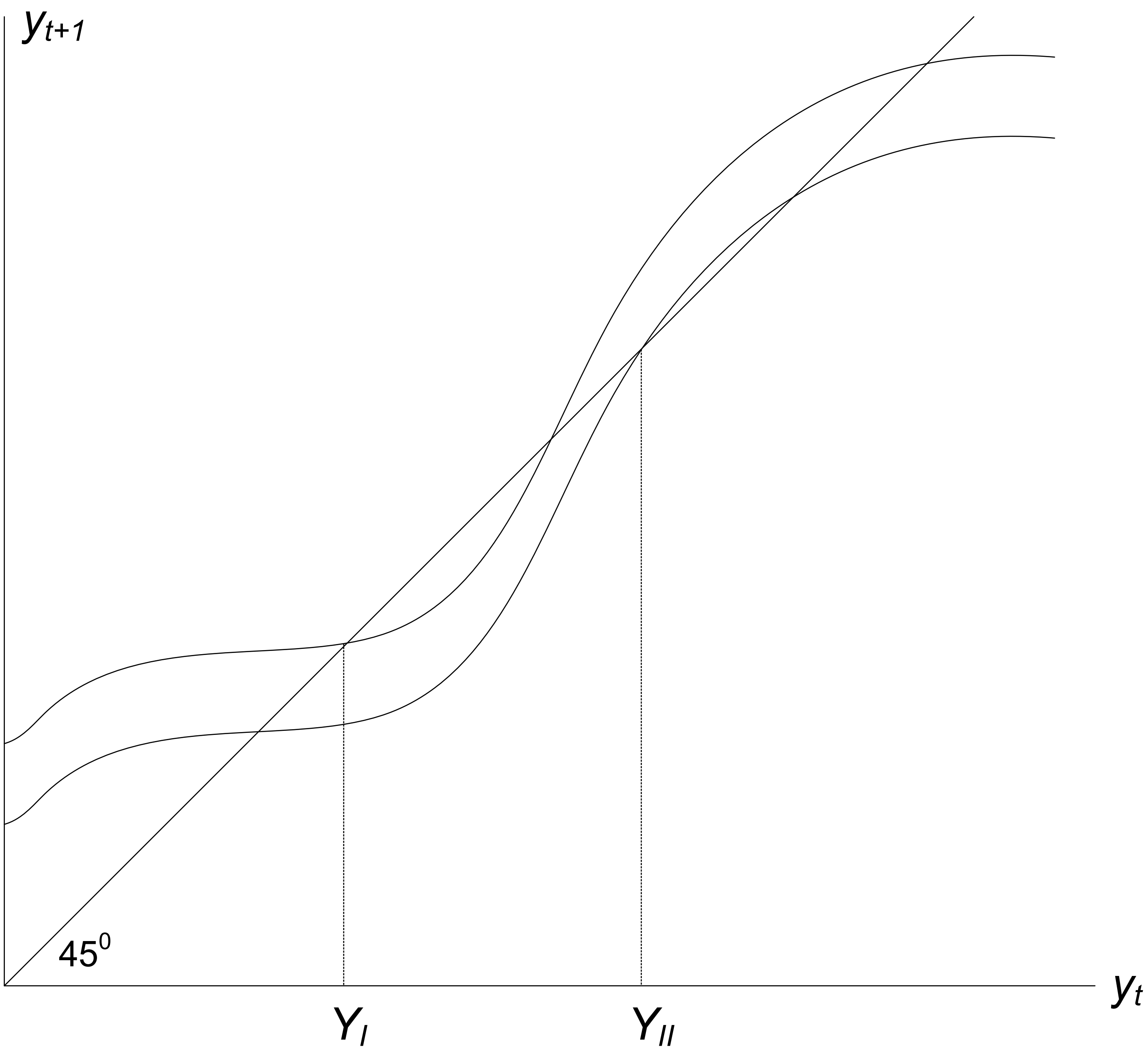
- Poor Genius. $f(0,1) > 0$.

- Rich Fool. $f(k,0) < k$ for all $k > 0$.

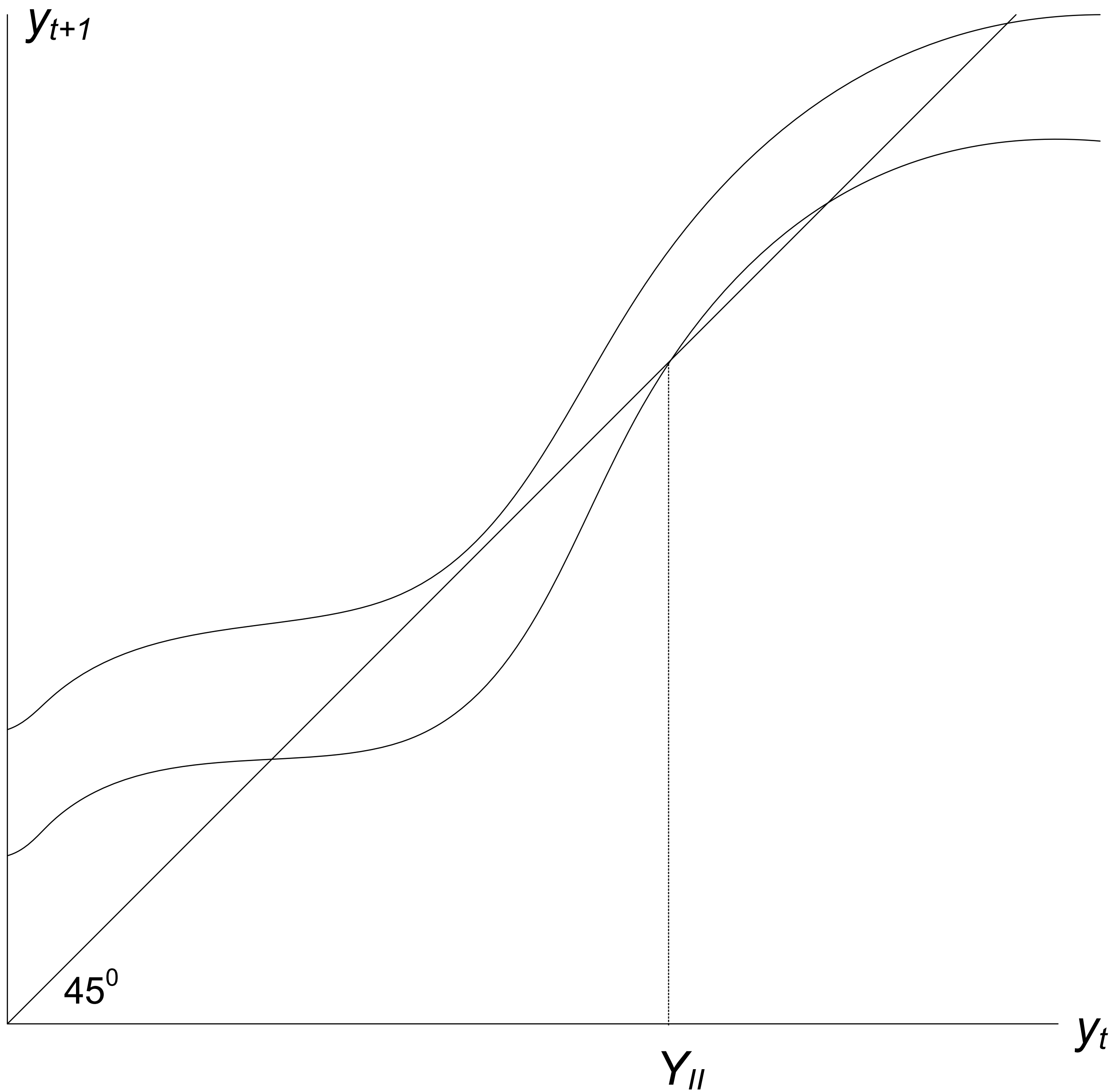
- Theorem. Then there exists a unique measure on incomes μ^* such that μ_t converges to μ^* as $t \to \infty$ from every μ_0.



- Core assumption: a "mixing zone". In this case, it fails:



- Here's a case where a mixing zone exists:



- Two major drawbacks of this model:
- The reliance on stochastic shocks
  - (or failing that, concavity of f)
  - Stochastic shocks not only disequalize . . .
  - . . . mixing gives everyone a chance to level the playing field.
  - But ergodicity could be a long time coming, so misleading
  - E.g., New York State lottery $\Rightarrow$ mixing.
- If there is no mixing, then multiple steady states:
  - But must have disjoint supports, which is weird.

Inequality and Markets

- Stripping away stochastic shocks allow us to distinguish between three views of the market:

- Equalization or convergence

  - Solow (1957), Brock-Mirman (1972), Becker-Tomes (1979, 1986), Loury (1981)...

- Disequalization or symmetry-breaking

  - Ray (1990), Freeman (1996), Matsuyama (2000, 2004), Mookherjee-Ray (2003)...

- Neutrality or coexistence of equal and unequal steady states

  - Ljungqvist (1993), Banerjee-Newman (1993), Galor-Zeira (1993), Ray-Streufert (1993), Ghatak-Jiang (2002)...

- Growth model can be applied to individual dynastic households.
  - Lots of "mini growth models", one per household.
- But then, how to interpret the "production function" f?
  - Presumably, as envelope of intergenerational investments
  - Financial bequests
  - Occupational choice

- So, not surprising that this literature looks like growth theory:

- E.g., Becker and Tomes (1986) generate f by:

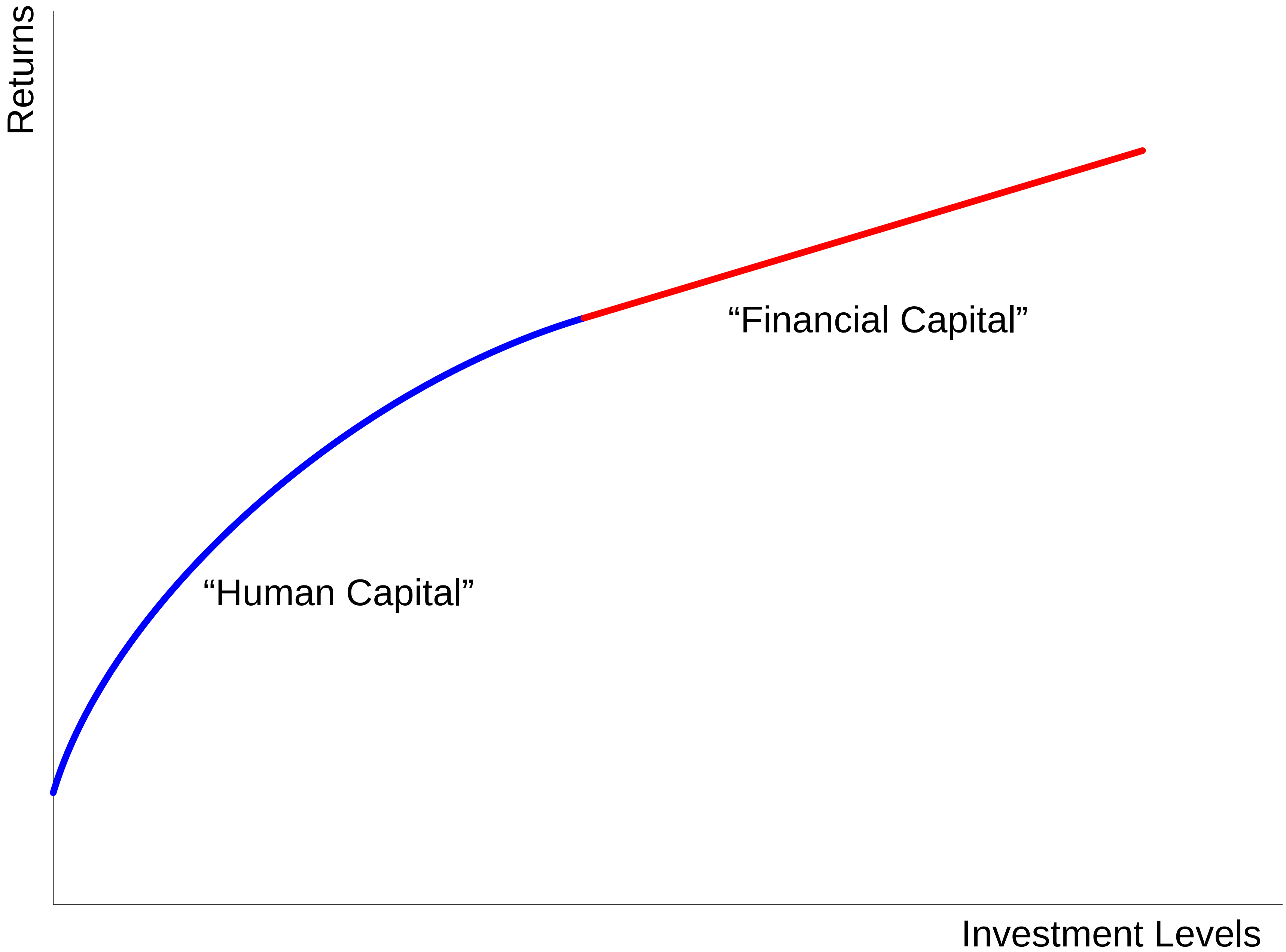
  - reducing all occupations to efficiency units ("human capital")

  - taking envelope with financial bequests

- Same true of Loury (1981).

  - Different x like different levels of human capital.

- Whether or not f is concave is then a question of "technology".


Returns
“Financial Capital”
“Human Capital”
Investment Levels

- Dropping efficiency units creates movements in relative prices:

  - f isn't "just technology" anymore.

- An Extended Example with just two occupations

  - Two occupations, skilled S and unskilled U. Training cost x.

  - Population allocation $(\lambda, 1-\lambda)$.

  - Output: $f(\lambda, 1-\lambda)$

- Skilled wage: $w_s(\lambda) \equiv f_1(\lambda, 1-\lambda)$

- Unskilled wage: $w_u(\lambda) \equiv f_2(\lambda, 1-\lambda)$

Households

- Continuum of households, each with one agent per generation.
- Starting wealth y; $y = c + k$, where $k \in \{0, x\}$.
- Child wealth $y' = w$, where $w = w_s$ or w_u.
- Parent makes choice to max utility.
- No debt!
- Child grows up; back to the same cycle.

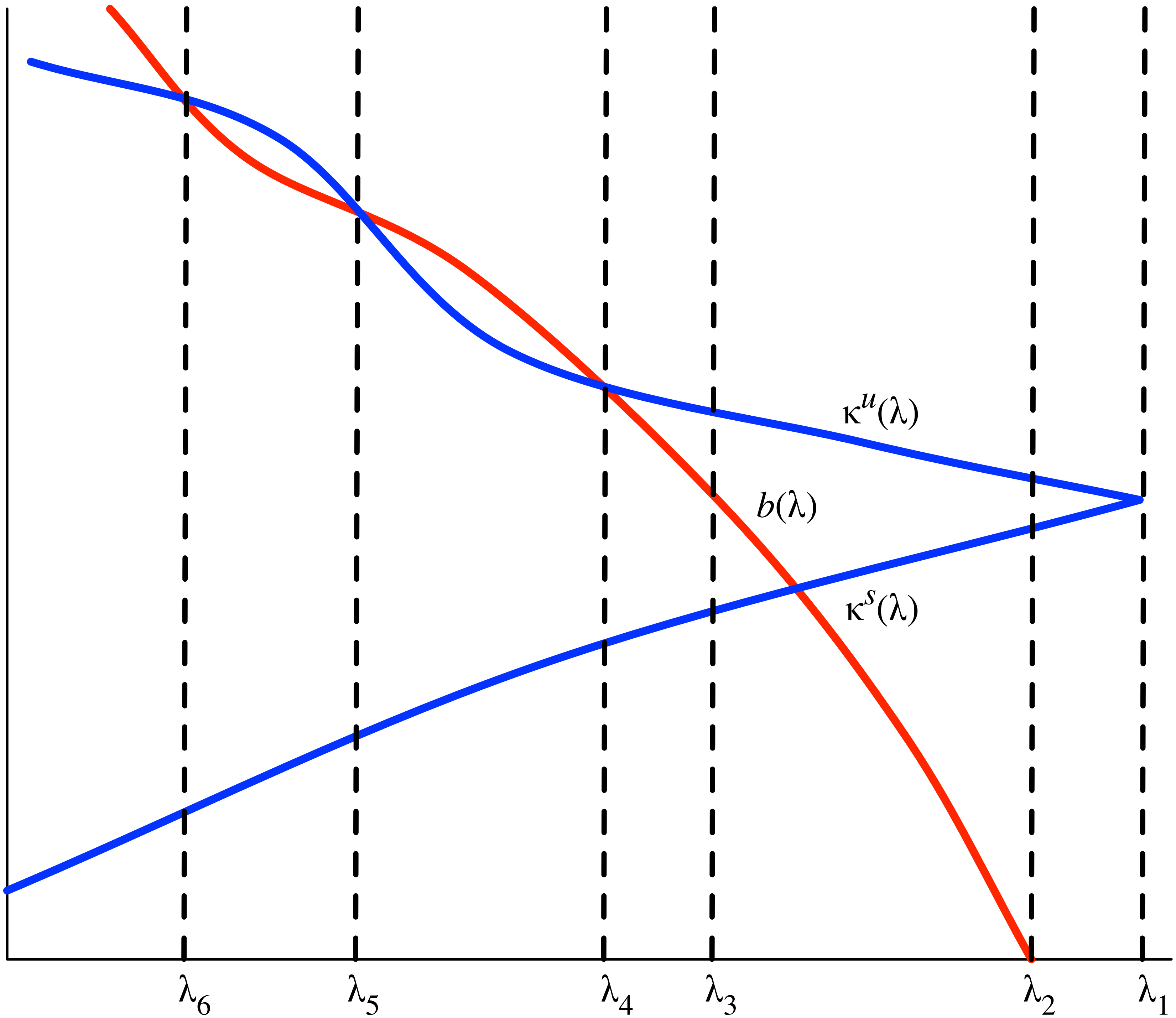
Equilibrium

- A sequence $\{\lambda^t, w_s^t, w_u^t\}$ such that
  - $w_s^t = w_s(\lambda^t)$ and $w_u^t = w_u(\lambda^t)$ for every t.
  - λ^0 given and the other λ^t's agree with utility maximization.

Steady State

- A *stationary* equilibrium with positive output and wages.
  - $\kappa^j(\lambda) \equiv U\left(w_j(\lambda)\right) - U\left(w_j(\lambda) - X\right)$ (investment cost in utils)
  - $b(\lambda) \equiv V\left(w_s(\lambda)\right) - V\left(w_u(\lambda)\right)$ (investment gain in utils)
- Steady state condition:

$$\kappa^u(\lambda) \geq b(\lambda) \geq k^s(\lambda).$$



$\kappa^u(\lambda)$
$b(\lambda)$
$\kappa^s(\lambda)$
λ_6
λ_5
λ_4
λ_3
λ_2
λ_1

- Two-occupation model useful for number of insights:

- No convergence; persistent inequality in *utilities*.

  - Symmetry-breaking argument.

- Multiple steady states must exist.

  - See diagram for multiple instances of $\kappa^u(\lambda) \geq b(\lambda) \geq k^s(\lambda)$.

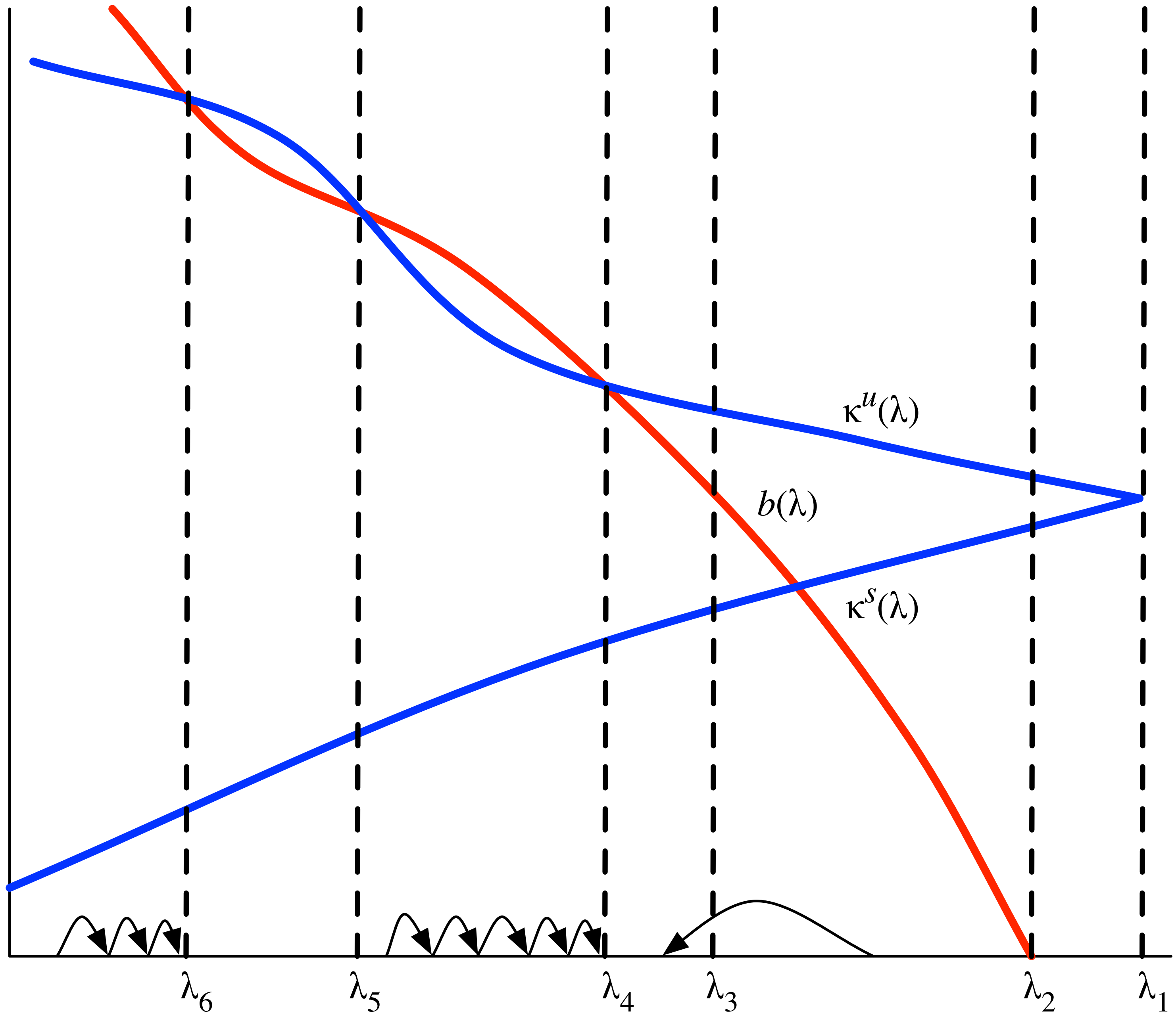
- Steady states with less inequality have higher net output.

  - Net output maximization: $\max_l F(l, 1-l) - X$. Say at l^*.

  - So $F_1(l^*, 1-l^*) - F_2(l^*, 1-l^*) = X$.

  - All steady states to left of this point: inequality $\uparrow$, output $\downarrow$.

- Can get an exact account of history-dependence (dynamics).



Applications

- The Cottage and the Factory

  - Banerjee and Newman (1993)

- Each person can set up factory at cost X.

- Gets access to production function $g(L)$, hire at wage w.

- Otherwise work as laborer.

- Multiple steady states in factory prevalence.

- To embed this story into two-occupation model:

  - Define u = laborer, s = entrepreneur. Let

$$f(l, 1-l) \equiv lg\left(\frac{1-l}{l}\right).$$

  - Then

$$w^u(l) = f_2(l, 1-l) = g'\left(\frac{1-l}{l}\right) = w,$$

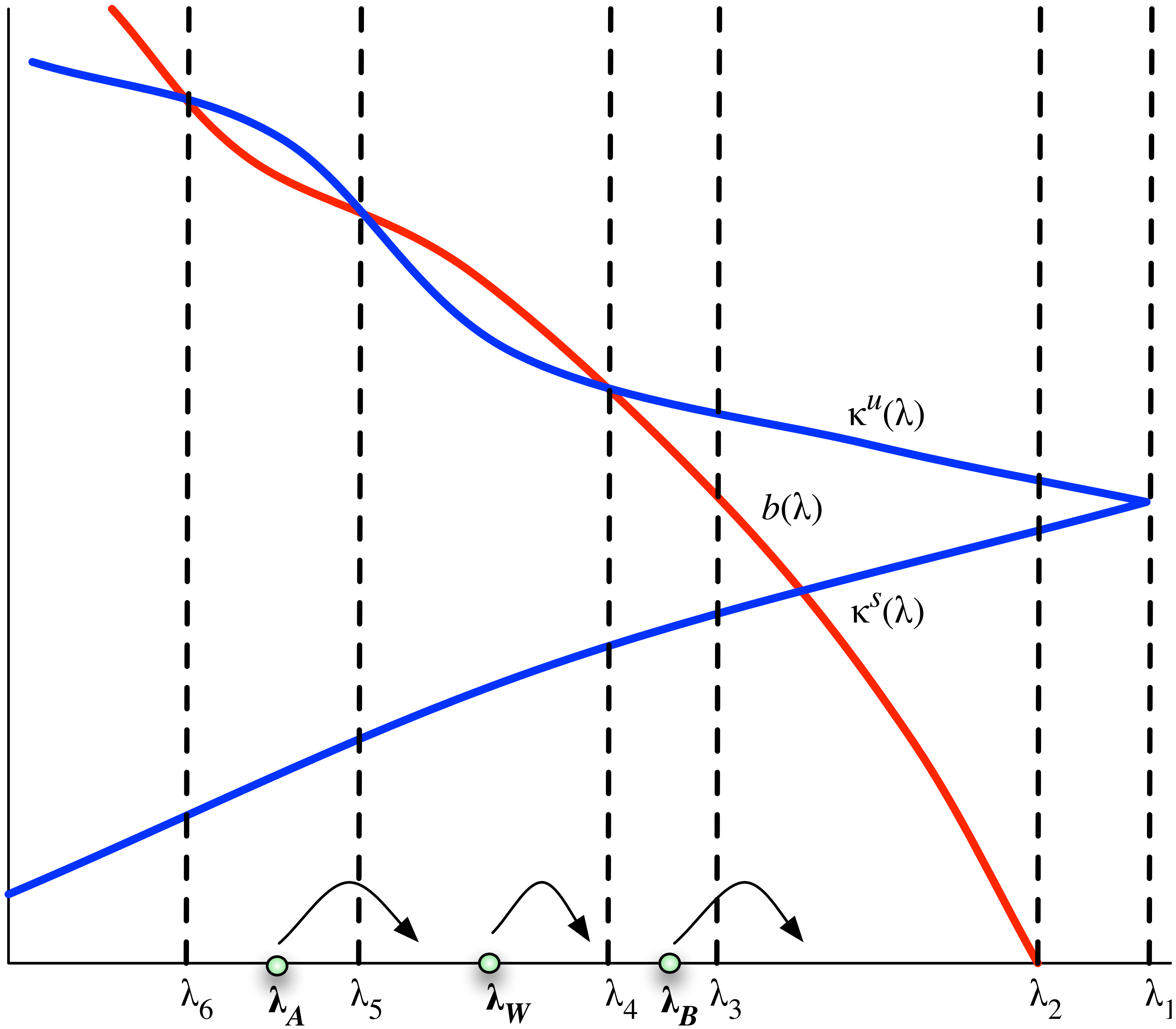
  - and

$$w^s(l) = f_1(l, 1-l) = g\left(\frac{1-l}{l}\right) - \frac{1-l}{l} g'\left(\frac{1-l}{l}\right) = \text{profits.}$$

Inequality and Comparative Advantage

- Tanaka (2003), Zakarova (2006)
- Two ex-ante identical countries
- differ only in initial inequality: their autarkic λs.
- Nested production function:
- aggregate output made from two intermediates
- each intermediate produced with skilled and unskilled labor
- One intermediate relatively intensive in skilled labor.

- In autarky, our model applies to each country
  - (simply integrate out the intermediate goods)
- In trade, our model applies to the world as a whole.
  - (with convex combination of two ls as initial condition)
- By theorem on dynamics, converges to edge steady state.
- Implies incomplete convergence *across identical countries*.



$\kappa^u(\lambda)$
$b(\lambda)$
$\kappa^s(\lambda)$
λ_6
$\boldsymbol{\lambda_A}$
λ_5
$\boldsymbol{\lambda_W}$
λ_4
$\boldsymbol{\lambda_B}$
λ_3
λ_2
λ_1

- Specific National Infrastructure
- Interpret occupations as labor for a specific bundle of goods.
- Interpret f as (common) utility function from the goods
- X as (utility) cost of producing those goods.
- National goods-specific infrastructure to facilitate production.
- Then countries segregate, each dominant in different activities.
- Initial conditions $\Rightarrow$ choice of infrastructure (Sokoloff-Engerman).
- If utility is nonhomothetic, composition will change with growth.

Occupational Choice for Children

- Say parents can choose to skill or not skill their kids.

$$u(c) + \delta n^{\theta} \left[eV^{s} + (1-e)V^{u} \right].$$

- $e =$ fraction of skilled kids, $V^{i} =$ value function, and $0 < \theta < 1$.
- Cost of raising kids: $r_0(w)$ for unskilled, $r_1(w)$ for skilled.
- Define $r(w, e) \equiv er_1(w) + (1-e)r_0(w)$.
- Then total cost can be written as $z \equiv r(e, w)n$.
- Parent consumption $c = w - z = w - r(w, e)n$.

Maximize above utility function subject to these constraints.

- **Proposition.** e is optimally set either to zero or 1.
- **Proof.**
  - Define extra "education cost" $X \equiv r_1(w) - r_0(w)$.
  - Differentiate parental utility with respect to e:

$$\frac{\partial \text{Utility}}{\partial e} = \delta n^{\theta}(V^s - V^u) - u'(w - r(w,e)n)nx,$$

  - Now use the first-order condition to eliminate u':

$$\frac{\partial \text{Utility}}{\partial e} = \frac{\delta n^{\theta} x}{r(w,e)} \left[\left\{ \frac{r_0(w)}{x} + (1-\theta)e \right\} (V^s - V^u) - \theta V^u \right].$$

  - Proves that parental utility is strictly quasiconvex in e, given w.
- So no interior solution to e can ever maximize parental utility.

- Proposition. At any transition point to a higher occupation, fertility must jump down.

- Remark. Contrast ambiguity on income vs substitution effects.

- Proof. Given e look at optimal choice of n:

$$u'(w-z)\,r(w,e) = \delta\theta n^{\theta-1}\left[eV^s + (1-e)V^u\right].$$

- Substitute this into utility function $u(c) + \delta n^{\theta}\left[eV^s + (1-e)V^u\right]$

- so that parent effectively chooses e to max

$$u(w-z) + \frac{1}{\theta}u'(w-z)\,z.$$

- Monotone in z. (Why?) So find an extremal value of z.

- At transition, both $e = 0$ and $e = 1$ optimal, so have same z.

- Therefore $e = 1$ must have lower n.

- So in steady state, a combination of Barro-Becker over the range in which no occupational transition, plus a fertility drop at the occupational transition.

- Theorem: Net effect is *always a fertility drop* over observed wage rates in steady state.

- Corollary. Steady states exhibit upward population drift from unskilled to skilled, roughly at the rate of difference in fertility.

  - For more, see Mookherjee, Prina and Ray (AEJ Micro 2010)

Conditionality in Educational Subsidies

- Recall that higher λ associated with higher net output.

- So there is a role for educational subsidies.

  - Assume all subsidies funded by taxing w_s at rate τ.

- Unconditional subsidies: give to unskilled parents.

$$T_t = \frac{\lambda_t \tau}{1 - \lambda_t} w_s(\lambda_t).$$

  - Add this to the unskilled wage: $w_u(\lambda_t) + T_t$.

- Conditional subsidies: give to all parents conditional on educating children.

$$Z_t = \frac{\lambda_t \tau}{\lambda_{t+1}} w_s(\lambda_t).$$

Theorem.

- With unconditional subsidies, every left-edge steady state declines, lowering the proportion of skilled labor and increasing pre-tax inequality, which undoes some or all of the initial subsidy.

- With conditional subsidies, every left-edge steady state goes up, increasing the proportion of skilled labor. In steady state, no direct transfer occurs from skilled to unskilled, yet unskilled incomes go up and skilled incomes fall.

- Conditional subsidies therefore generate superior macroeconomic performance (per capita skill ratio, output and consumption) and welfare (Rawlsian or utilitarian).

- For more, see Mookherjee and Ray (Economic Record 2008)

- Initial Poverty and Subsequent Inequality

- Mookherjee and Ray (2010a)

- Extend model to accommodate direct bequests.

- Now persistent inequality is *not* a necessary outcome.

- (Rework the symmetry-breaking example with financial bequests.)

- Dynamics much more complicated, but can be done for two-occ case.

- Theorem. When initial poverty is high, then even a situation of perfect equality must cause convergence to an unequal steady state.

Behavioral Approaches to Poverty

- failed aspirations

- informational biases

- temptation, lack of self-control

Two Examples from Developing Countries

- Poor forego profitable small investments
  - Agricultural investment in Ghana (Udry-Anagol, 2006)
  - Fertilizer use in Kenya (Duflo-Kremer-Robinson, 2010)
  - Microenterprises in Sri Lanka (Mel-McKenzie-Woodruff, 2008)
- Public distribution debate
  - Public food distribution system in India
  - Huge debate on food versus cash transfers
  - Impulsive spending from cash (Khera 2011 survey)

Self-Control or Just Present Bias?

- Demand for commitment products in LDCs.
  - Lockboxes in the Gambia (Shipton, 1992)
  - Commitment savings in the Philippines (Ashraf-Karlan-Yin, 2006)
  - ROSCAS (Aliber, 2001, Gugerty, 2001, 2007, Anderson-Baland, 2002)

- Pressures to share
  - Extended-family demands on wealth
  - (Platteau 2000, Hoff-Sen 2006, Brune et al 2011)

Self-Control

- Intuitive idea:
  - Ability to follow through on an intended plan
  - (operationally, match a choice made with full precommitment)

- External versus internal devices.
  - External: locked savings, retirement plans, Roscas etc.
  - Internal: the use of psychological private rules (Ainslee).
  - see Strotz (1956), Phelps-Pollak (1968), or Laibson (1997).

- Literature on the particular question pursued here:

- Banerjee-Mullainathan (2010) [BM]:

  - "The link to poverty within this framework comes from assuming that the fraction of the marginal dollar that is spent on temptation goods can depend on the level of consumption."

  - These results assume that the poor are more tempted than the rich.

- Bernheim, Ray and Yeltekin (1999, 2013) take a different approach.

  - They assume that the underlying model is homothetic in preferences.

  - The only non-homothetic feature is an imperfect credit market.

Assets and Incomes

- Accumulation

$$A_t = c_t + \frac{A_{t+1}}{\alpha}.$$

- Imperfect credit market

$$A_t \geq B > 0.$$

- Interpretation: $A =$ financial assets $+$ pv of labor income

$$P = \frac{\alpha}{\alpha - 1} y,$$

- and

$$B = \Psi(P)$$

- e.g.,

$$B = \psi P \text{ for some } \psi \in (0, 1]$$

Preferences $u(c) = c^{1-\sigma}/(1-\sigma)$, for $\sigma > 0$.

$$u(c_0) + \beta \sum_{t=1}^{\infty} \delta^t u(c_t), \quad 0 < \beta < 1.$$

- Standard model: $\beta = 1$.
- If $\delta\alpha > 1$ [growth] and $\mu \equiv \frac{1}{\alpha}(\delta\alpha)^{1/\sigma} < 1$ [discounting], then

$$A_{t+1} = (\delta\alpha)^{1/\sigma} A_t$$

$$c_t = (1-\mu) A_t.$$

- $\longrightarrow$ Ramsey policy.
- If $\beta < 1$, optimal plan is time-inconsistent.

Equilibrium With Self Control

- Motivated by personal rules of Ainslee (1991):
  - The mechanism by which "...the person can arrange consistent motivation" for a "prolonged course of action."
  - "[T]he same logic is the basis for what is called a 'self-enforcing contract' between individuals."
- Modeled as an equilibrium across various selves.
  - For every history of actions, choose a savings plan.
  - If I deviate, I "punish" by switching to an alternative plan.
  - No deviation, including deviations from the alternative plan, must be profitable.
- The ability to self-punish is crucial in trying to exercise self control.

Self-Control Definition

- Self-control at A:

$\Rightarrow$ Accumulation at A in some equilibrium.

- Strong self-control at A:

$\Rightarrow$ $A_t \to \infty$ from A, in some equilibrium.

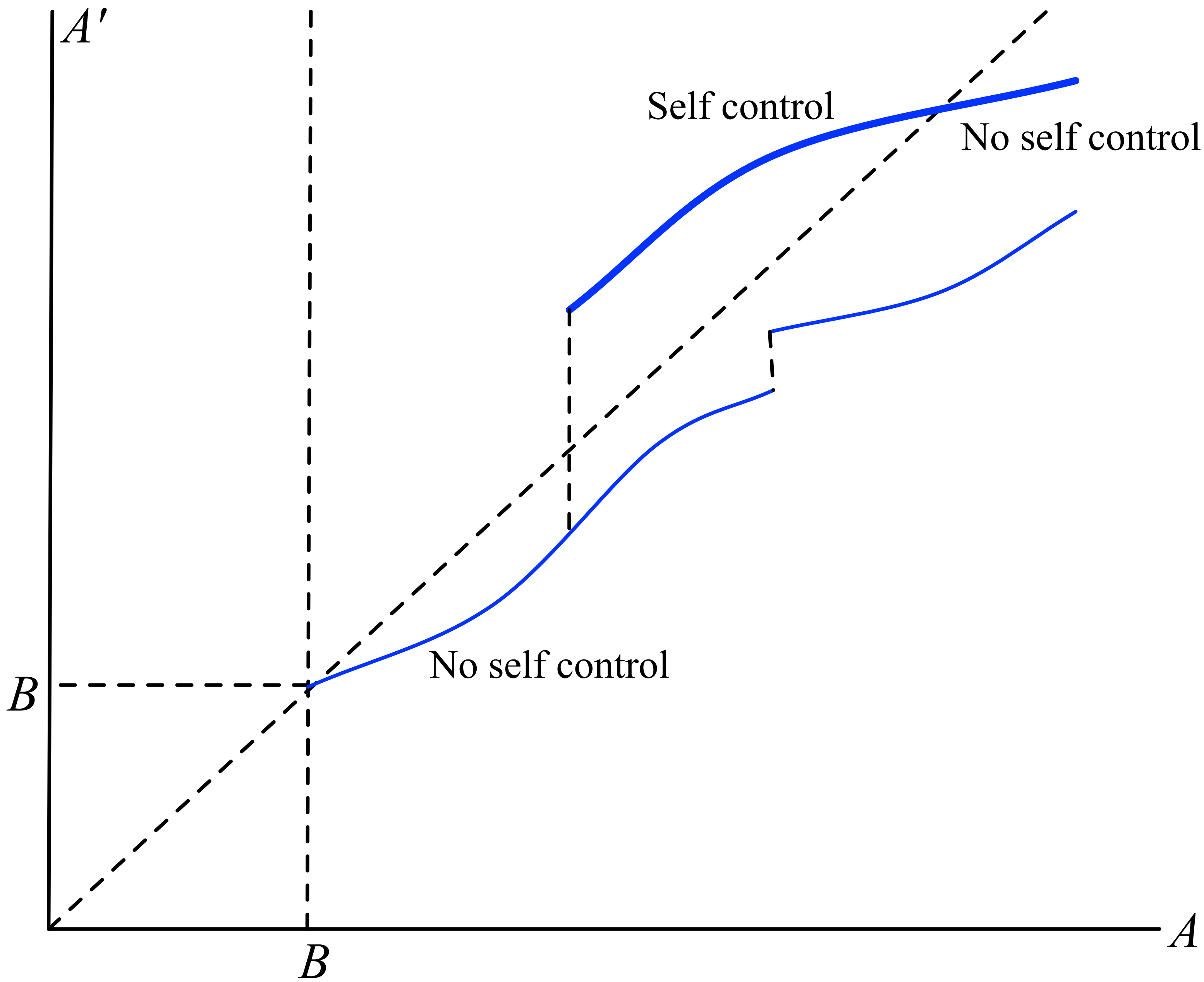
- No self-control at A:

$\Rightarrow$ No accumulation at A in any equilibrium.

- Poverty trap at A:

$\Rightarrow$ Slide to credit limit B from A in every equilibrium.

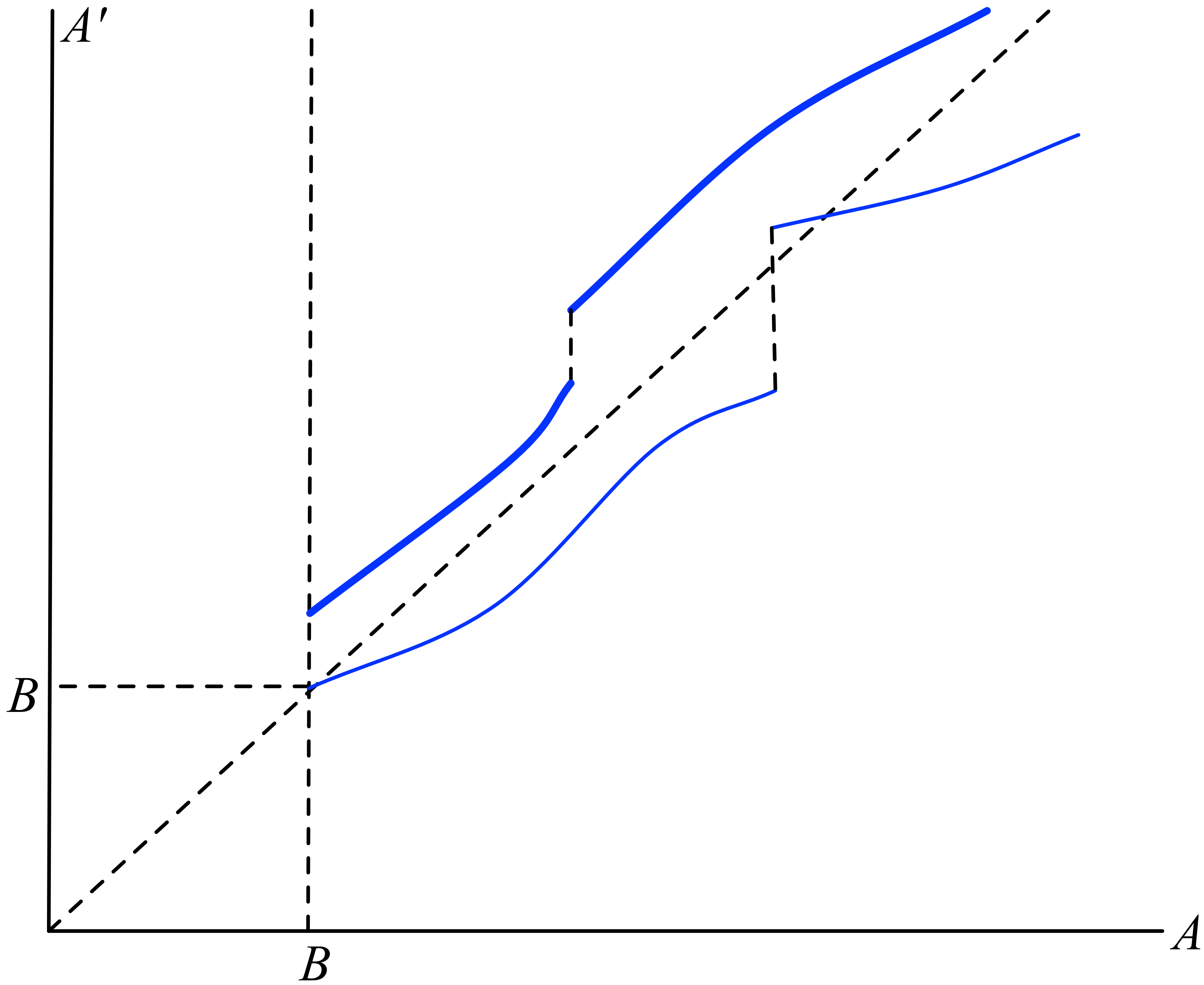
Self-Control and No Self-Control



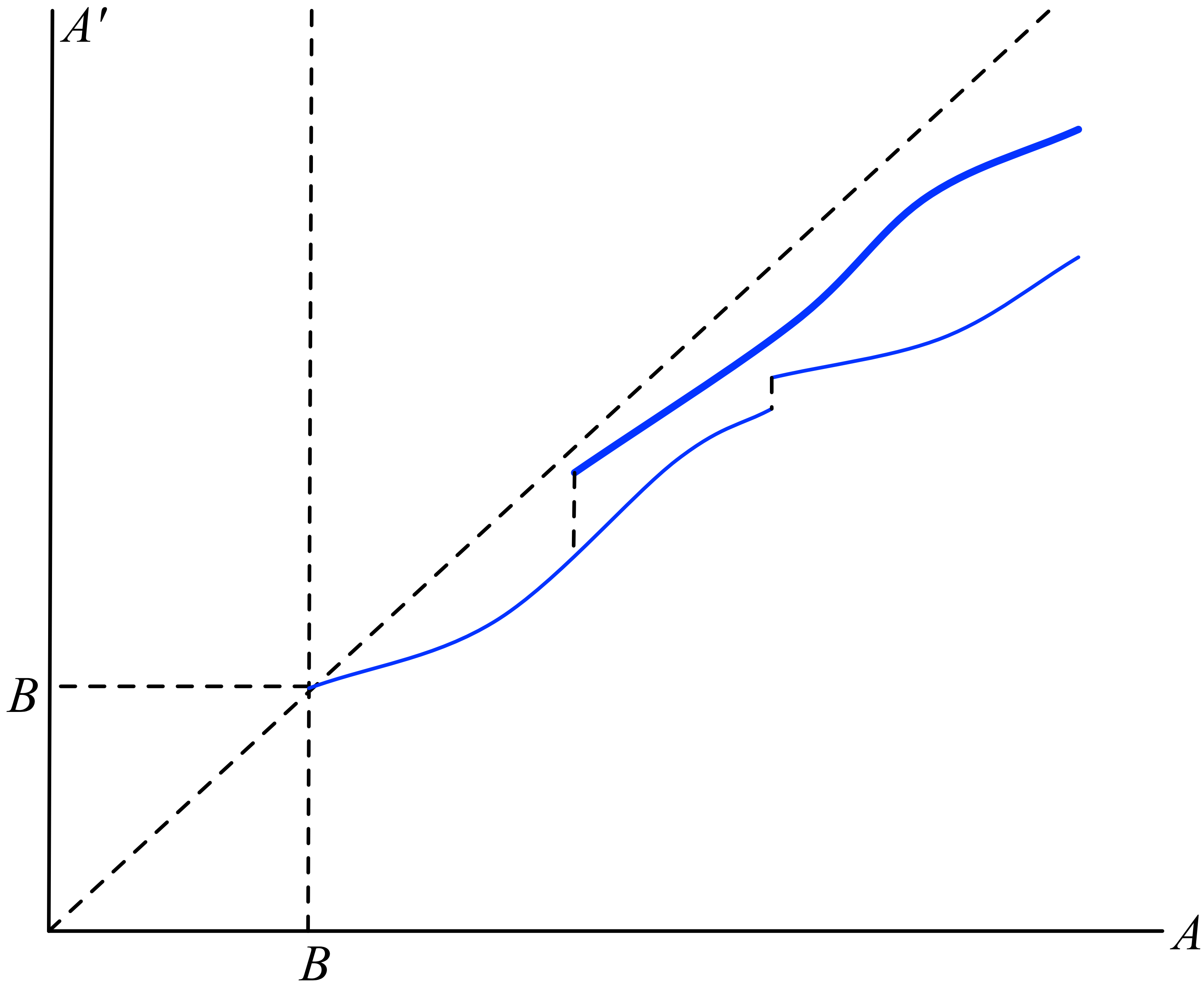
Uniformity and Nonuniformity

- Uniform case:
  - Self control at every A, or its absence at every A.
- Nonuniform case:
  - Self-control at A, no self-control at A'.

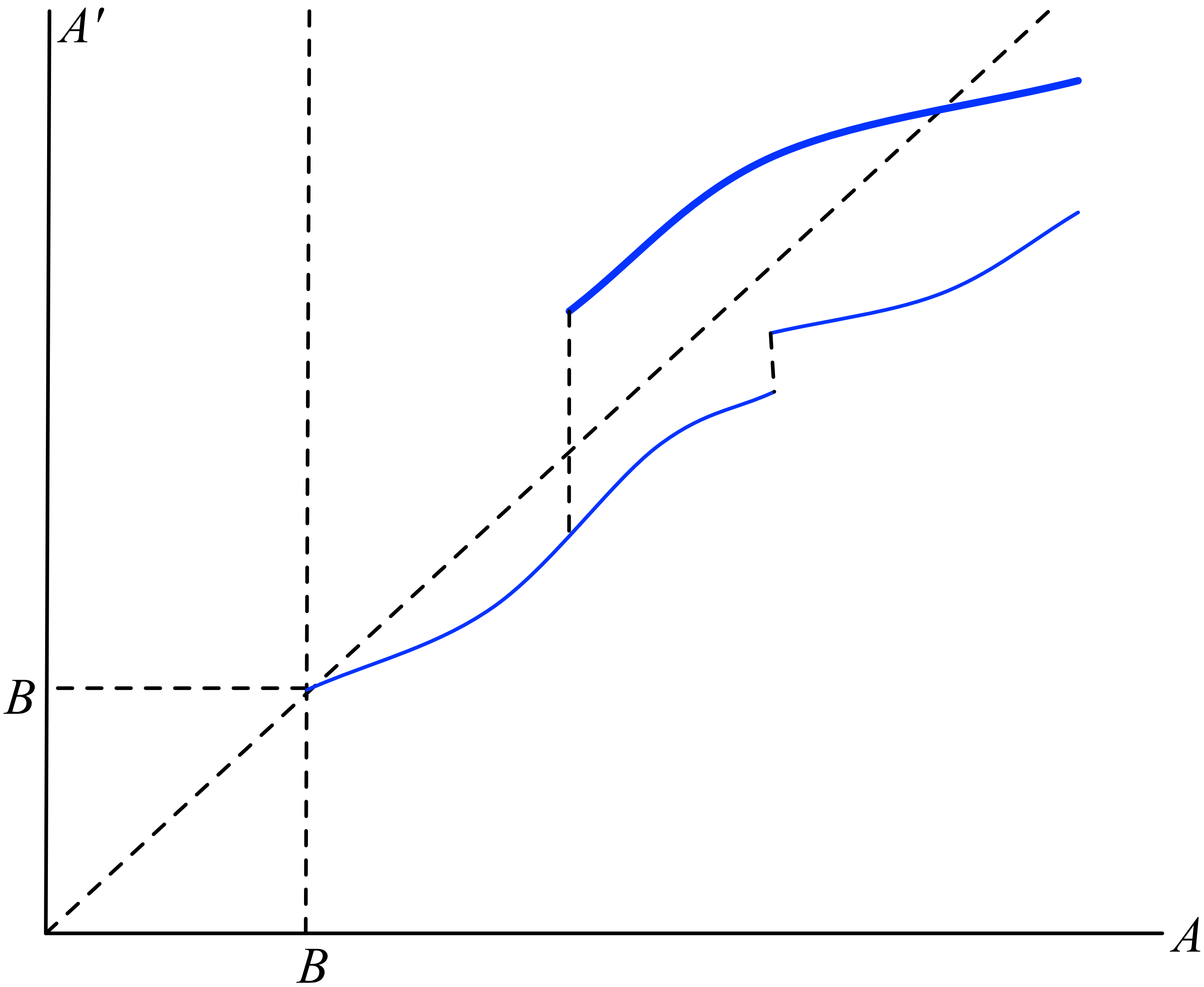
Uniformity and Nonuniformity



Uniformity and Nonuniformity



Uniformity and Nonuniformity



Uniformity and Nonuniformity

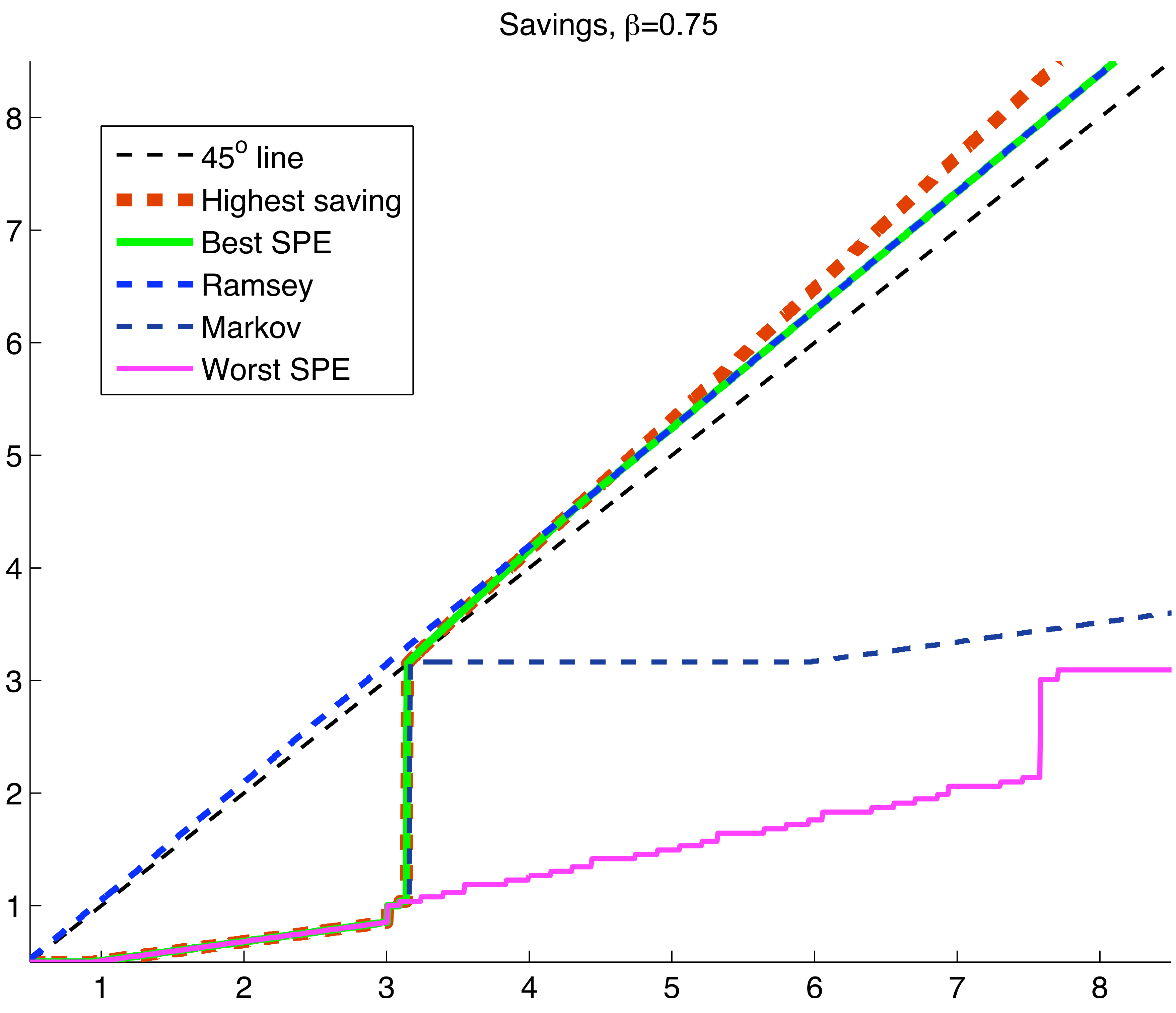
- **Theorem.** Suppose no credit constraints, so that $B = 0$.
  - Then every case is uniform.
- $B > 0$ destroys scale-neutrality (in A), but how exactly?
- Some intuition:
  - Think of the consequences of a lapse in self-control.
  - More severe when the individual has more assets; hence more to lose.
  - Not exactly what happens in this model, but good approximation.

The Structure of Punishments

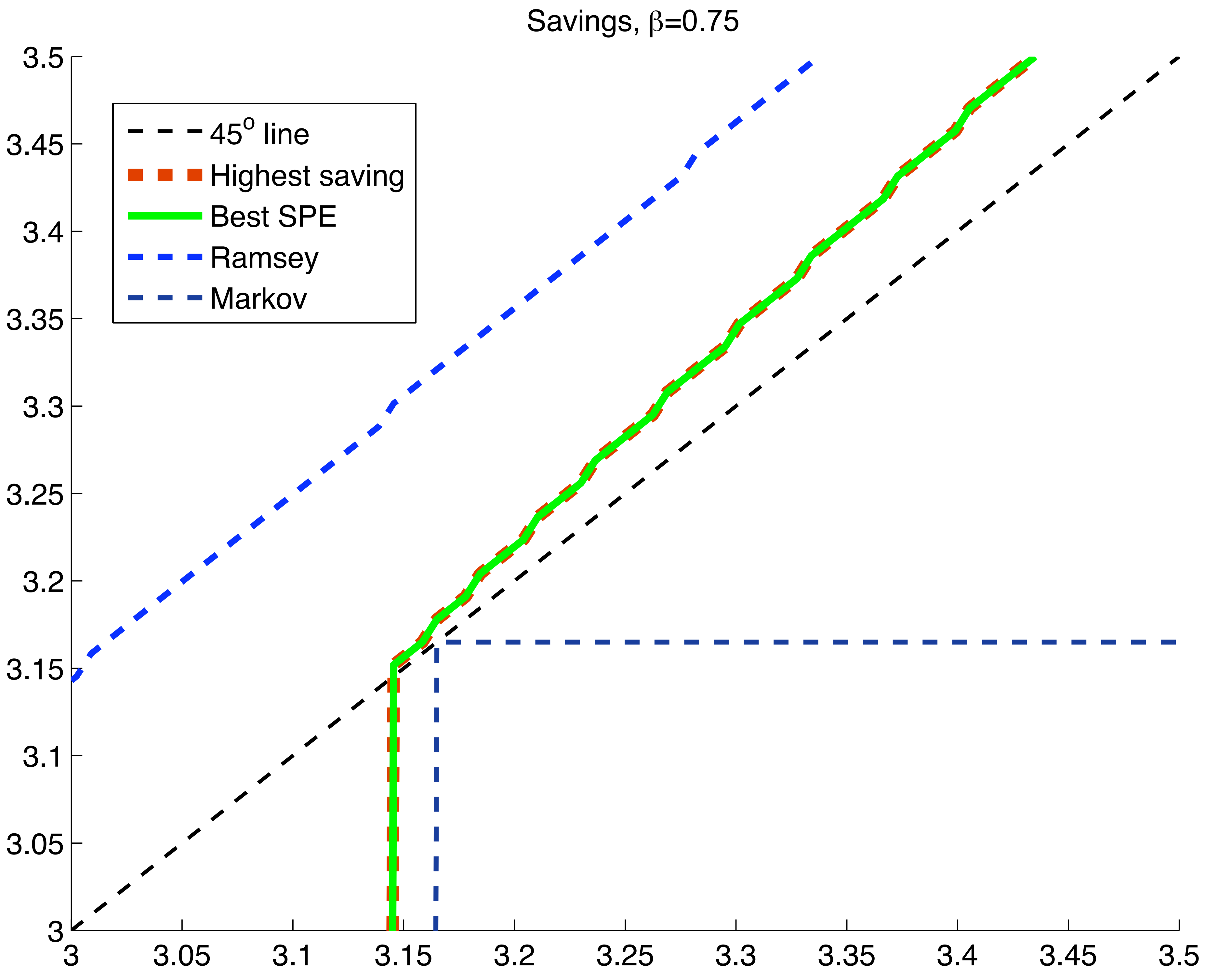
- **Theorem.**

- (i) The worst equilibrium value at any asset level A is implemented by choosing the smallest possible equilibrium continuation asset at A.

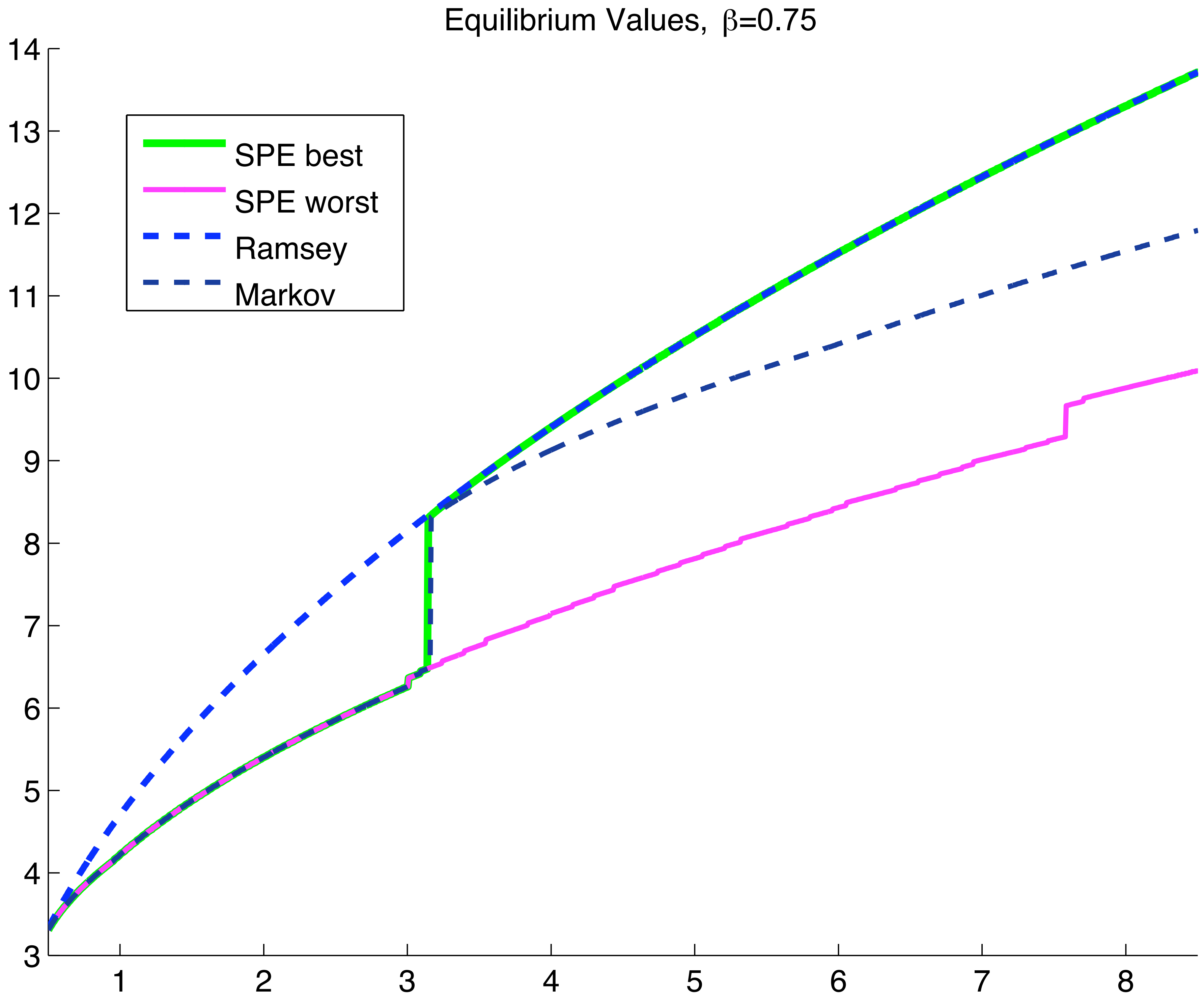
- (ii) This value can be generated by an equilibrium path, which entails a return to the best equilibrium after at most two "binges."



Savings, β=0.75
45° line
Highest saving
Best SPE
Ramsey
Markov
Worst SPE
1
2
3
4
5
6
7
8



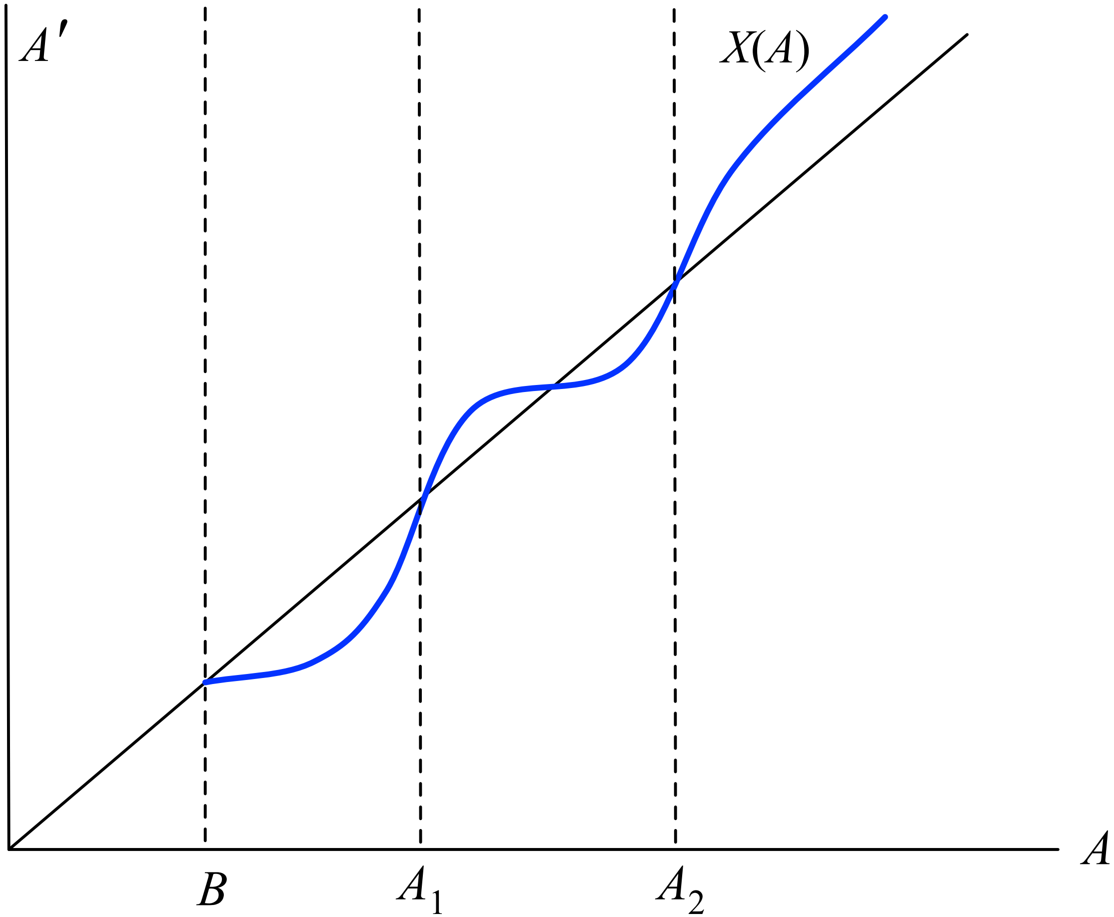
Savings, β=0.75
45° line
Highest saving
Best SPE
Ramsey
Markov
3
3.05
3.1
3.15
3.2
3.25
3.3
3.35
3.4
3.45
3.5


Equilibrium Values, β=0.75
SPE best
SPE worst
Ramsey
Markov
14
13
12
11
10
9
8
7
6
5
4
3
1
2
3
4
5
6
7
8

- **Theorem**. [Central Result]. In the non-uniform case,

- There is $A_1 > B$ such that every $A \in [B, A_1)$ exhibits a poverty trap.

- There is $A_2 \geq A_1$ such that every $A \geq A_2$ exhibits strong self-control.



Some Implications

1. Easier Access to Credit Has Ambiguous Effects

- Conventional theory: more abundant credit reduces saving.
- Implications here are more nuanced.
- Modified neutrality: only B/A matters.
- Easier credit (lower B) reduces A_1 and A_2 thresholds:
- More individuals successfully exercise self-control
- Offsetting effect: those who fall into trap will fall further.
- Summary: ambiguous effects, depending on where you start.

2. The Demand for Commitment Devices

- Demand for external commitment devices by poor households.
- Surprisingly little evidence that this demand is more widespread.
- (But: Ariely-Wertenbroch 2002, Beshears-Choi-Laibson-Madrian 2011)
- Need some reliance on internal mechanisms (value of flexibility).
- But external devices undermine efficacy of internal mechanisms.

- Who demands external devices?

- The asset-poor, and the income-rich if $B \propto$ permanent income.
- The asset-rich or the income-poor prefer internal mechanisms.

- Income-rich generally also asset-rich, so net effect is ambiguous.

3. Designing Accounts to Promote Saving

- **Example**: retirement savings programs.
  - Significant variation in lock-up across plans
  - In addition, large variation in stringency of contributions.
- Recall: lock-up has both upside and downside.
  - Programs that capitalize on upside while avoiding downside?
  - Idea: lock up funds until some target, then remove the lock.
  - Can (should) allow each individual to select personal target.

- To formalize, use taste shock for uncertain environment:

$$u(c, \eta) = \eta \frac{c^{1-\sigma}}{1-\sigma},$$

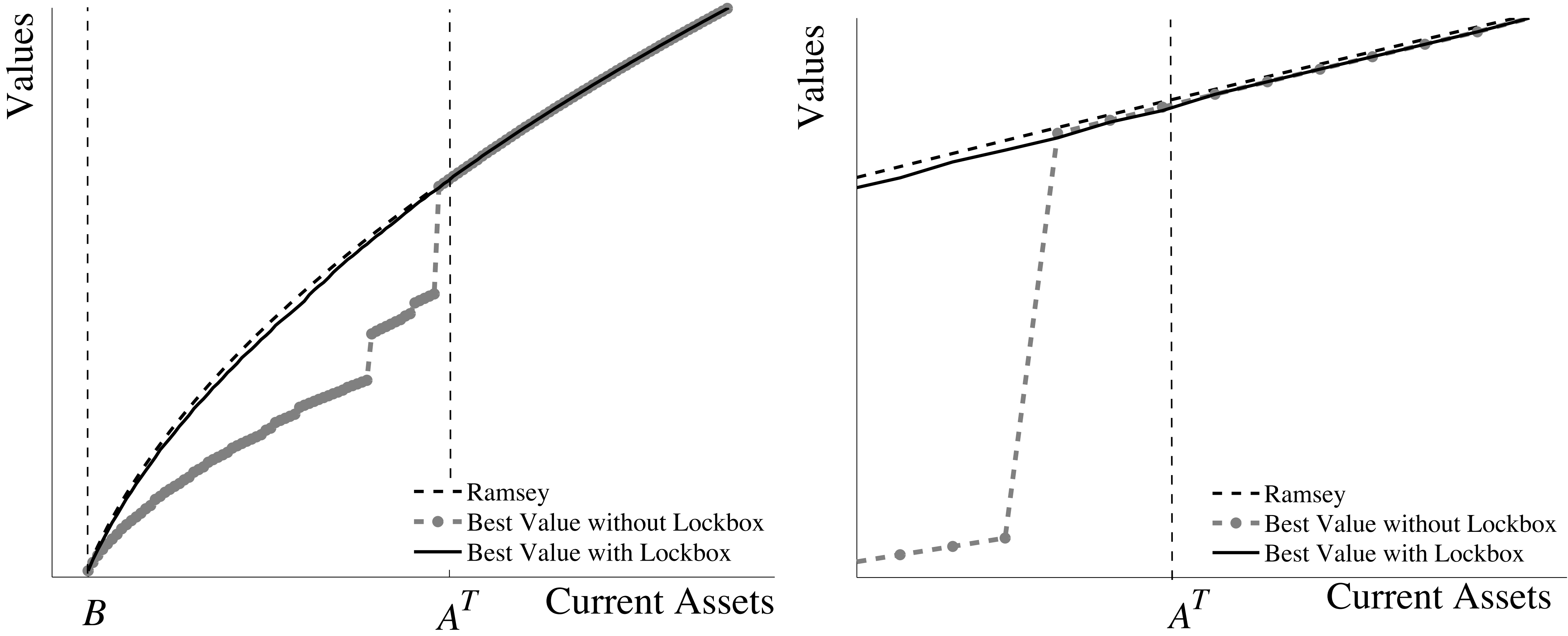
- Lock-up account that unlocks once a threshold is reached.

- Threshold slightly higher than the threshold that permits accumulation.

- If lower, the agent will slide back once the account is unlocked.

- Note: nowhere close to solving the optimal design problem.

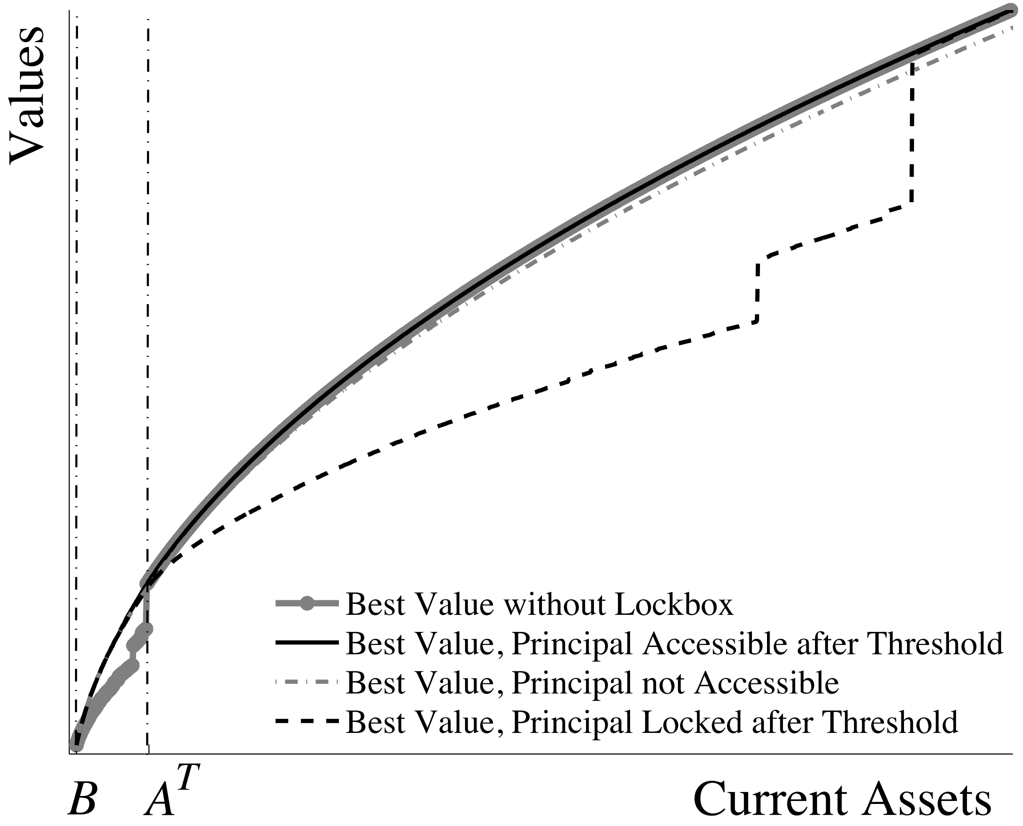
Alternative A. commitment savings up to threshold, full release thereafter.

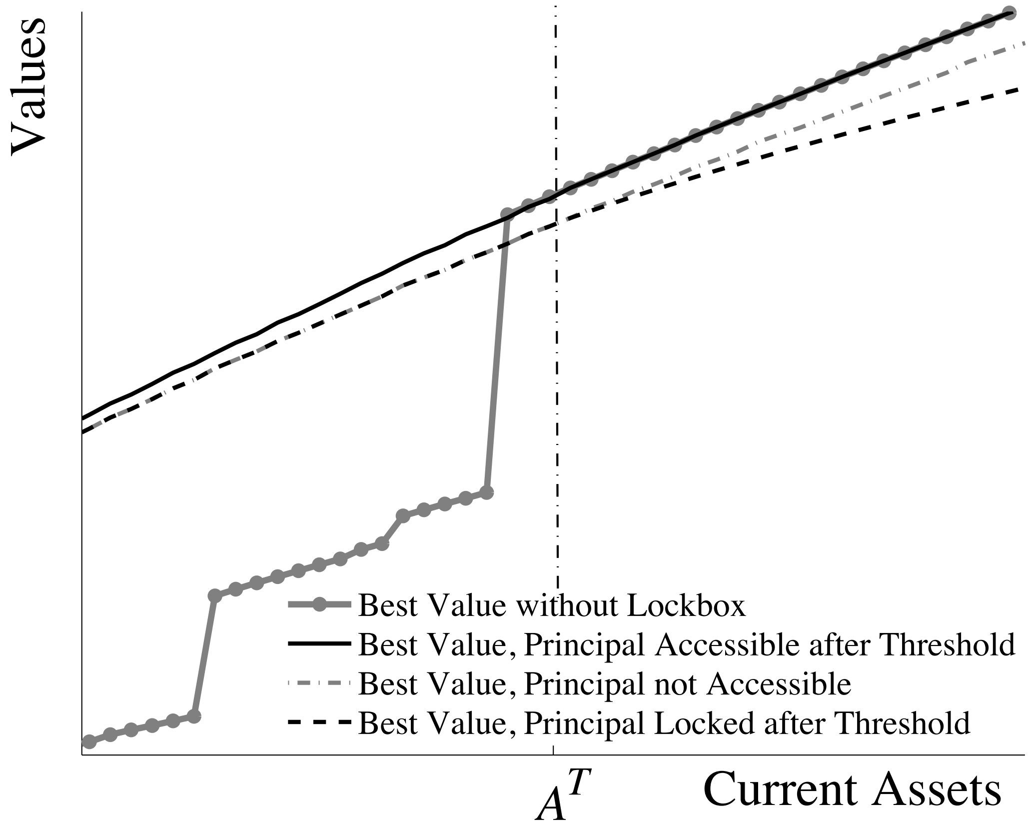


- Both the lock-up and the release are important . . .

Alternative B: commitment savings forever, principal always locked.

Alternative C: usual saving after threshold, commitment principal locked.





Note: Alternative C can be worse than Alternative B.

4. Asset-Specific MPCs

- Hatsopoulos-Krugman-Poterba (1989), Thaler (1990), Laibson (1997)

- $A =$ financial assets $+$ permanent income.

- Jump in financial assets

  - $B/A = B/($financial assets $+$ permanent income$)$.
  - B/A falls: can switch from decumulation to accumulation.
  - So low MPC from financial assets.

- Jump in income. If $B/($perm inc$)$ constant, $B/A \uparrow$.

  - High MPC in non-uniform case.

- At best B unchanged; then identical MPCs.

Summary

- We know that a failure of self-control can lead to poverty.
  - Is the opposite implication true?
- Model constructed for scale-neutrality:
  - Result isn't "built-in" by presuming that the poor are tempted more.
  - Ainslee's personal rules as history-dependent equilibria
- Structure of optimal personal rules is remarkably simple:
  - Deviations entail "falling off" the wagon, then "climbing back on".

- Main result: ability to impose self-control rises with wealth.
   - In fact, the model generates a poverty/self-control trap.
- Novel policy implications:
   - Among them: interplay between external and internal commitments
   - External self-control devices can undermine internal self-control
   - Lock-box savings accounts with self-established targets and unlocking of principal may be particularly effective devices for increasing saving

- Poverty/temptation link one of three behavioral poverty traps.

- The Information Trap

- Information a commodity that poor households cannot afford.

- Arsenic contamination of groundwater

- Madajewicz *et al* (2007) document large well-switching after info campaign

- HIV/AIDS incidence by age of partner.

- Dupas (2011) field experiment on info to teenagers in Kenya.

- Also possibility of internal coordination failures with multiple challenges:

- Diarrhea, respiratory disease, malaria, groundwater arsenic

- The Aspirations Trap
- Appadurai (2004), Ray (1998, 2006), Genicot-Ray (2013)
- A person's aspirations affects her incentives to invest.
- Investments determine growth and income distribution.
- But aspirations are not formed in isolation.
- The income distribution in turn shapes aspirations.
- Two-way process of aspirations formation and growth.