Reconciling Hayek's and Keynes' views of recessions

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0. Introduction
Recessions

- Recessions often come after periods of rapid accumulation of assets (productive capital, houses, durable goods)
- Two opposite views of economic policy in those recessions
  - Hayek
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Two opposite views

The Liquidationist View (Friedrich Hayek)	The Aggregate Demand View (John Maynard Keynes)
▸ Recessions are needed to cleanse the economy.	▸ Recessions are periods of insufficient demand
▸ Gvt spendings, aggregate demand management only delays necessary adjustment	▸ Activist fiscal policy is needed

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- We show that the two views are not mutually exclusive
- "Over-" ("mal-") accumulation of physical assets creates the need for *liquidation* $\rightsquigarrow$ recession
- This *liquidation* will cause the economy to function particularly inefficiently.
- Some stimulative policies may remain desirable even if they postpone a recovery.

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- Environment with decentralized markets & flexible prices .
- Two imperfections:
  - Labor market matching friction in the spirit of Diamond-Mortensen-Pissarides $\rightsquigarrow$ unemployment risk
  - Adverse selection in the insurance market : unemployment risk is not (fully) insurable.

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- We do not propose a theory of why the economy might find itself with a (too) large stock of houses, durables and/or capital goods.
  - × Noisy news
  - × Lax monetary policy
  - × Exuberance
  - × Perfect foresights limit cycle

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- Lucas and Prescott [1974], Lucas [1990]
- Lagos and Wright [2005]
- Angeletos and La'O [2013]
- Carroll [1992]
- Guerrieri and Lorenzoni [2009]
- Challe and Ragot [2013]
- Ravn and Sterk [2012]
- den Haan, Rendahl, and Riegler [2014]
- Chamley [2014], Kaplan and Menzio [2013], Heathcote and Perri [2012]

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Roadmap

1. Model setup
2. Equilibrium
3. Interesting Properties of the Static Equilibrium
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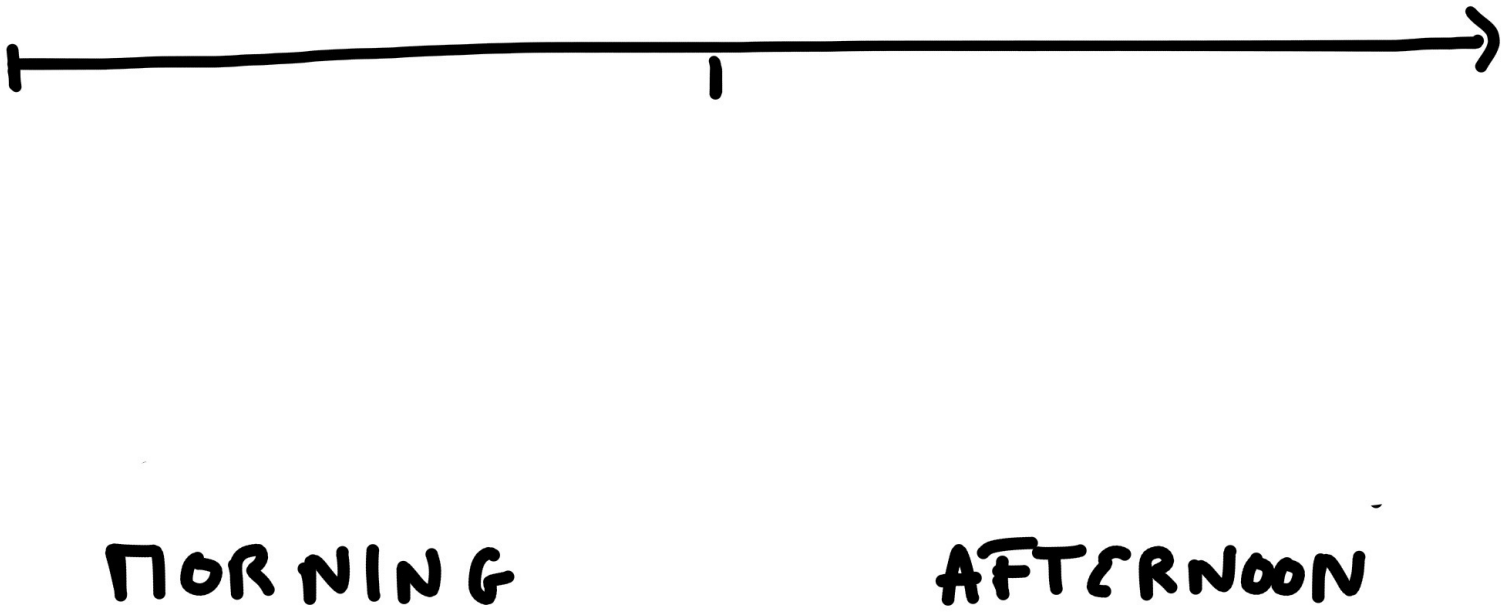
Figure 1: Overview: timeline



1. Model setup

Figure 2: Overview: Initial goods

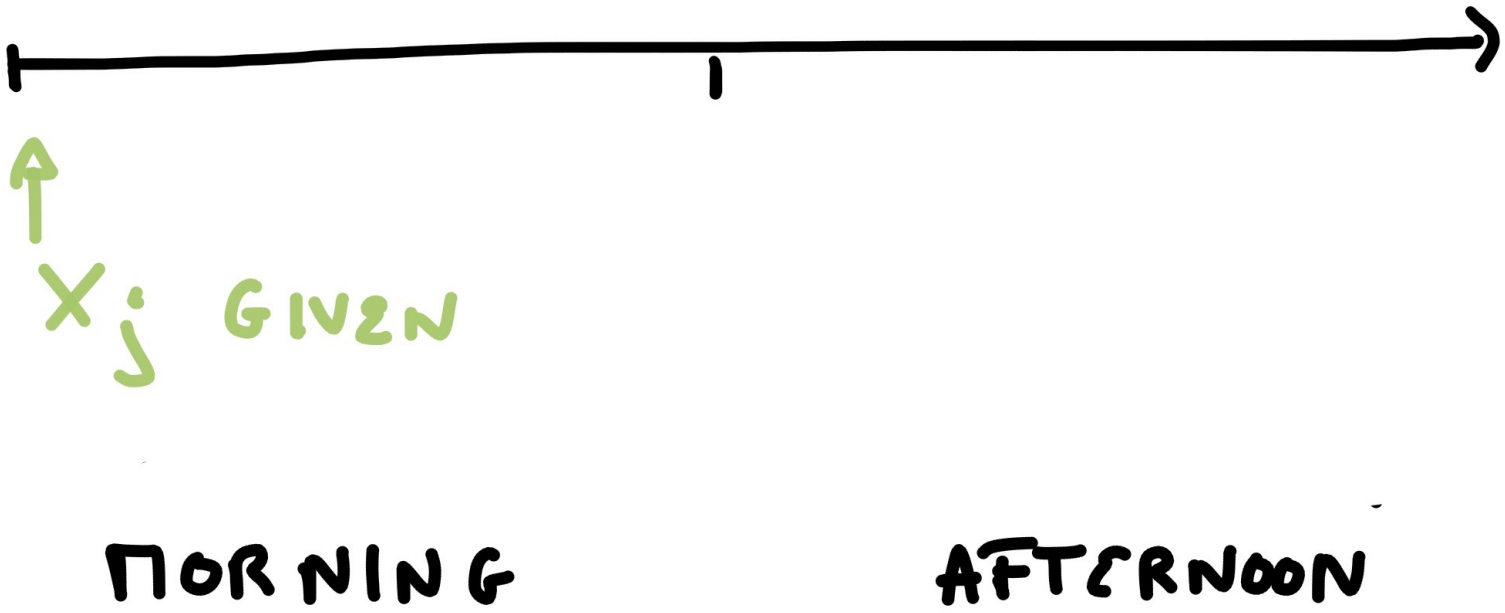


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Figure 3: Overview: markets

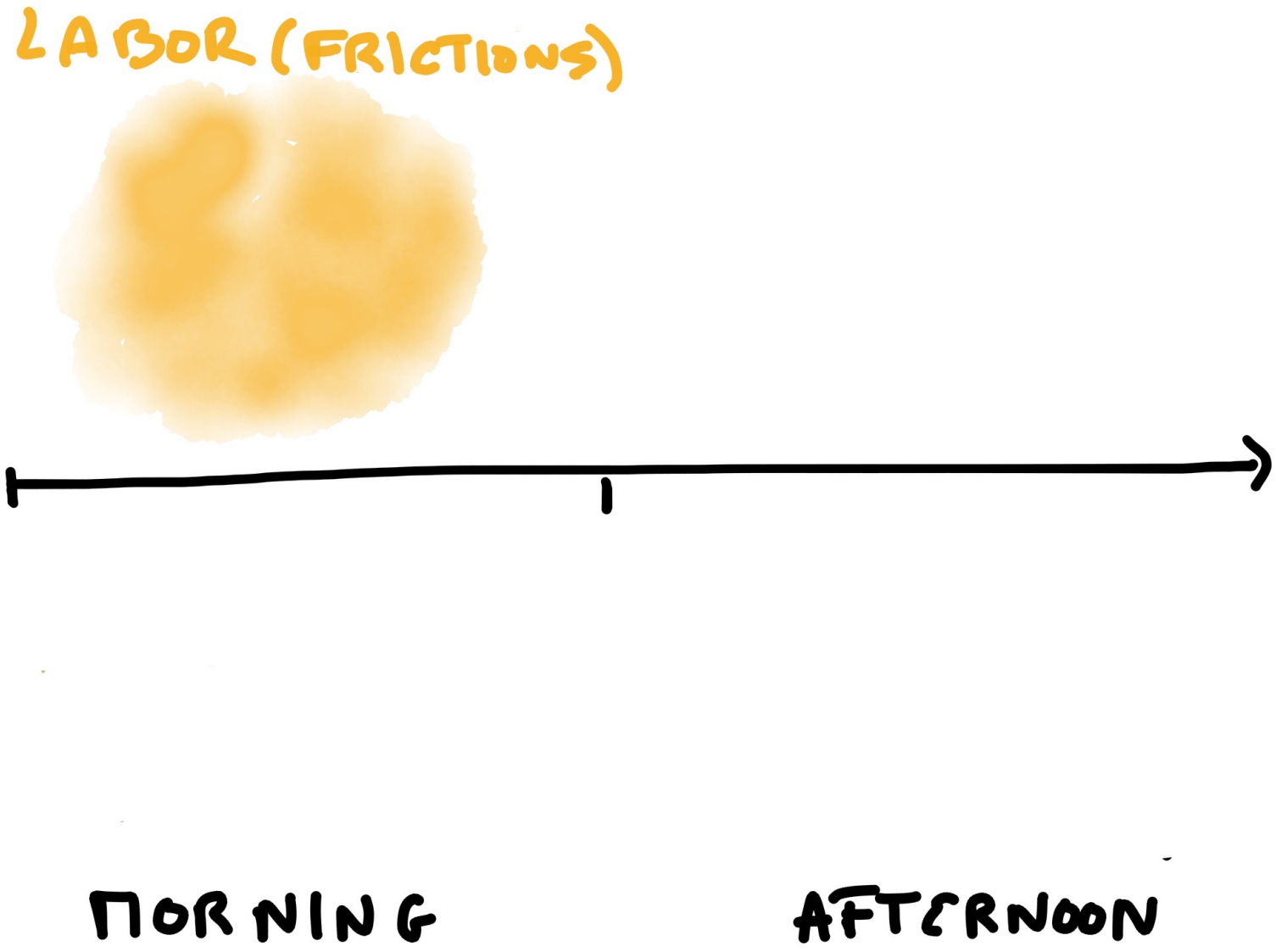

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Figure 4: Overview: markets

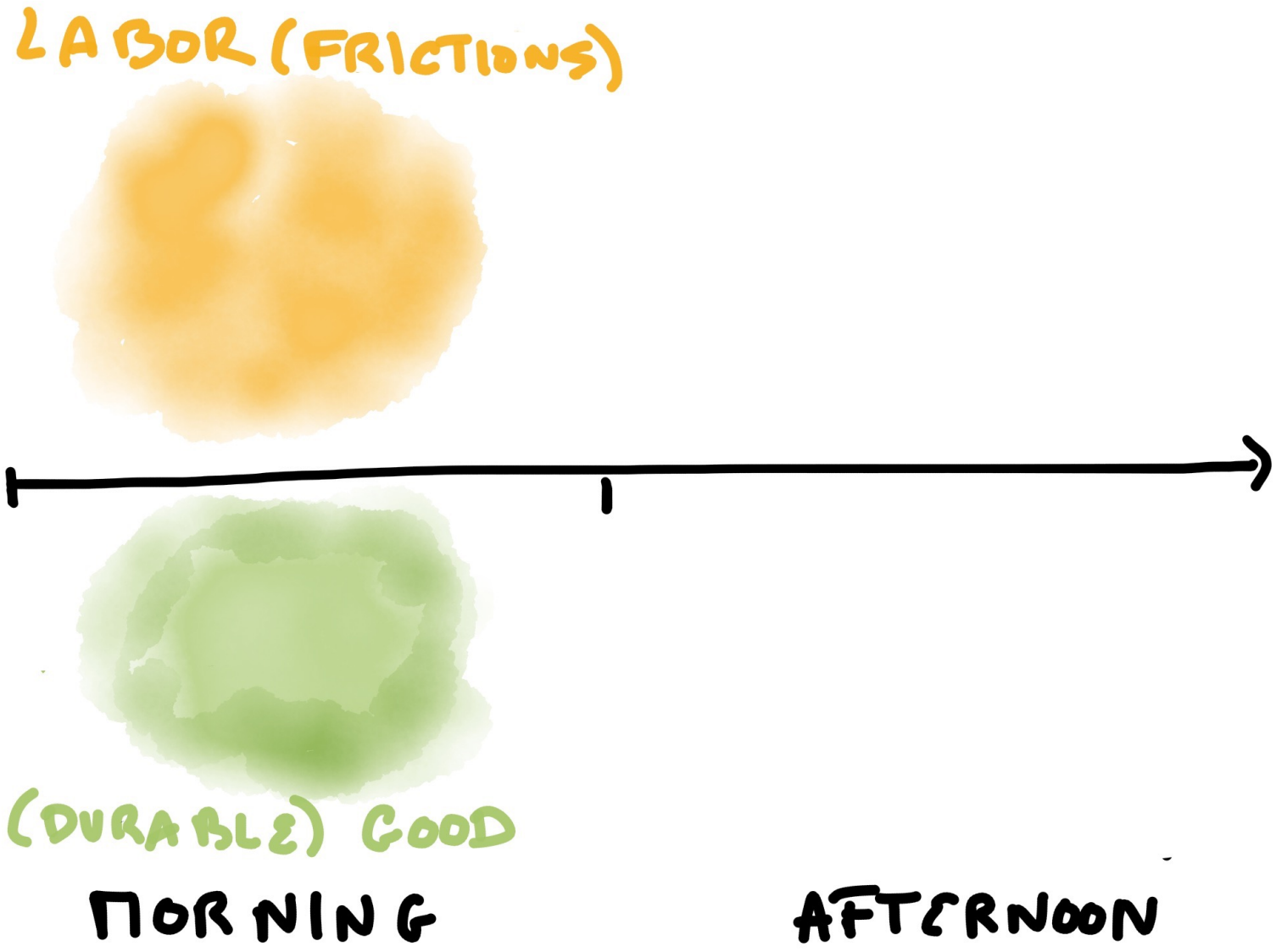

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Figure 5: Overview: markets

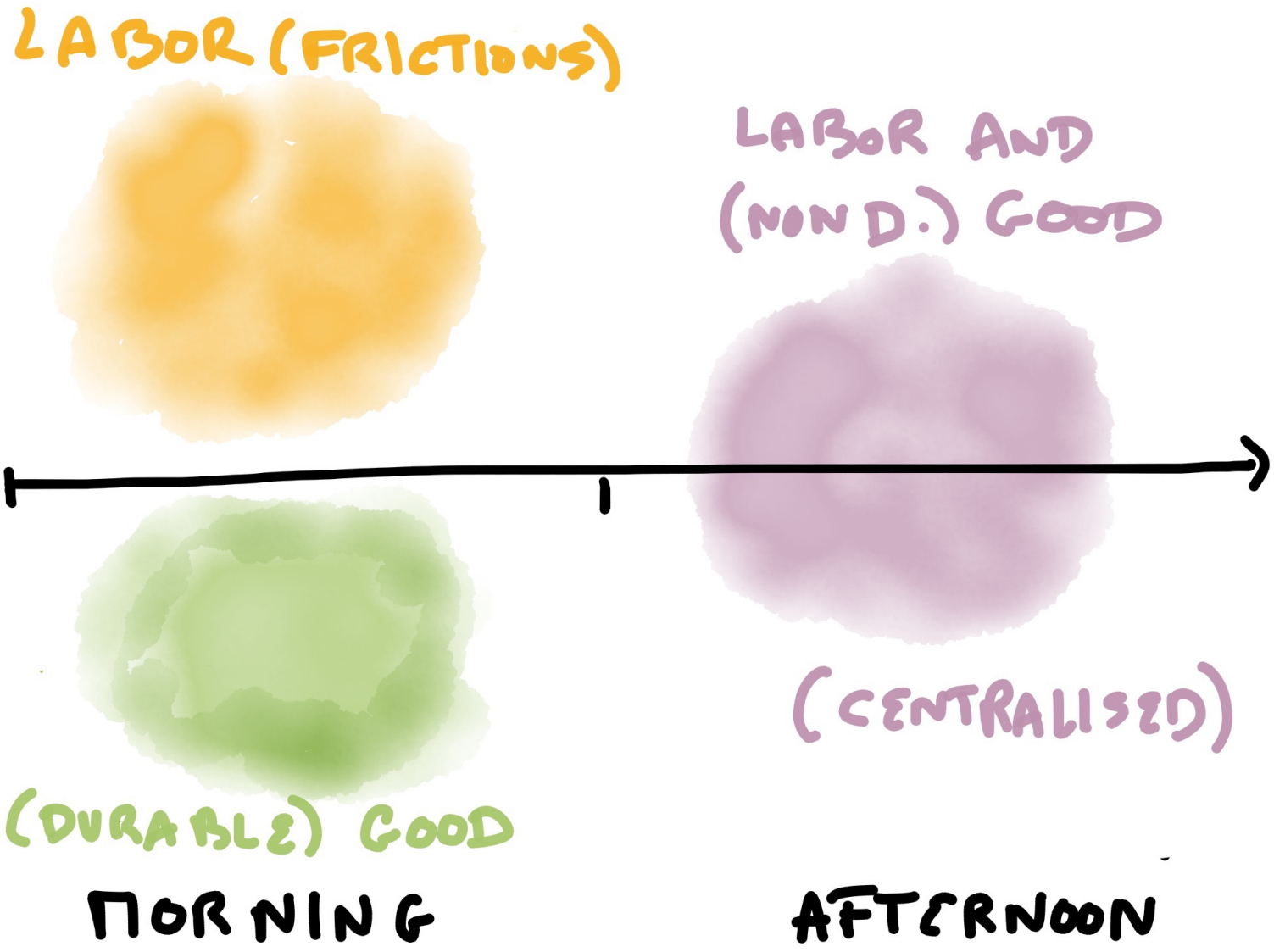

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Figure 6: Overview: firms

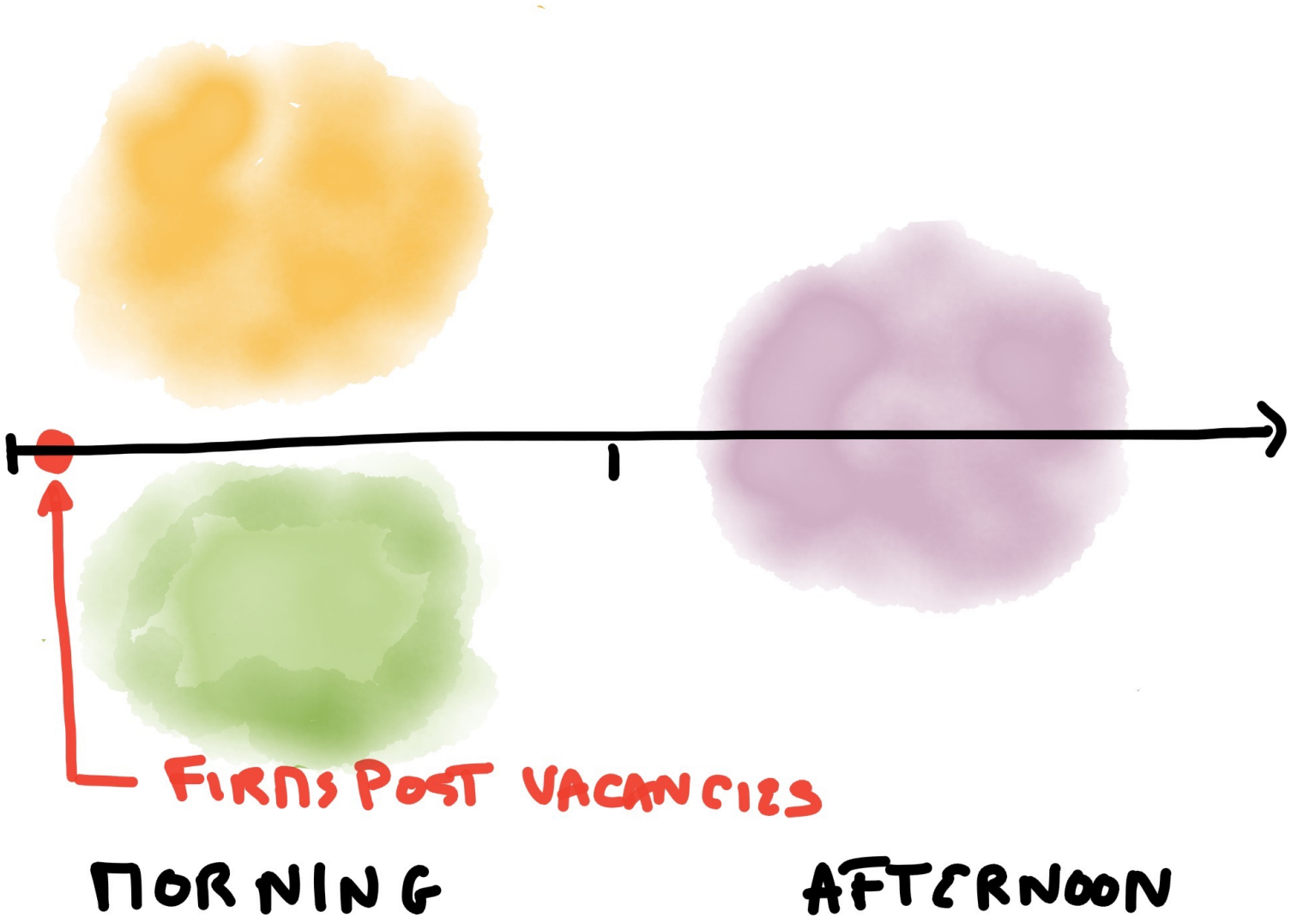

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Figure 7: Overview: firms

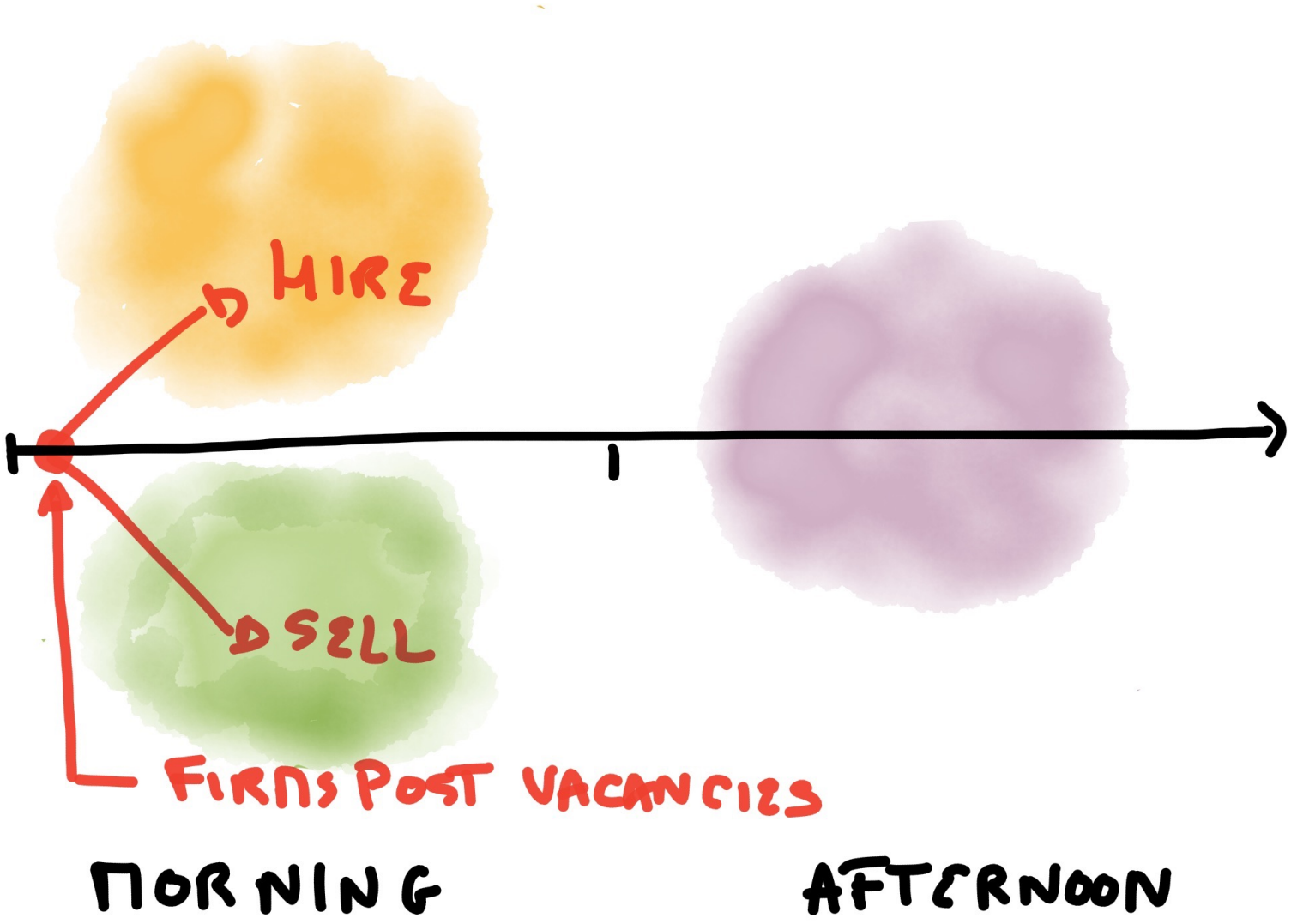

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Figure 8: Overview: households

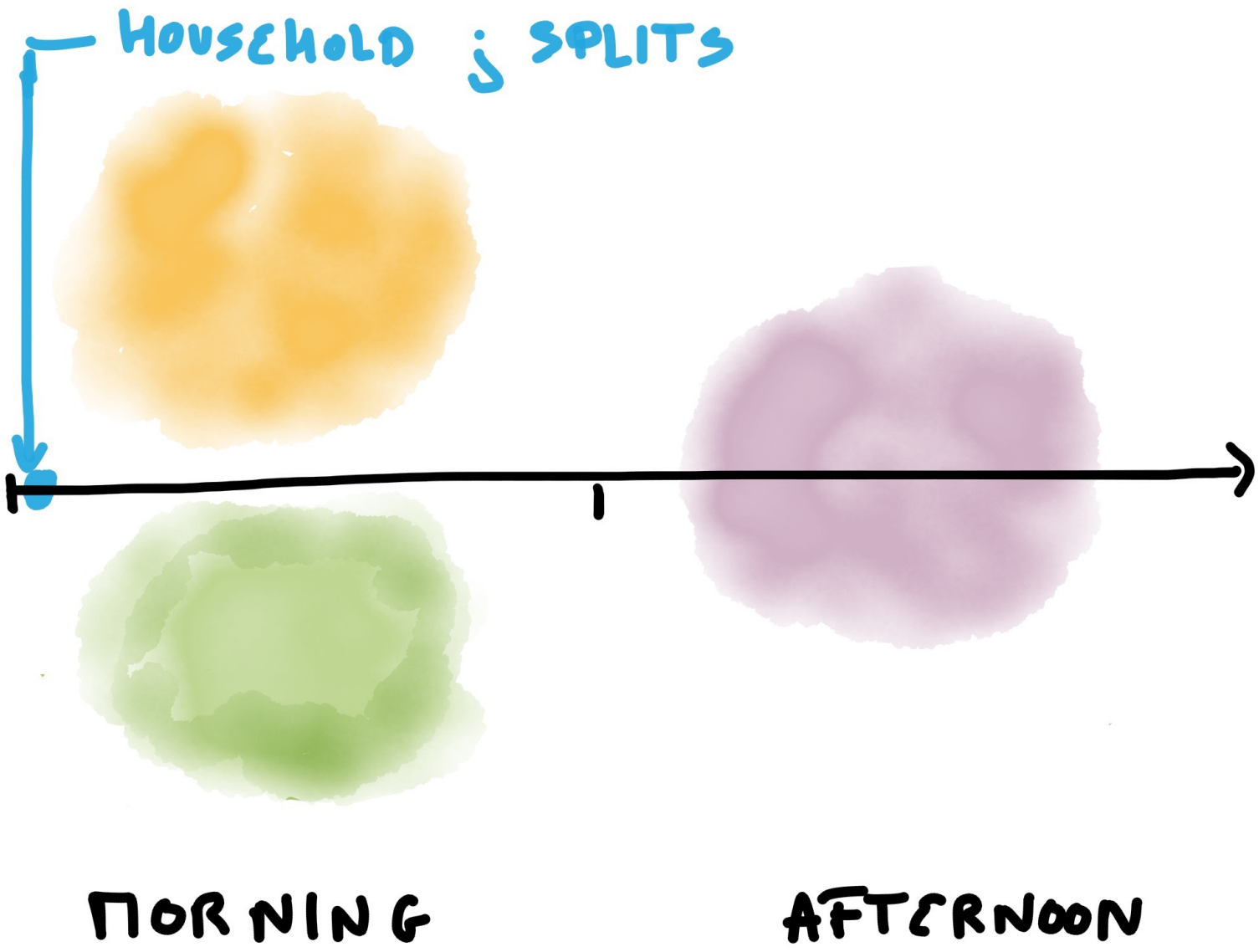

Figure 9: Overview: households

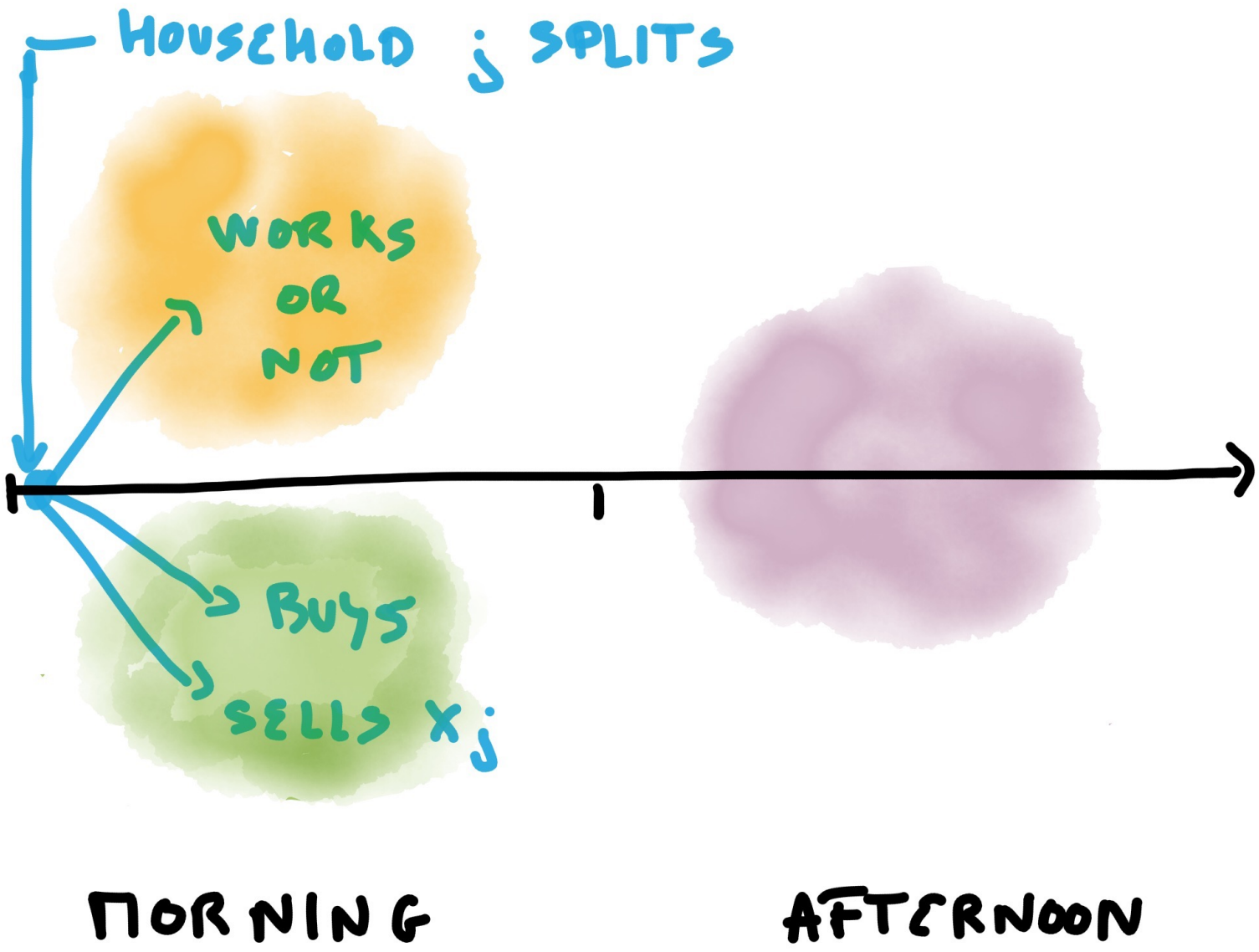

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Figure 10: Overview: households

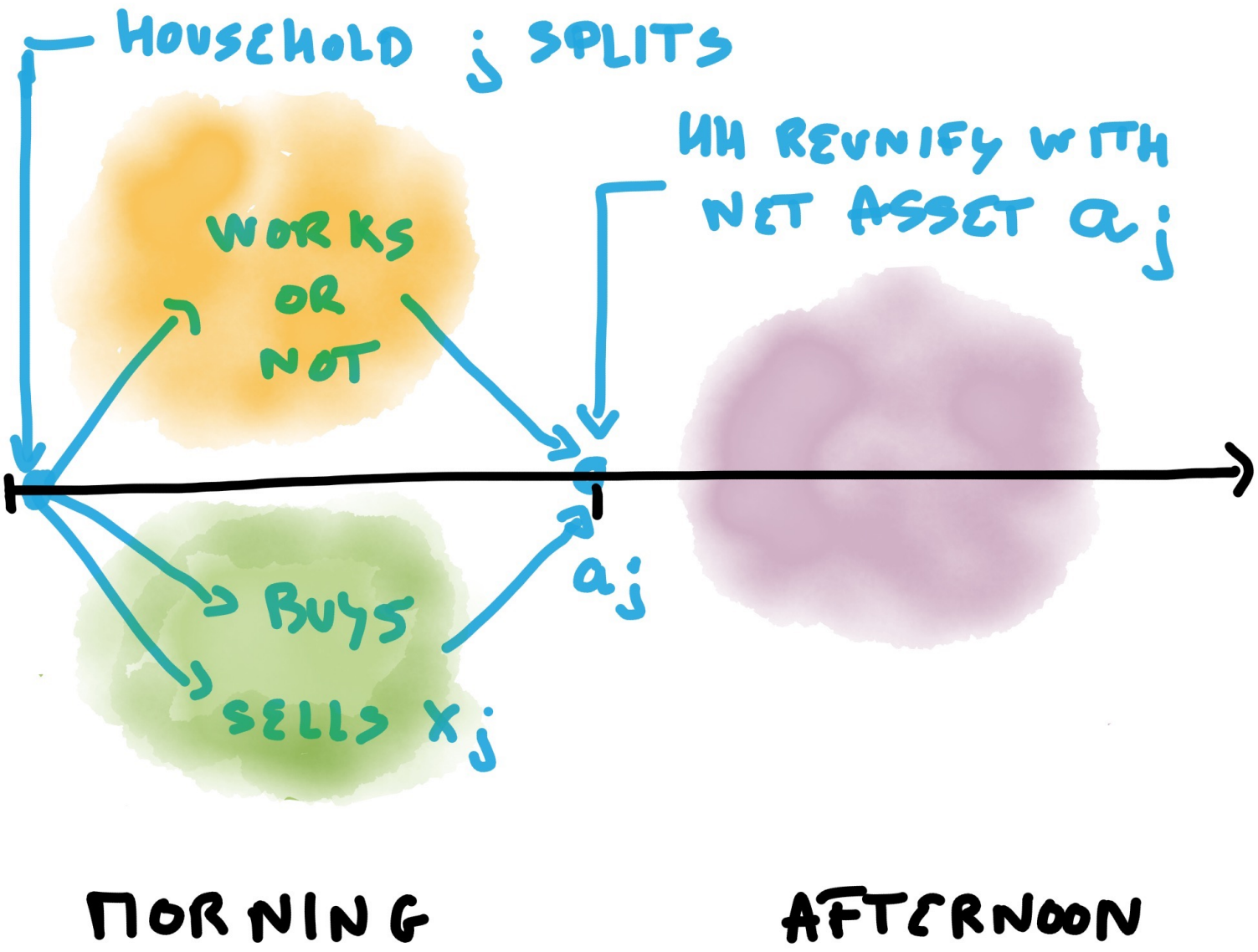

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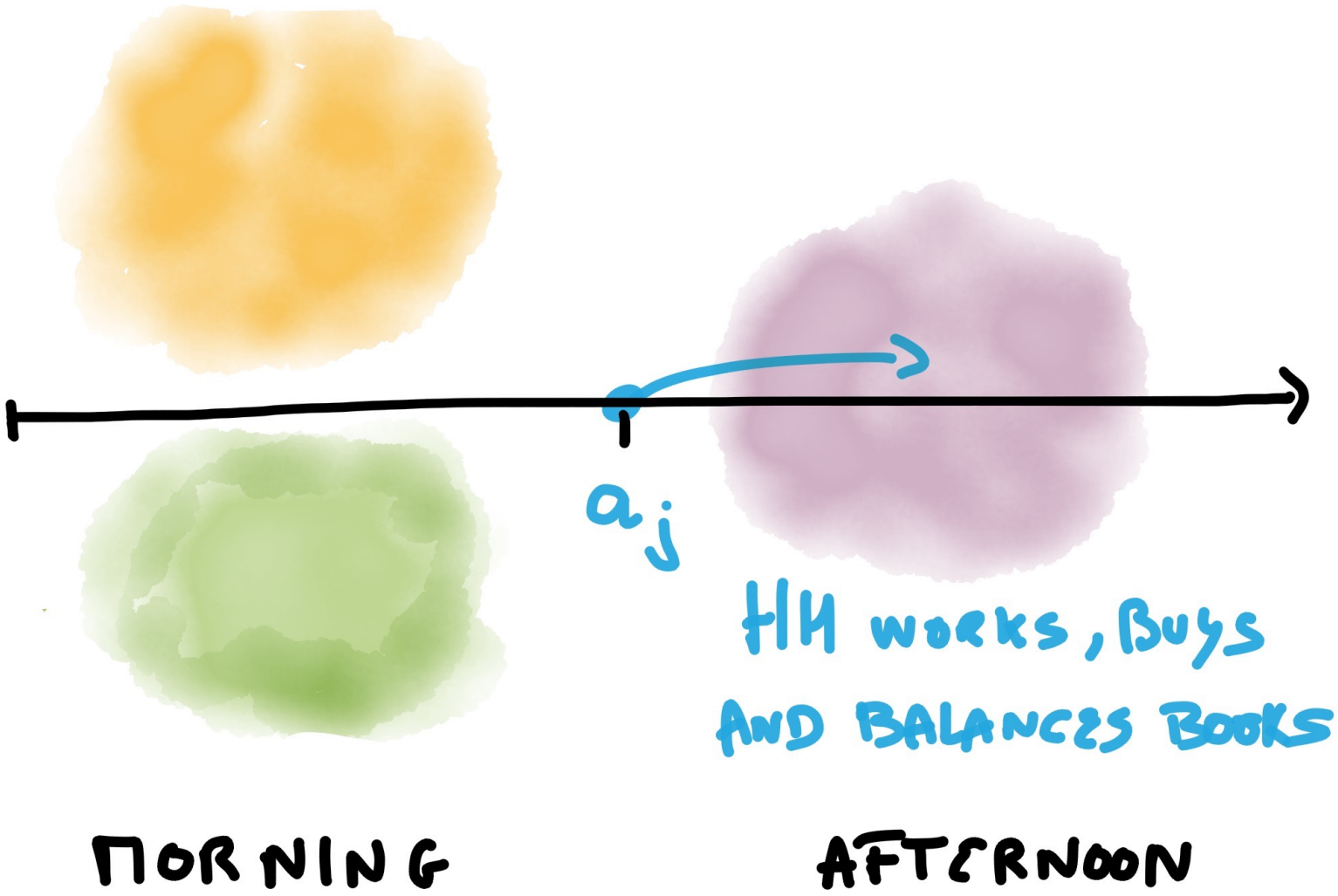
Figure 11: Overview: households



1. Model setup
Checklist

- X: exogenous amount of good that is already in households hands
- Mass L of households always looking for jobs
- Afternoon is centralized, all the action is in the morning
- Frictions on the morning labor market
- Unemployment risk that is not insured
- No coordination between firms, shoppers and workers
- Shoppers and workers credit/debit a bank account that they will clear in the afternoon.
- Morning good is referred to as "durable" as it will be in the dynamic extension
- Afternoon good is non durable and serves as the numéraire.

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Preferences

- $$U(\underbrace{X_j + e_j}_{c_j}) - \nu(\ell_j) + V(\underbrace{-pe_j + \mathcal{I}_j w \ell_j}_{a_j}).$$
- Initial endowment of X_j units of durable good.
- Continuation value $V(a_j)$ given (*in this talk*)
- $\mathcal{I}_j = \begin{cases} 1 & \text{if employed} \\ 0 & \text{if unemployed} \end{cases}$

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- N = number firms who decide to search for workers.
- $M(N, L)$ = number of matches (CRS).
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Household morning decisions

- Worker problem:

$$\max_{\ell_j} -\nu(\ell_j) + V(\underbrace{-pe_j + \mathcal{I}_j w \ell_j}_{a_j})$$

- Shopper problem:

$$\max_{e_j} U\left(X + e_j\right) + \mu V\left(w\ell_j - pe_j\right) + (1-\mu) V\left(-pe_j\right)$$

$\mu \equiv M(N, L)/L$ job finding probability.

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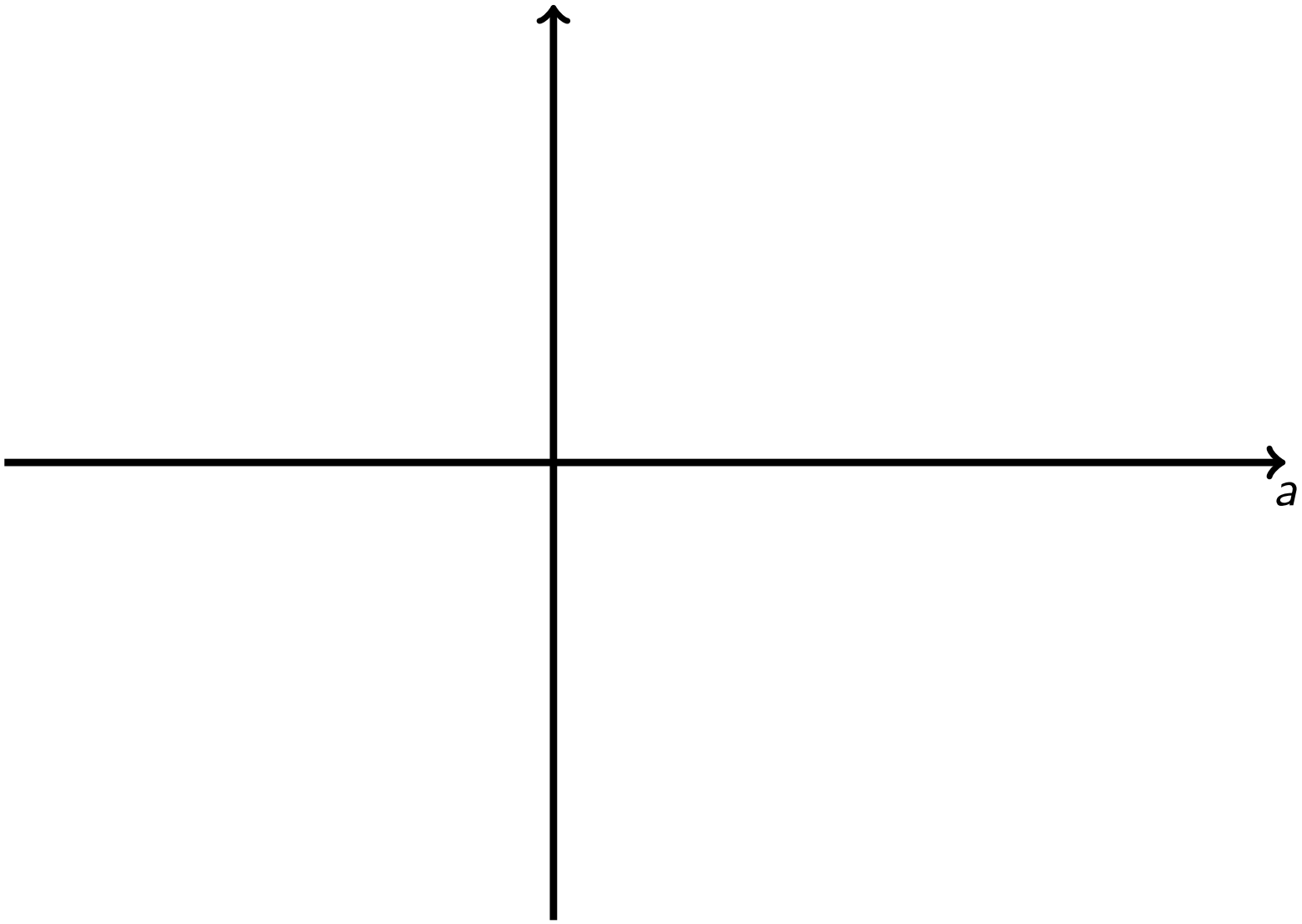

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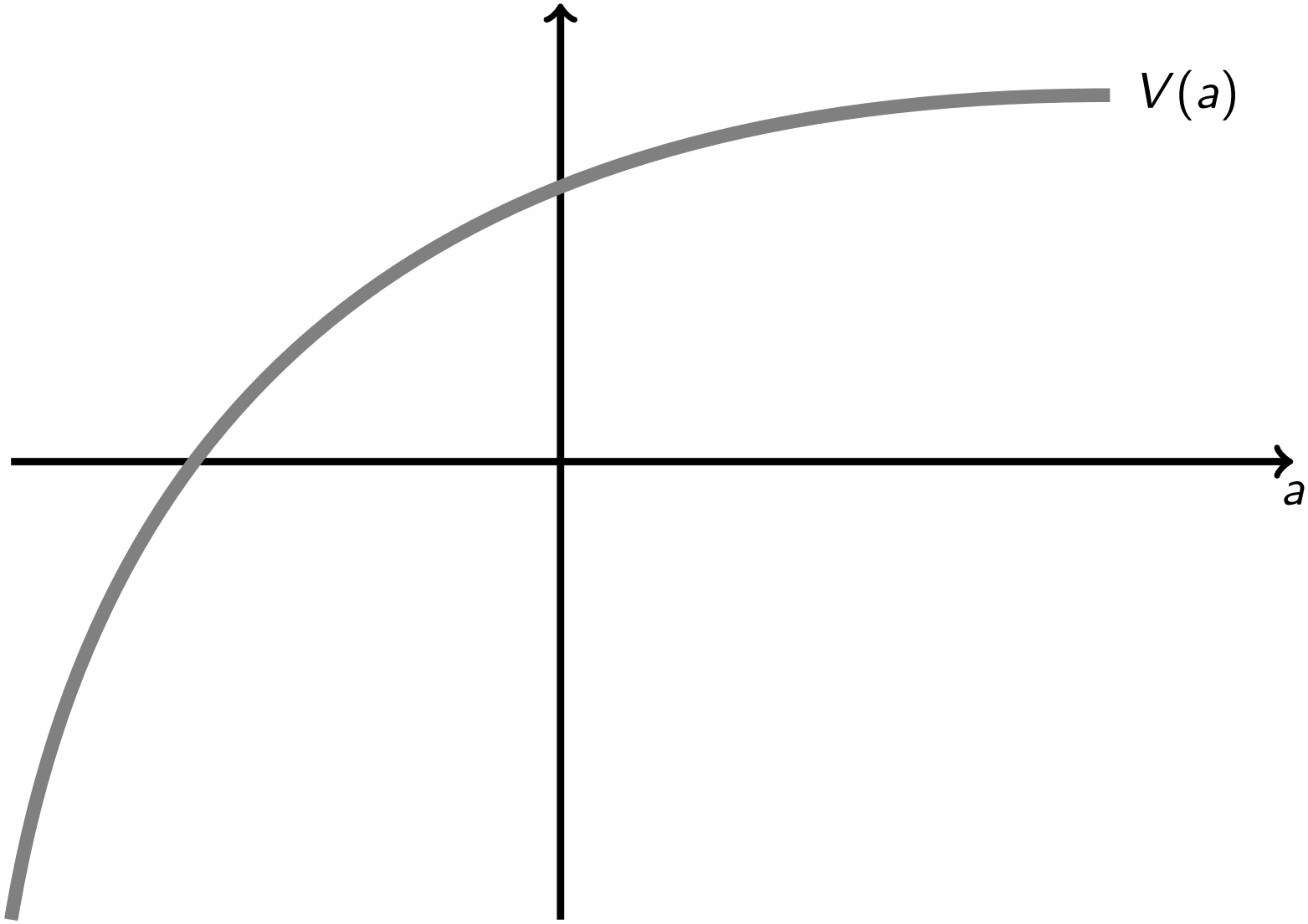

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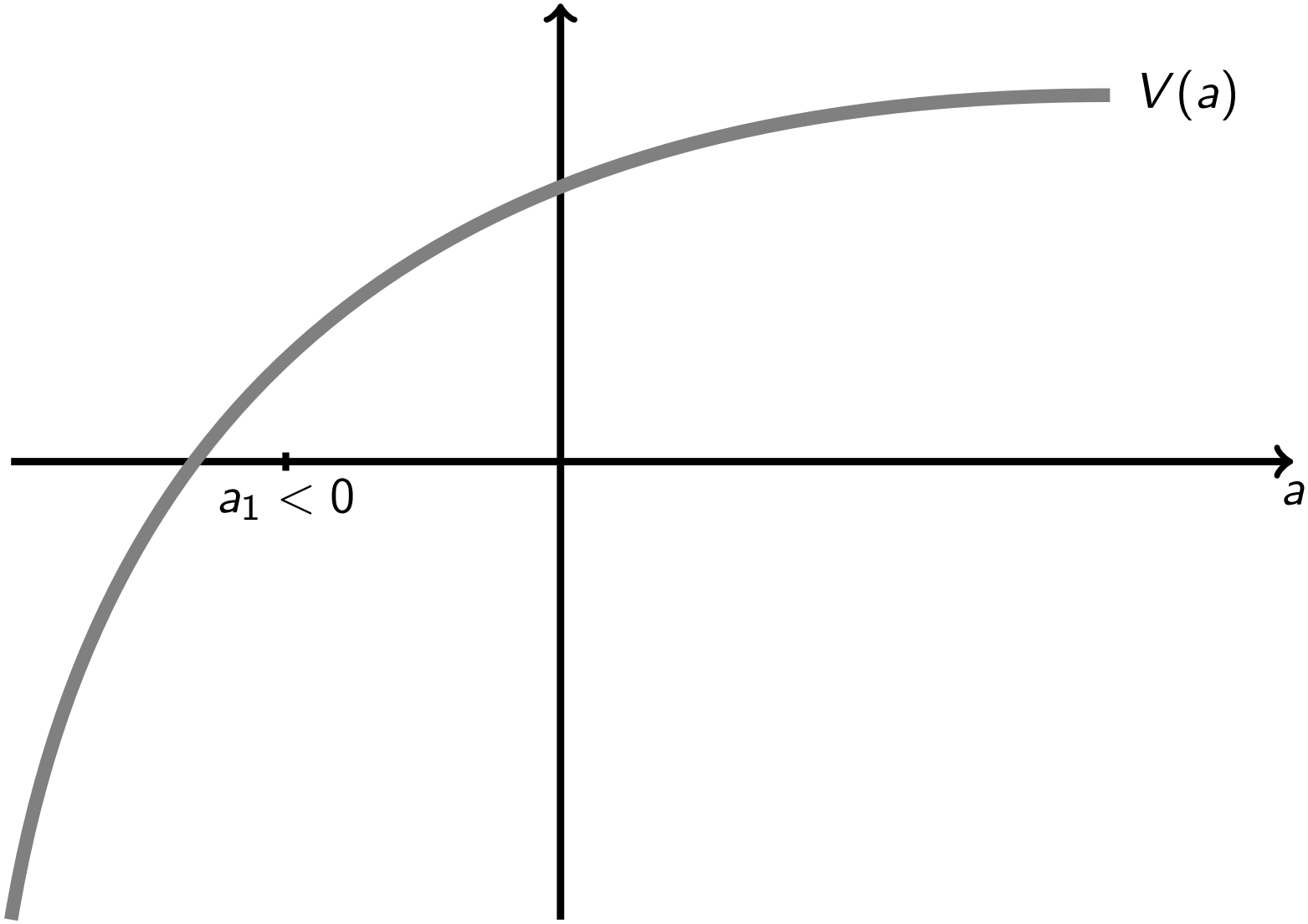

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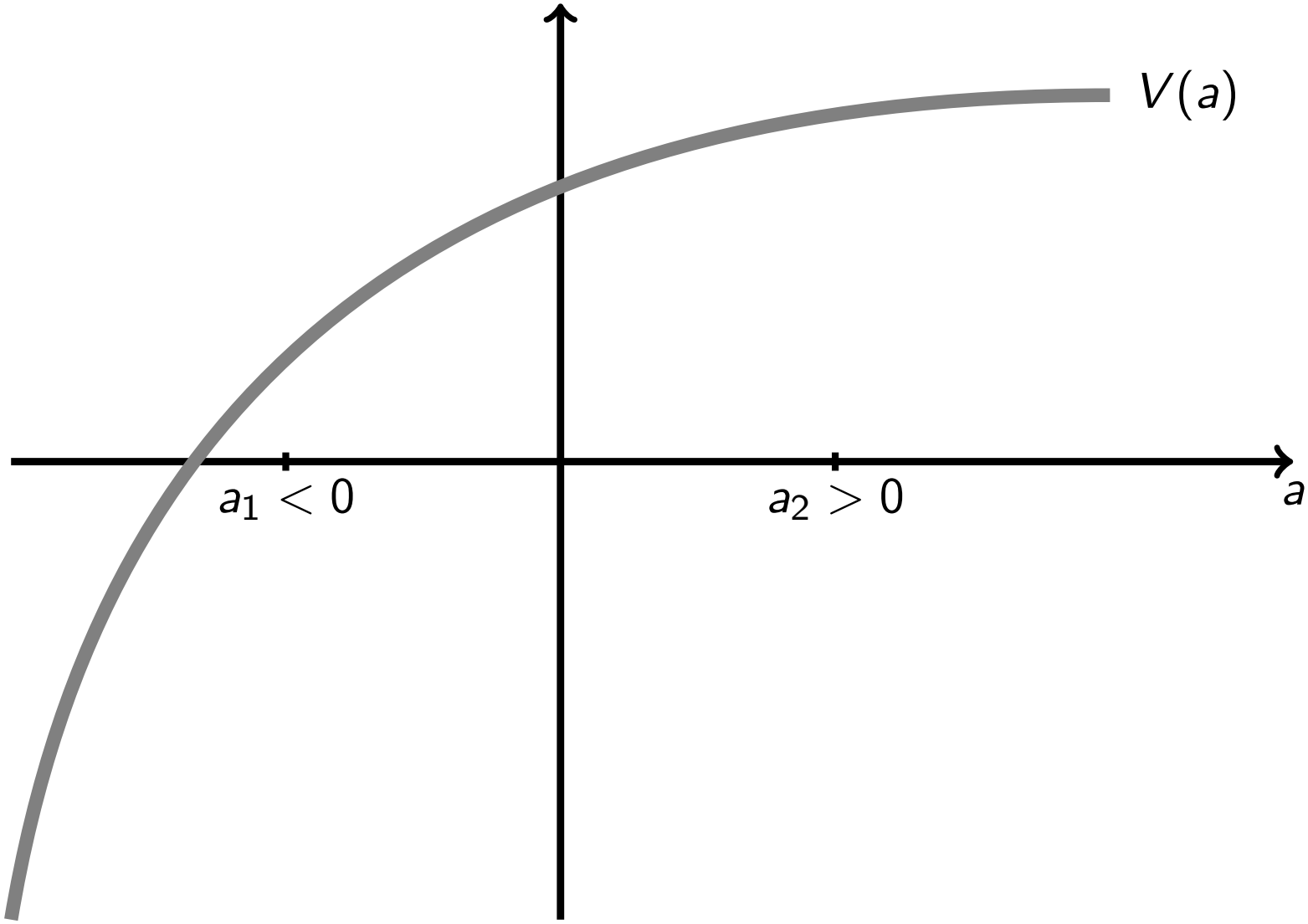

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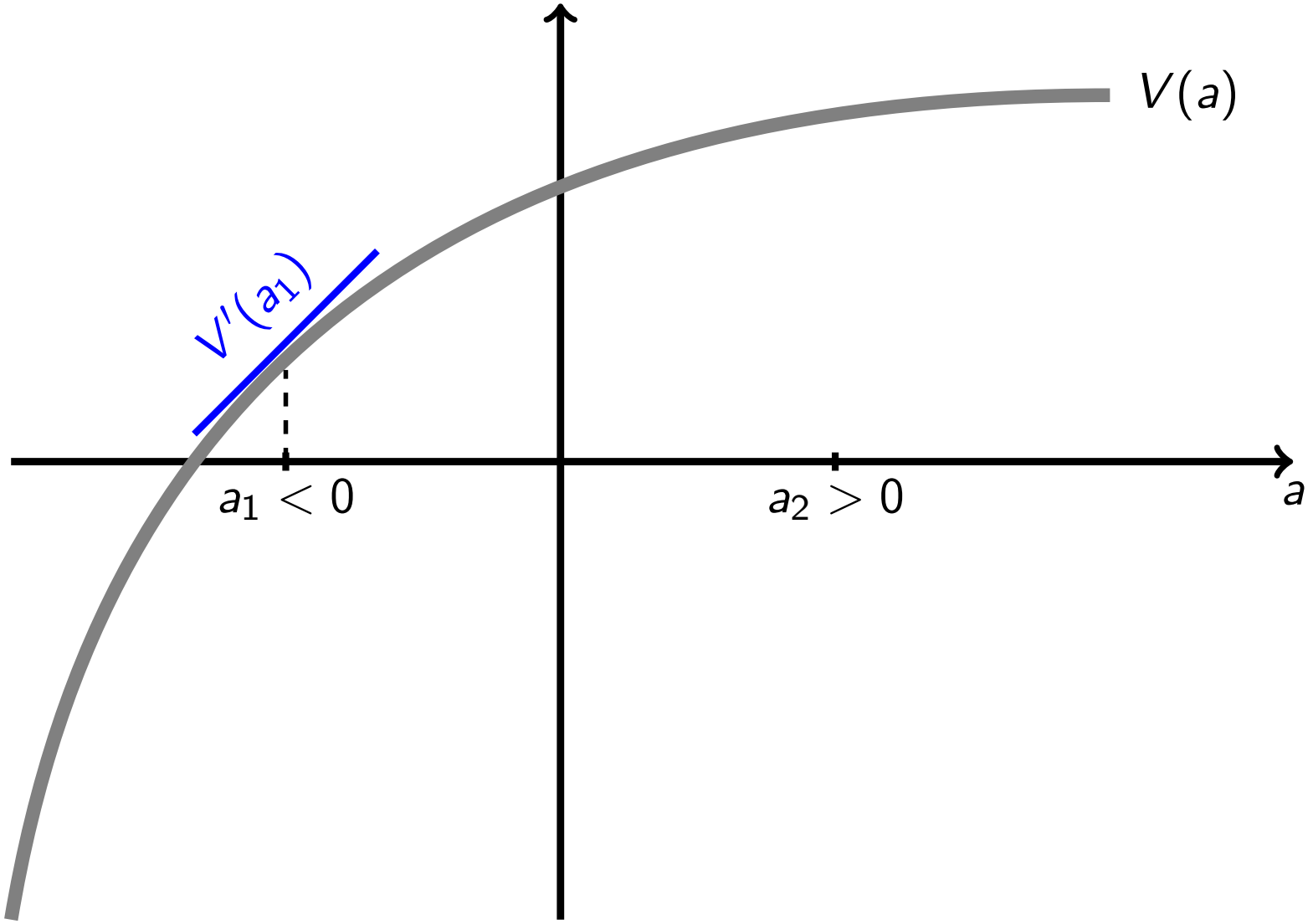

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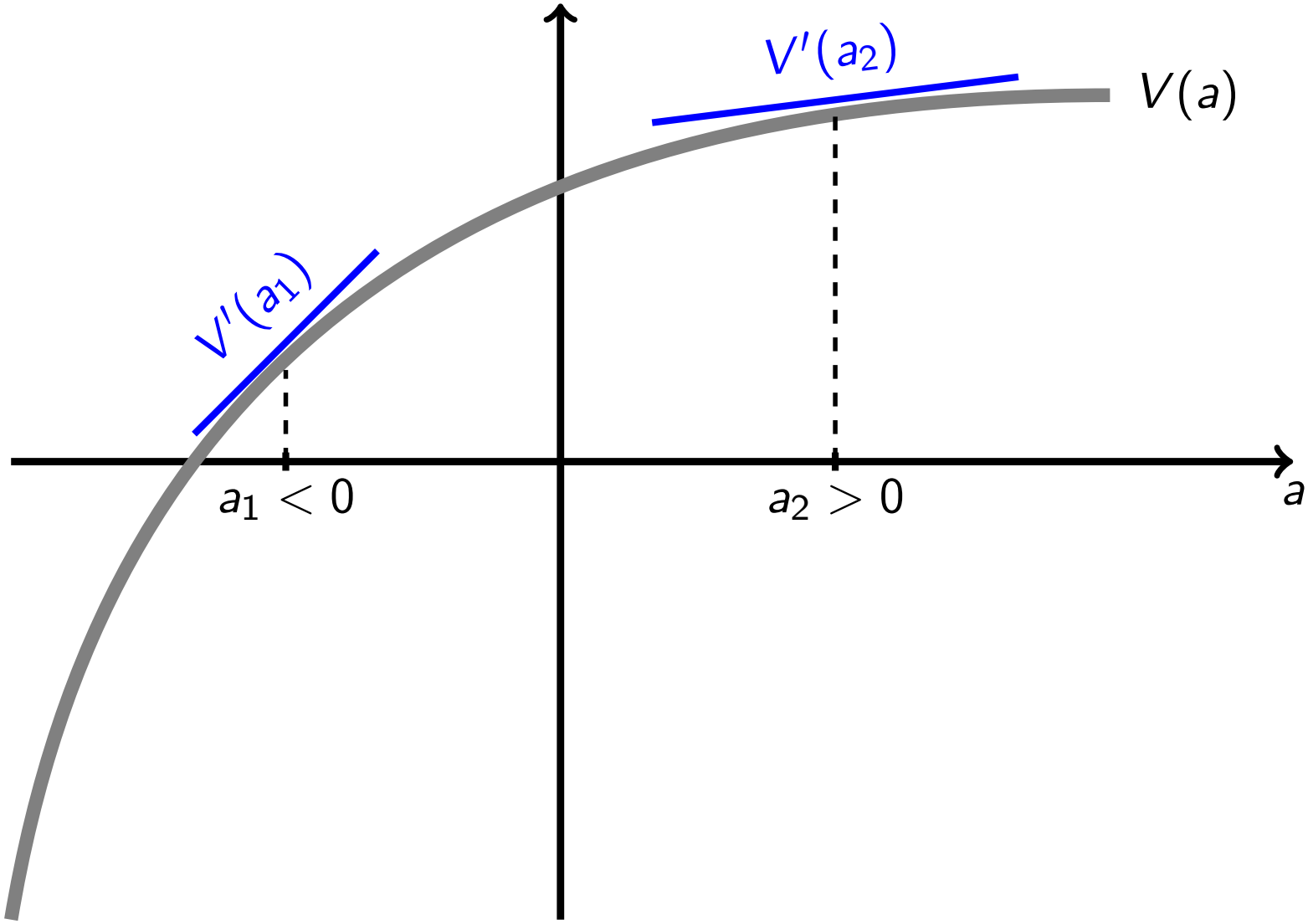

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3. Interesting Properties of the Static Equilibrium
4. Extensions / Dynamics / Policy Trade-offs

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First sub-period

- The equilibrium is given by the following equations
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- $$\nu'(\ell) = V'\left(w\ell - p\left(c - X\right)\right)w$$
- $$pF'(\ell) = w$$
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- $$\frac{1}{p}U'(c) = \frac{M(N,L)}{L}V'\left(w\ell - p\left(c - X\right)\right) + \left[1 - \frac{M(N,L)}{L}\right]V'\left(-p\left(c - X\right)\right)$$
- $$\nu'(\ell) = V'\left(w\ell - p\left(c - X\right)\right)w$$
- $$pF'(\ell) = w$$
- $$\frac{M(N,L)}{N}[pF(\ell) - w\ell] = p\Phi$$
- $$M(N,L)F(\ell) = L(c - X) + N\Phi$$

2. Equilibrium

First sub-period

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- $$\begin{aligned}\frac{1}{p}U'(c) &= \frac{M(N,L)}{L}V'\left(w\ell - p\left(c - X\right)\right) \\ &\quad + \left[1 - \frac{M(N,L)}{L}\right]V'\left(-p\left(c - X\right)\right)\end{aligned}$$
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2. Equilibrium

A labor market wedge

$$\frac{\nu'(\ell)}{U'(c)} \underbrace{\left\{1 + (1-\mu)\left[\frac{V'\left(-p\left(c-X\right)\right)}{V'\left(w\ell - p\left(c-X\right)\right)} - 1\right]\right\}}_{1+\text{ labor wedge}} = F'(\ell)$$

0. Introduction
Roadmap

1. Model setup
2. Equilibrium
3. Interesting Properties of the Static Equilibrium
4. Extensions / Dynamics / Policy Trade-offs

3. Interesting Properties of the Static Equilibrium

Goal and parametric restrictions

- Our main goal now is to explore the effects of changes in X on equilibrium outcomes.
- Why and when an increase in X can actually lead to a reduction in consumption and/or welfare?
- Can liquidation periods be socially painful?
- In this talk I restrict the analysis to
  - $M(N, L) = \min\{N, L\}$

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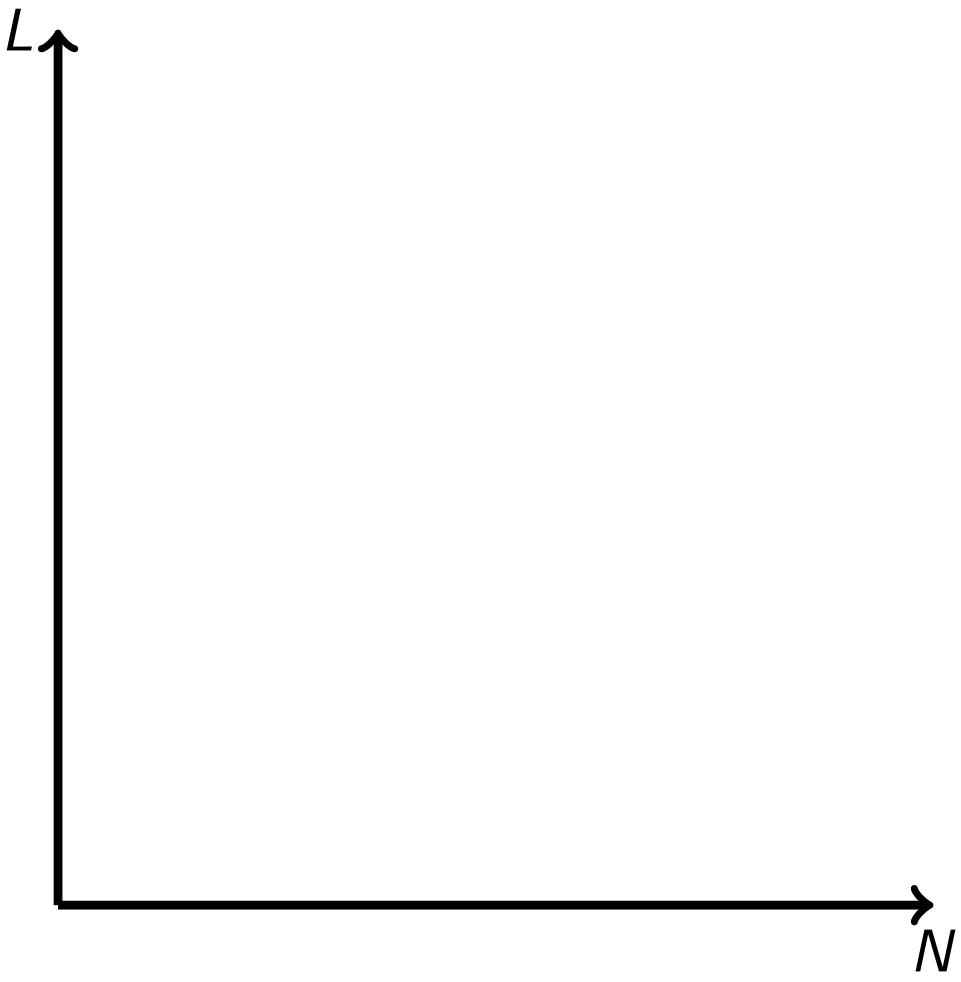
Figure 13: The Matching Function $M(N, L)$



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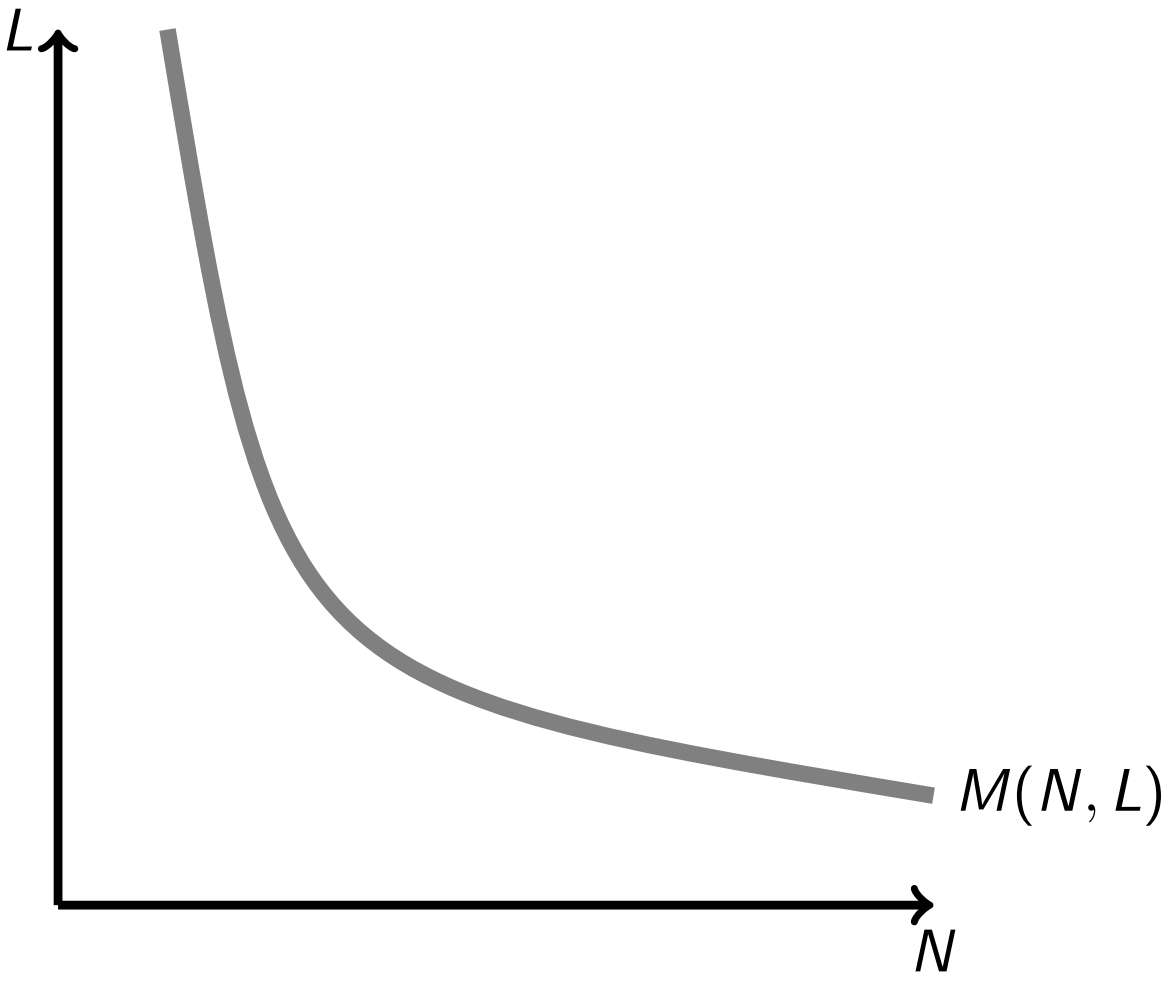

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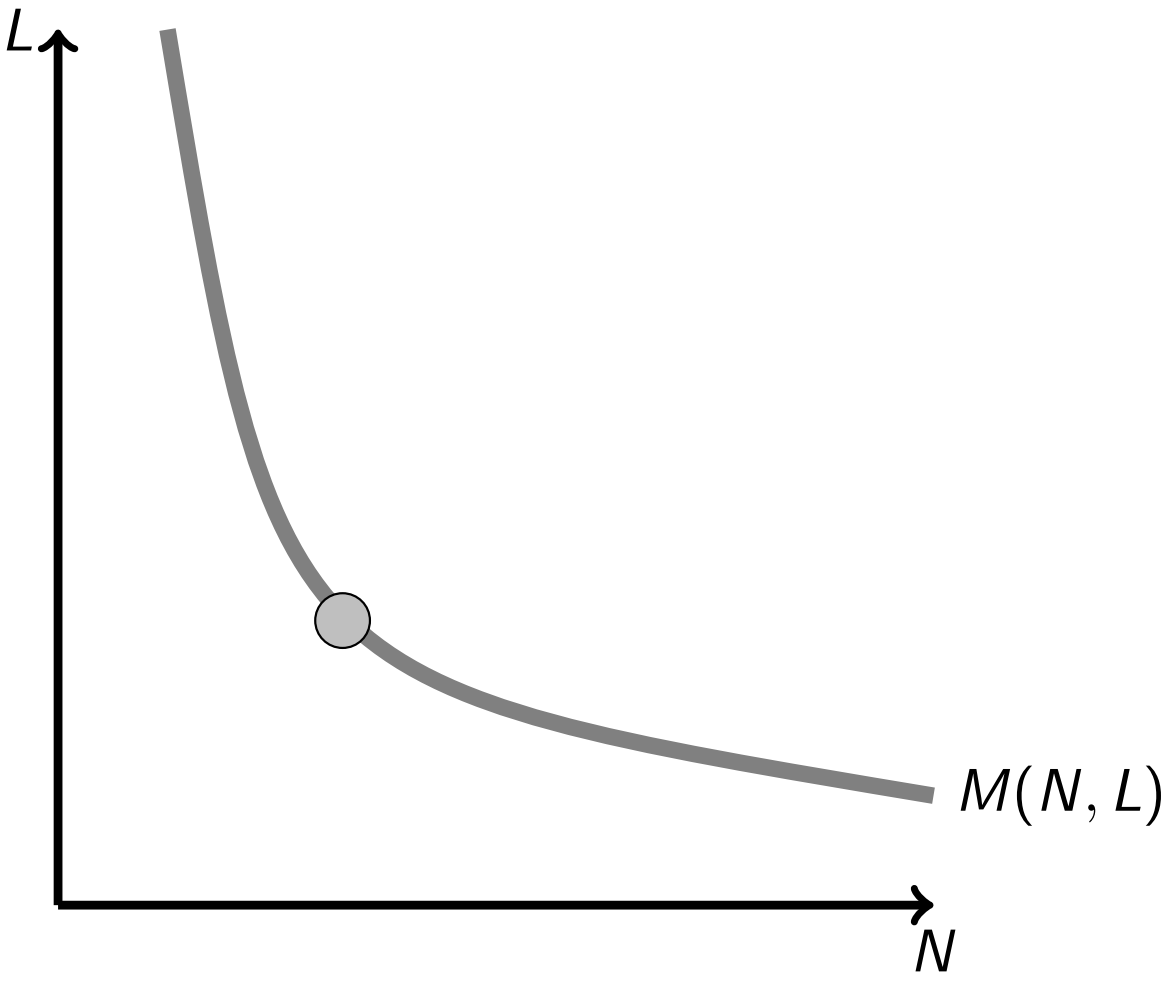

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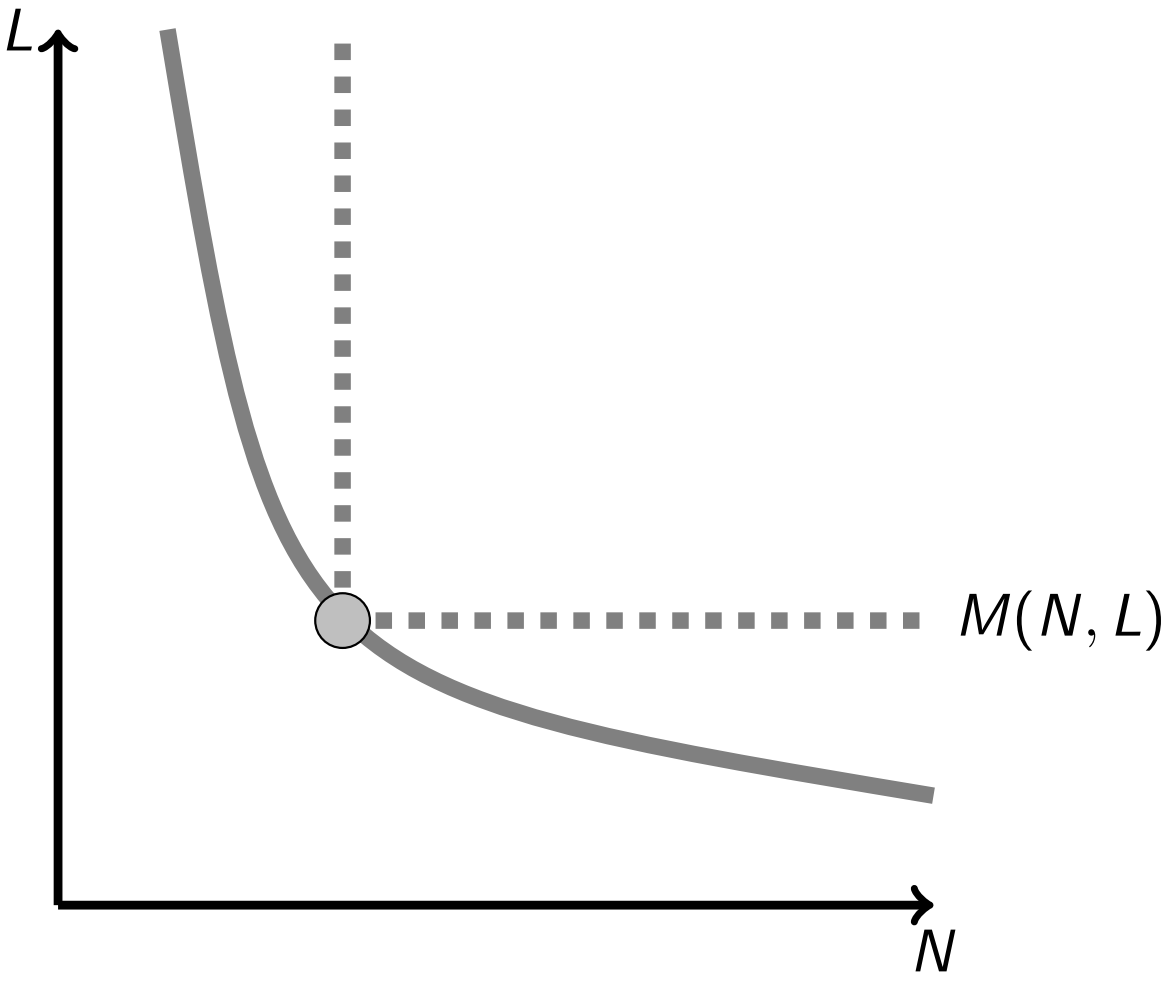

3. Interesting Properties of the Static Equilibrium

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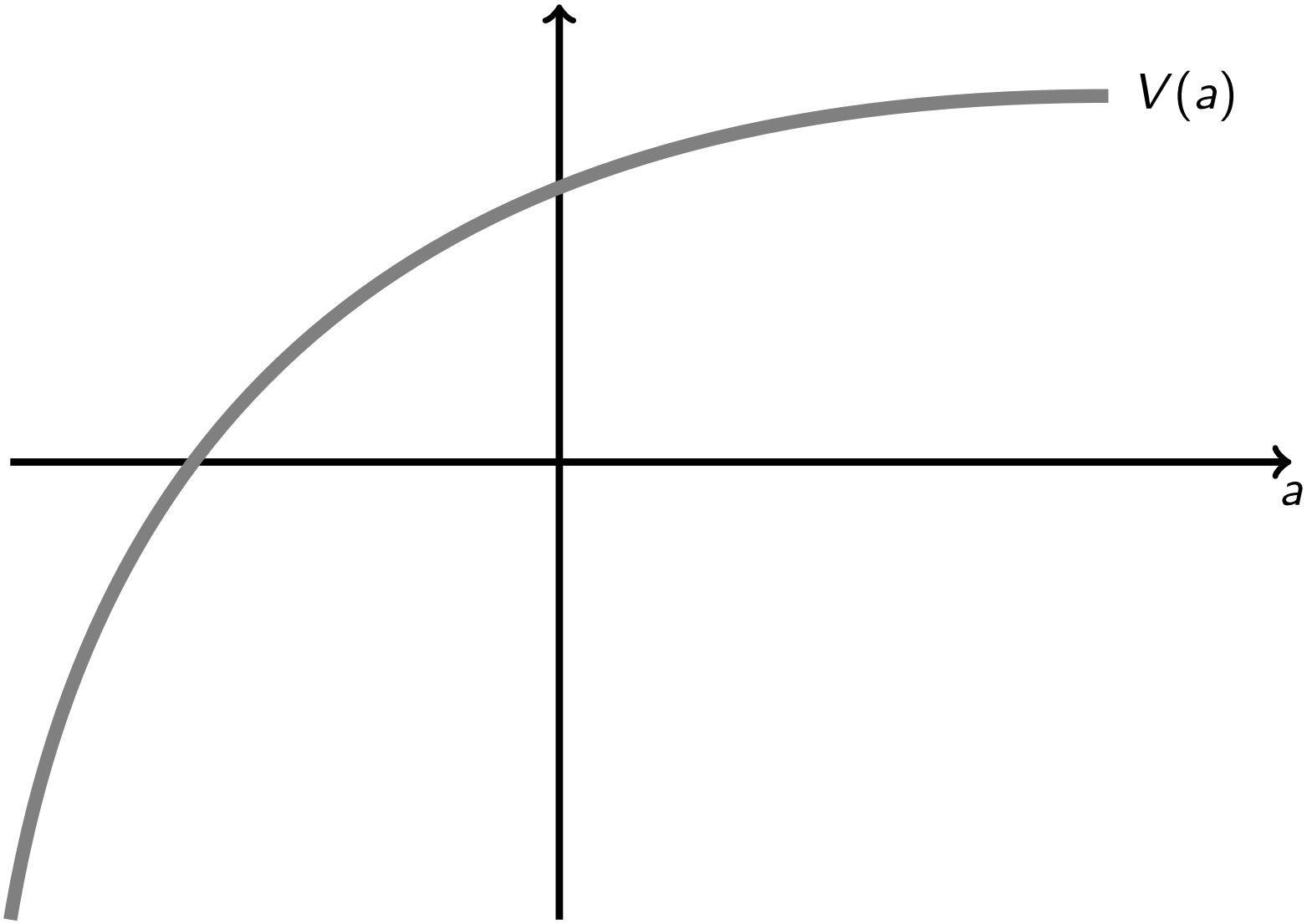

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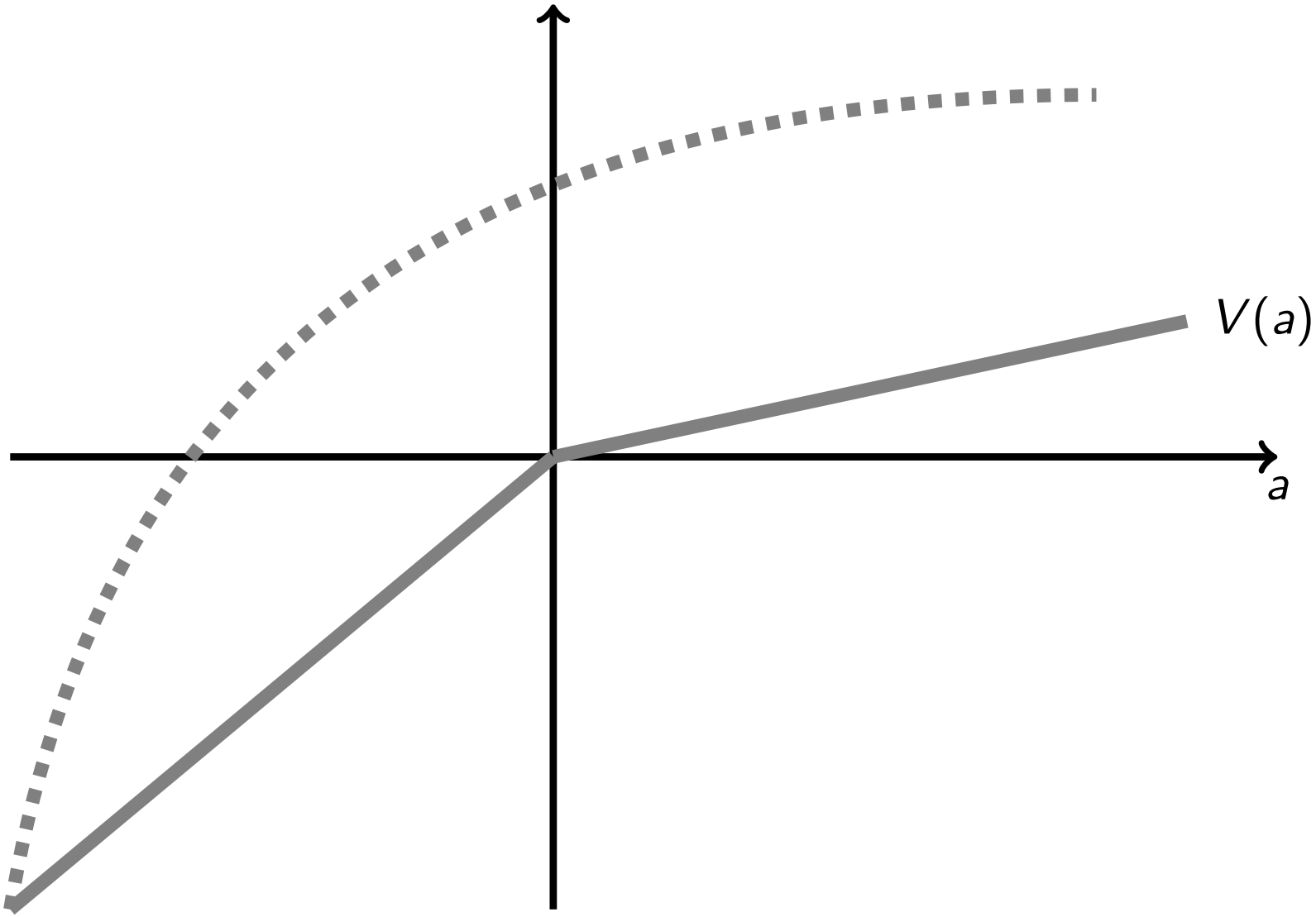

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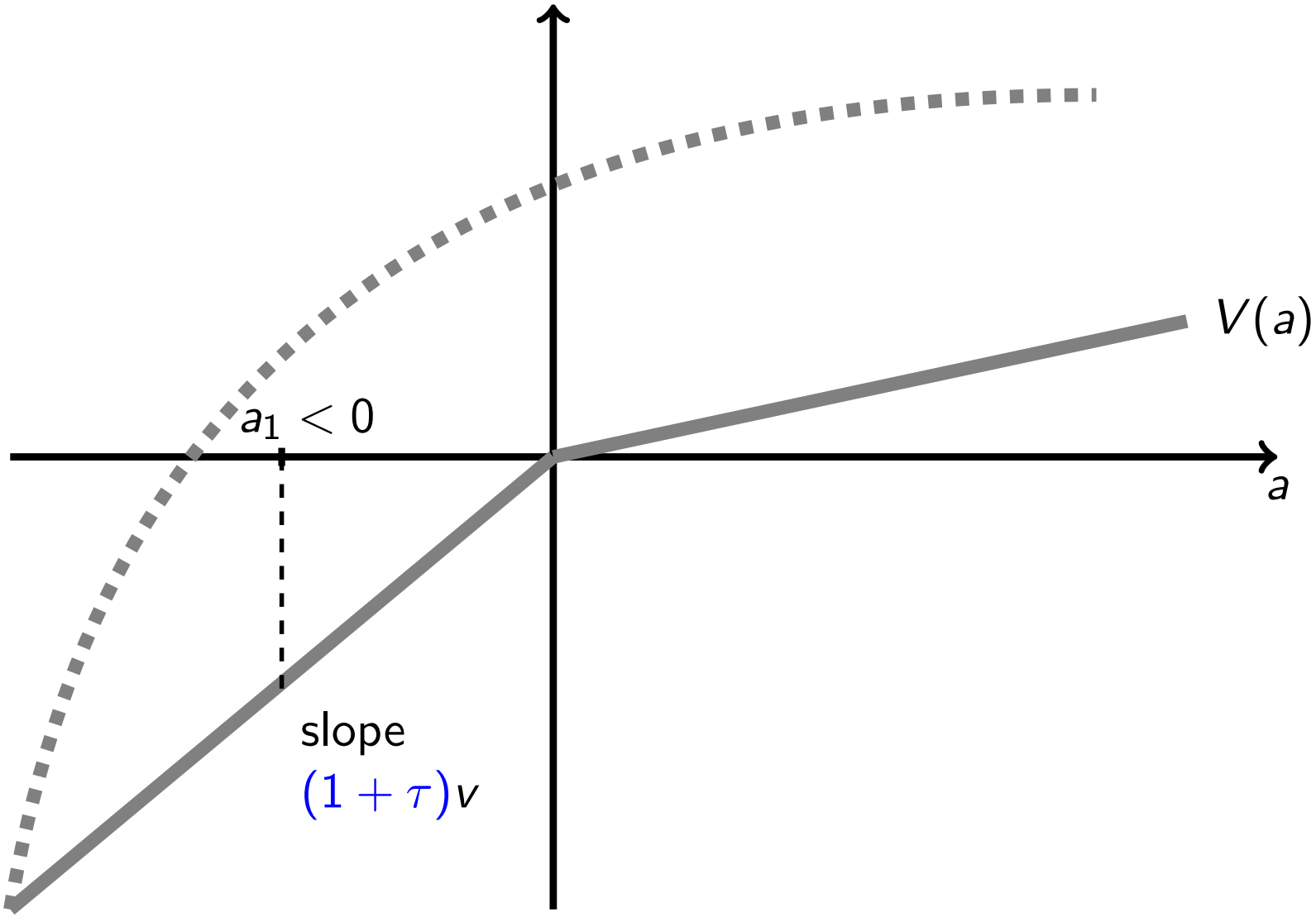

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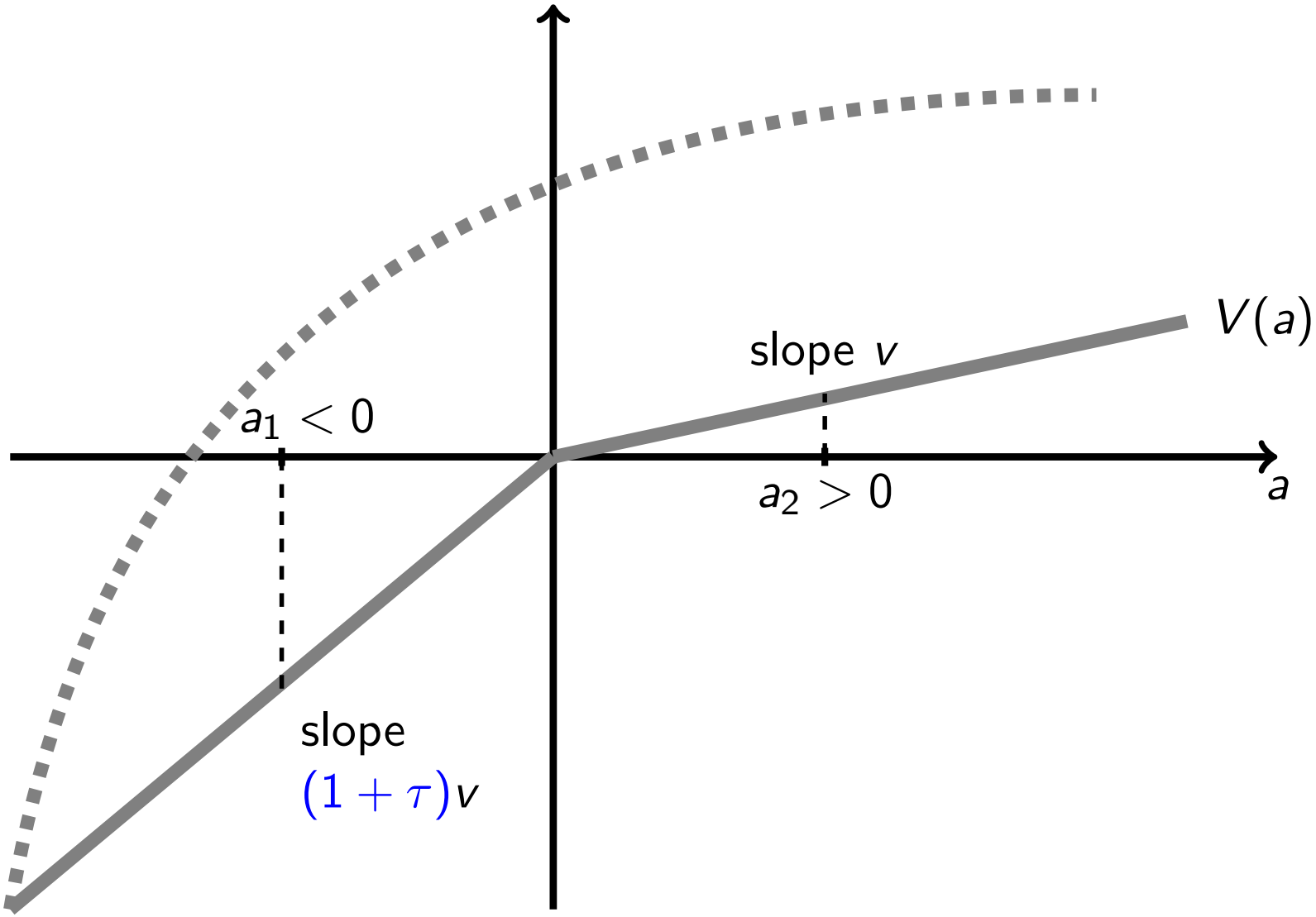


3. Interesting Properties of the Static Equilibrium

With piecewise linear V

$$\frac{\nu'(\ell)}{U'(c)}\left\{1+(1-\mu)\underbrace{\left[\frac{V'\left(-p\left(c-X\right)\right)}{V'\left(w\ell-p\left(c-X\right)\right)}-1\right]}_{\tau}\right\}=F'(\ell)$$

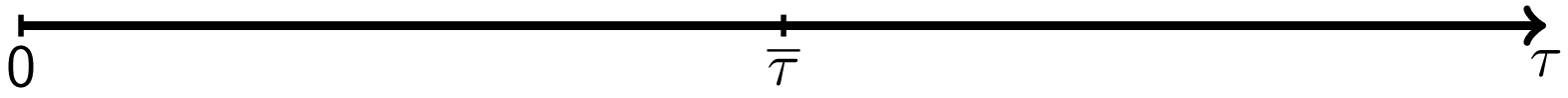
3. Interesting Properties of the Static Equilibrium

Two key parameters (1)

X

$$\tau$$

Figure 15: Proposition 1: Existence and Uniqueness



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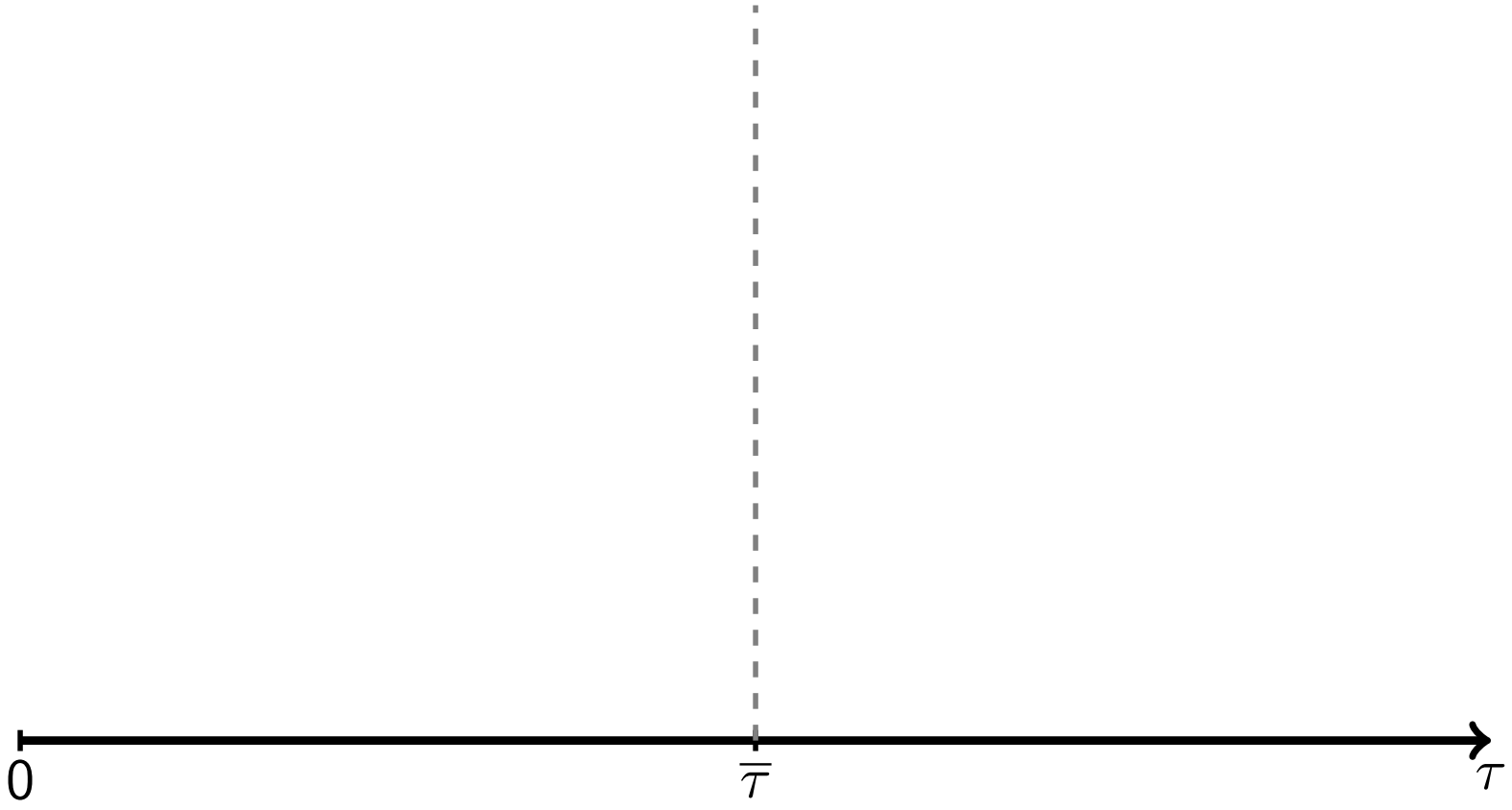

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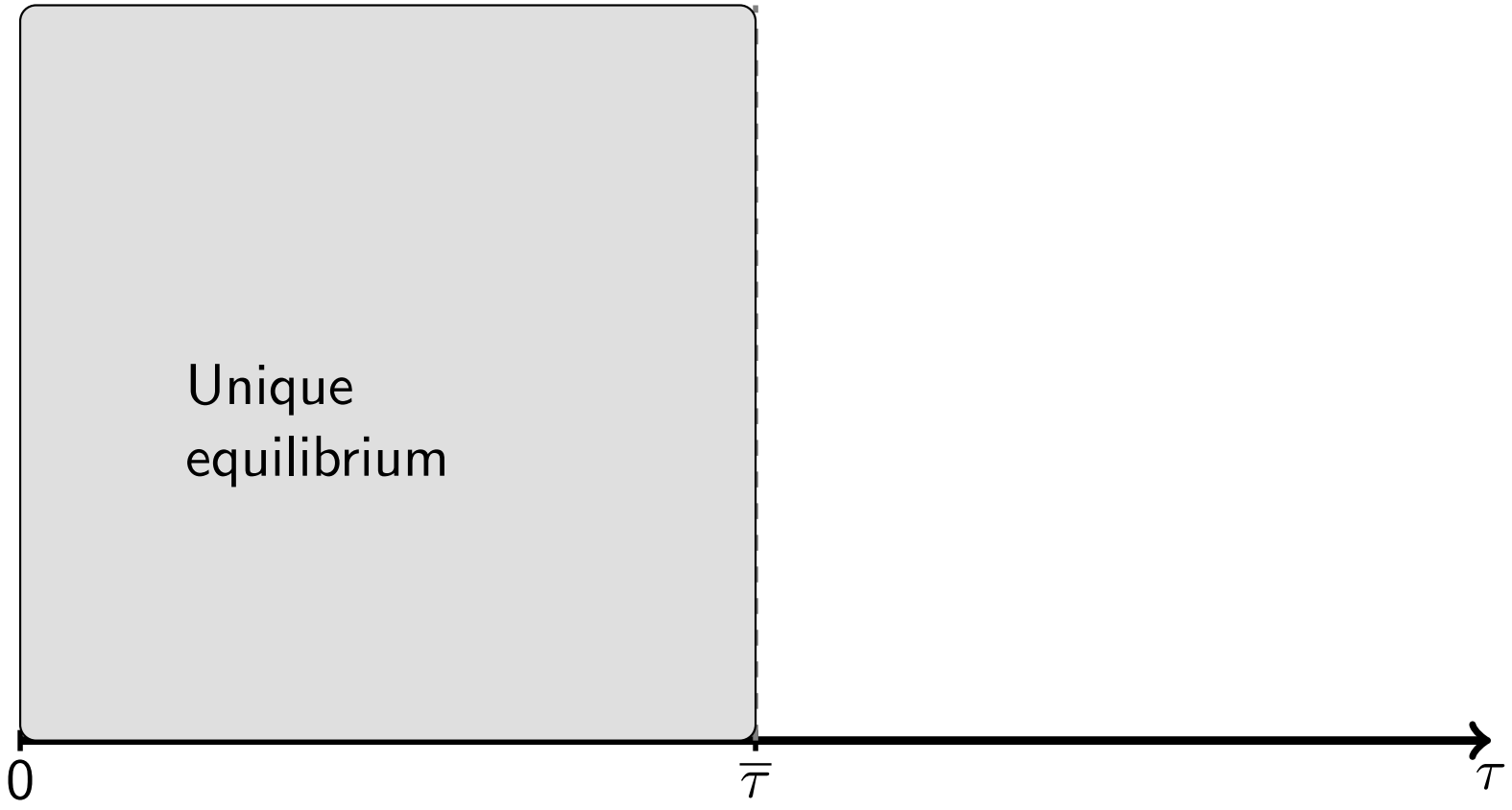

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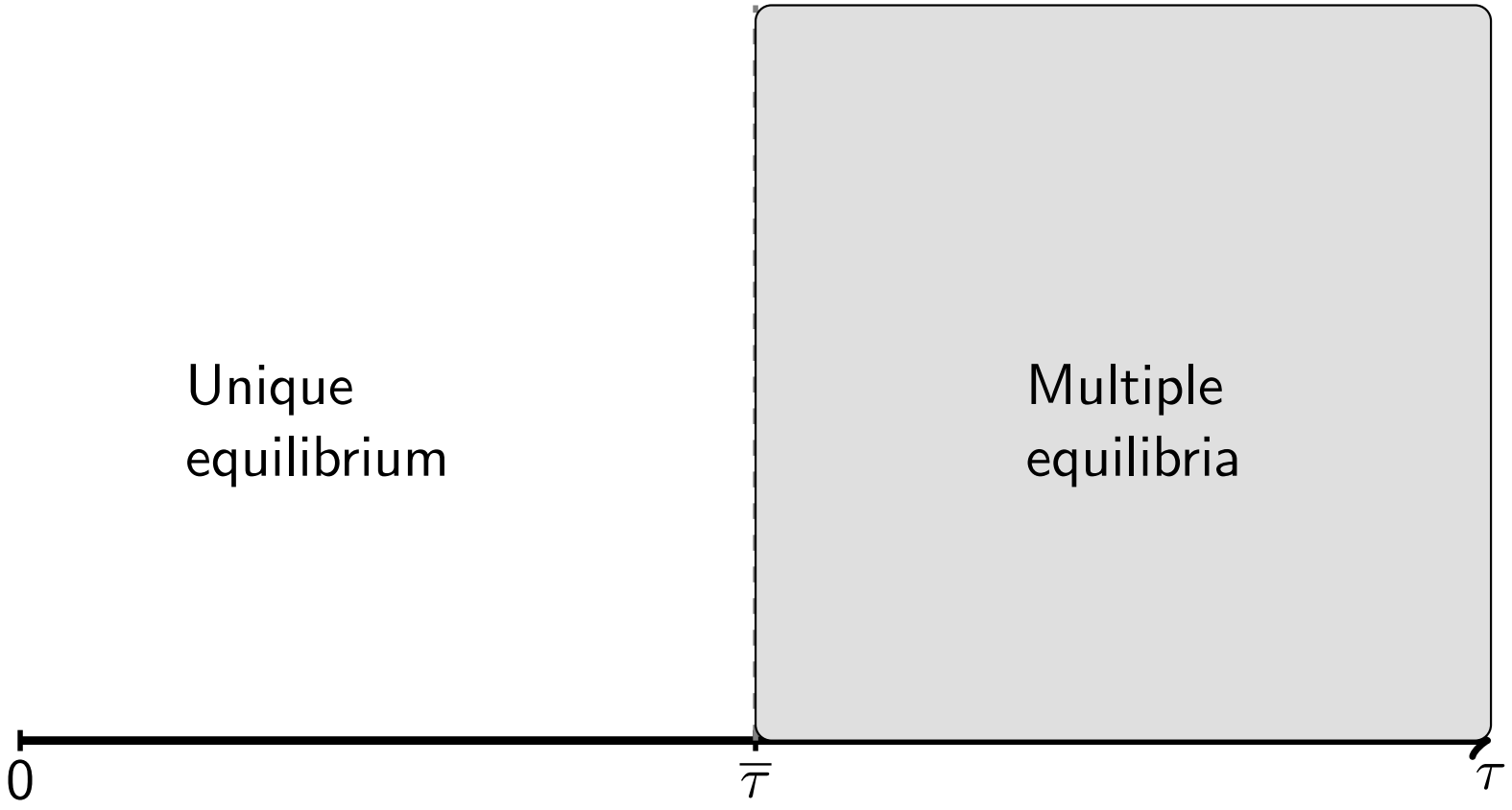

Figure 16: Proposition 2: The three regimes

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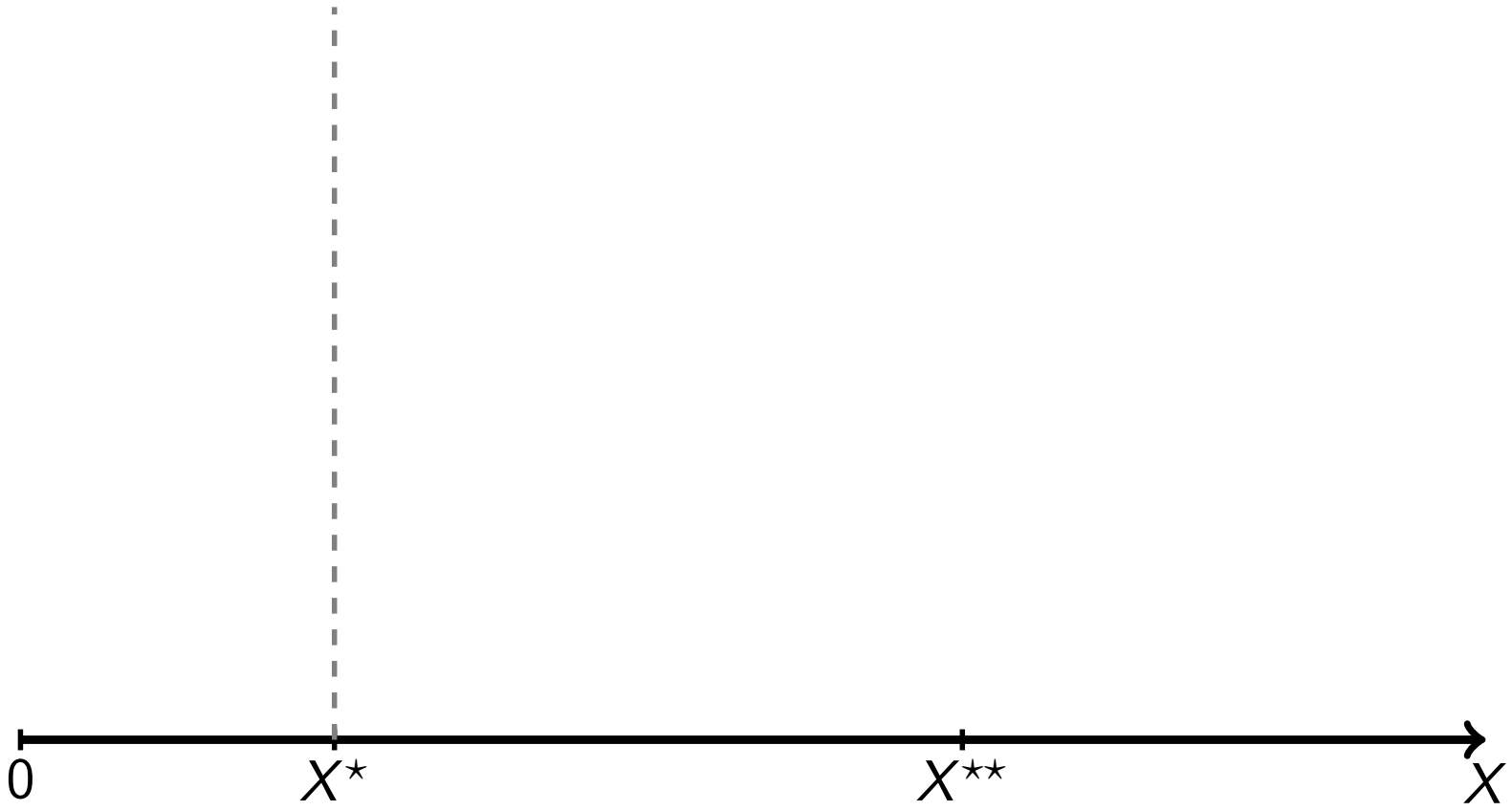

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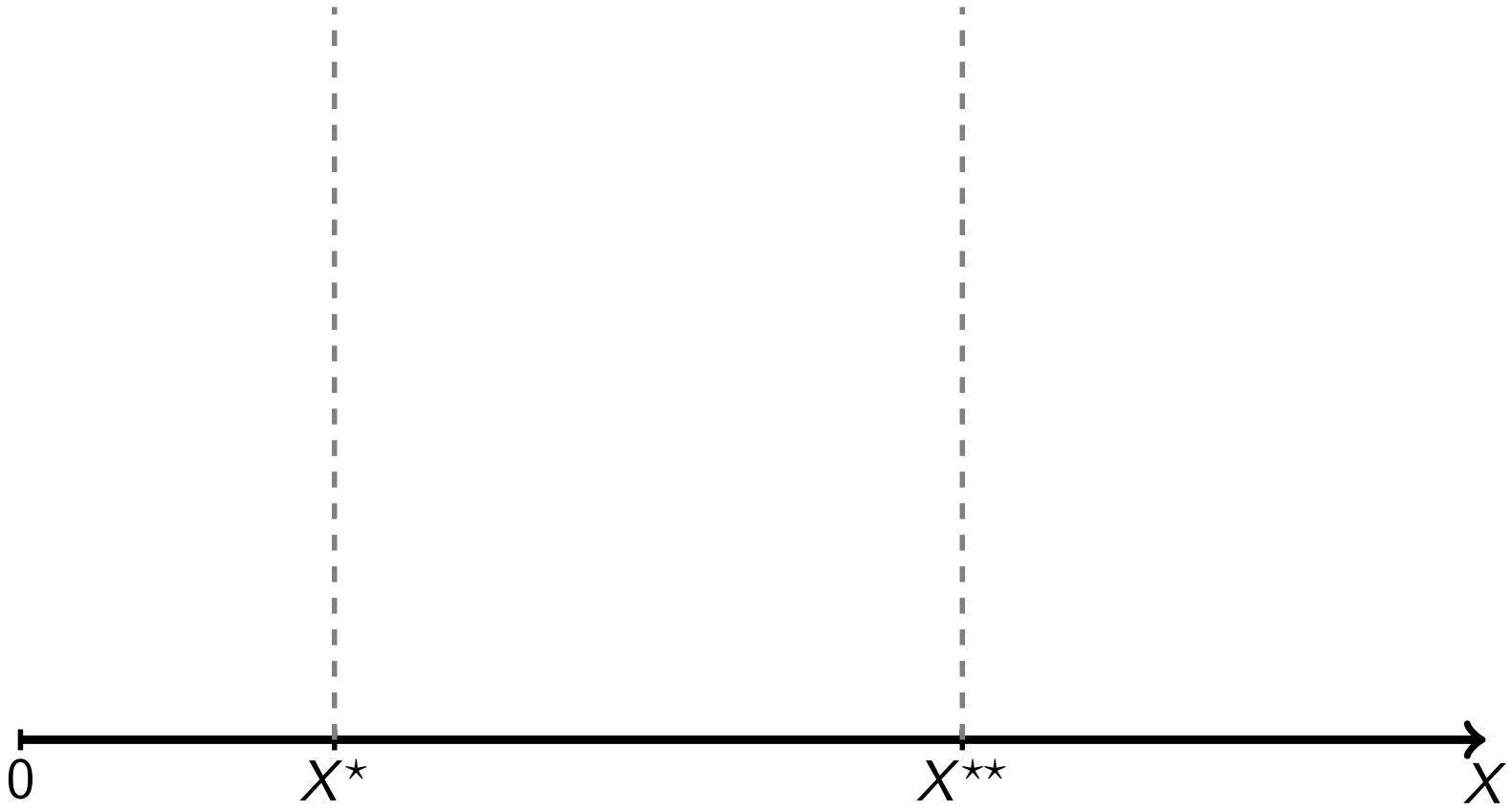

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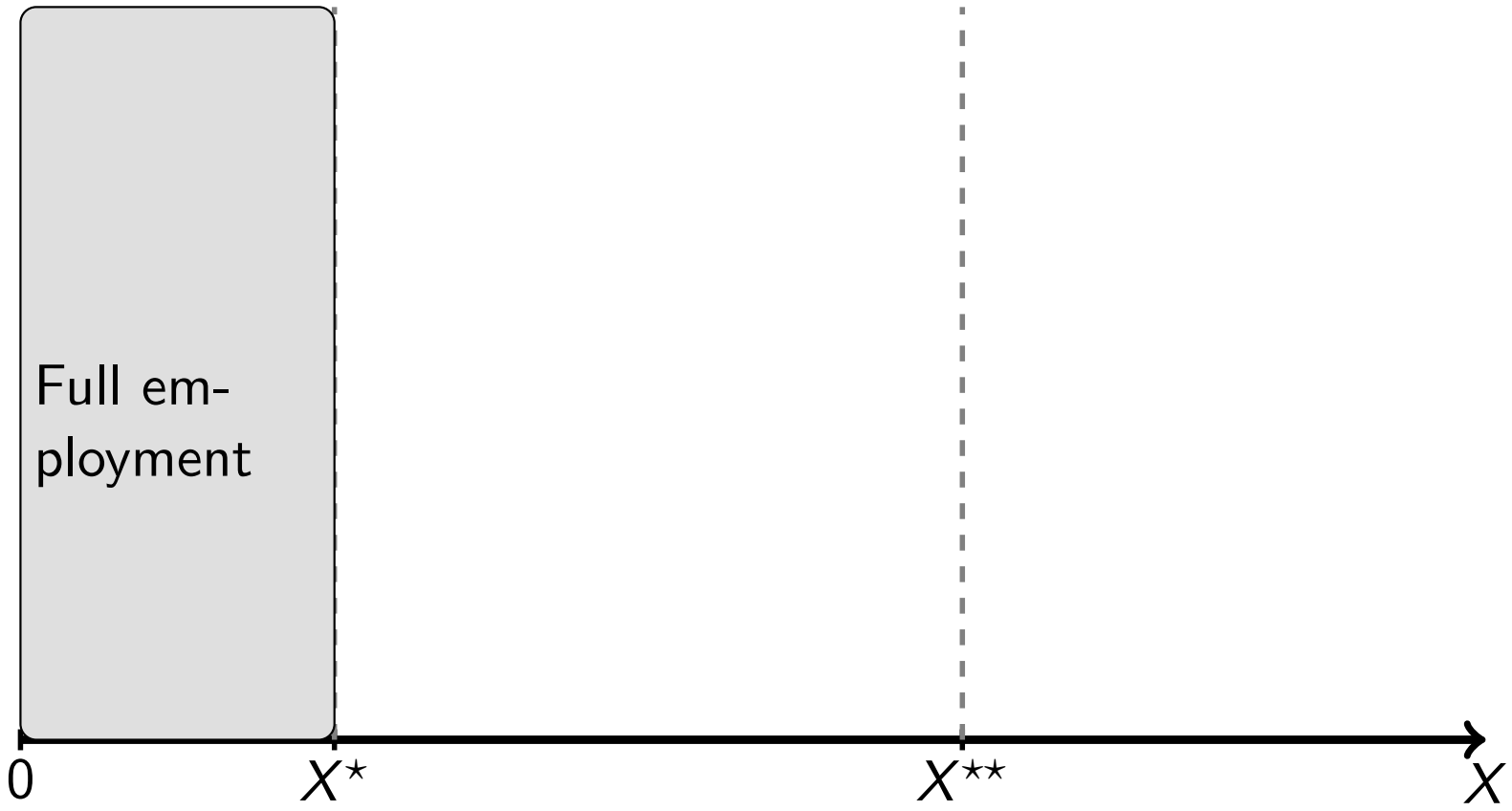

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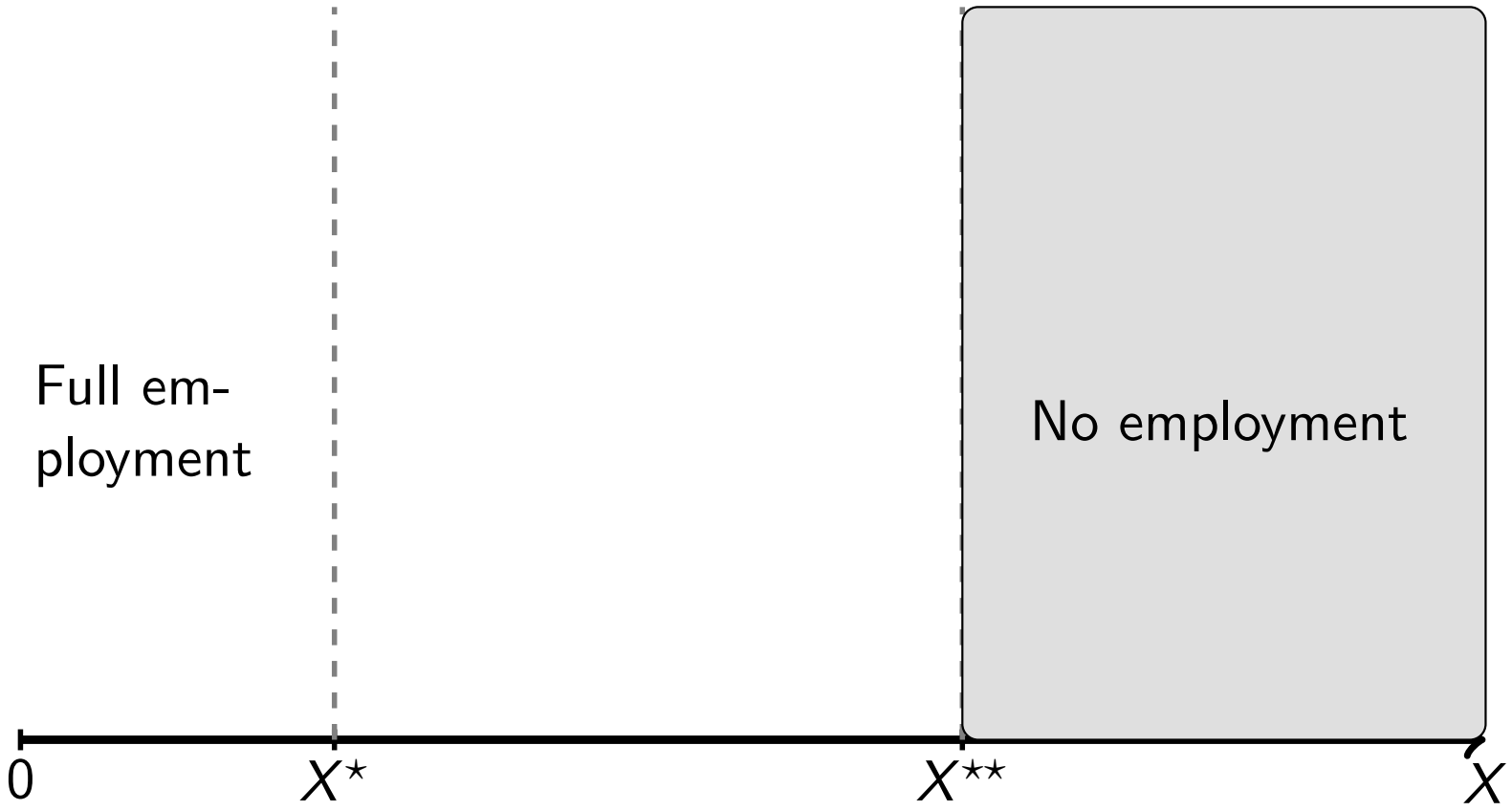

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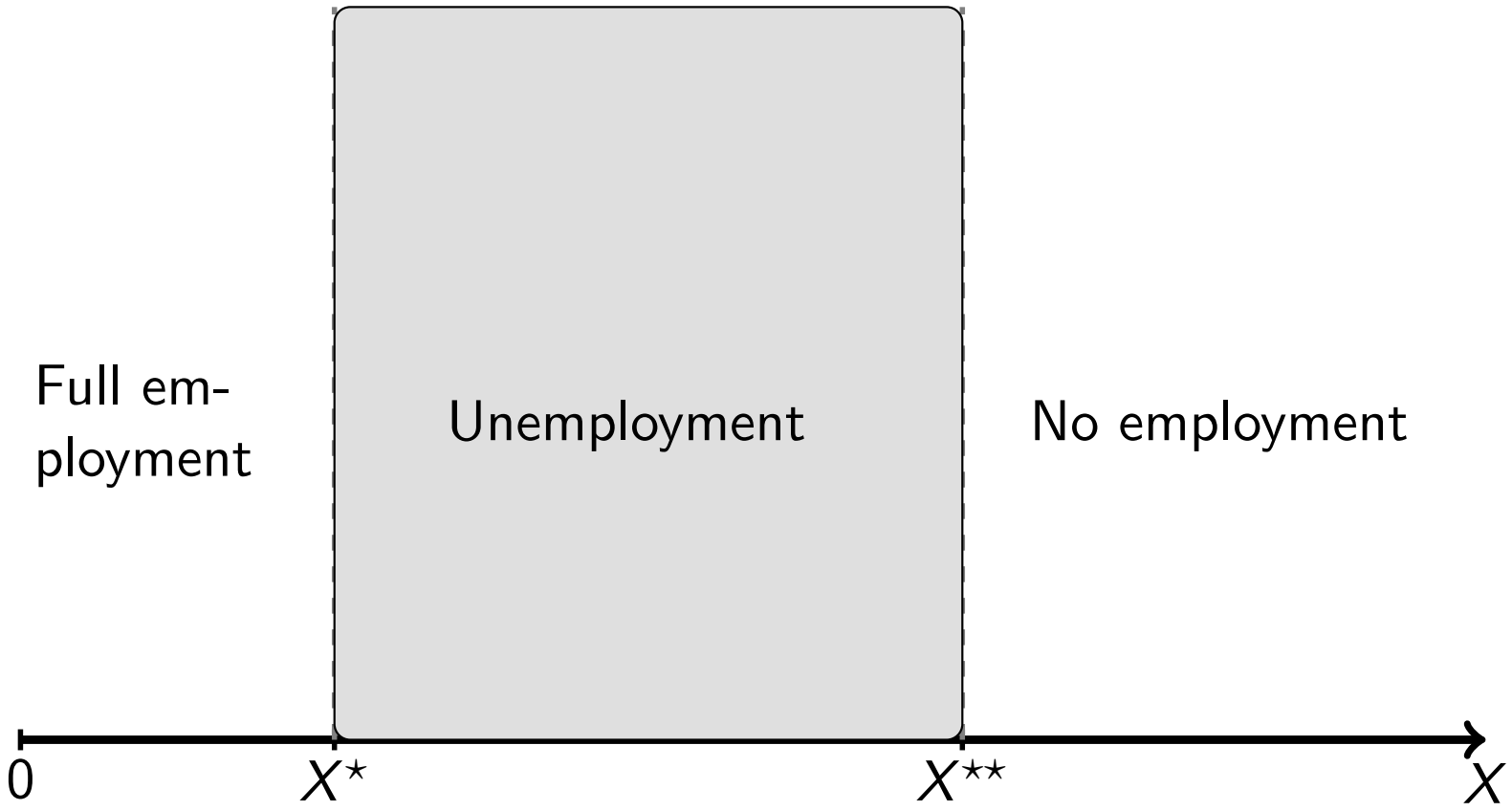

3. Interesting Properties of the Static Equilibrium

Consumption as a function of X

- How does vary equilibrium consumption when X increases?
- In the full employment regime :
  - Marginal utility of spendings decrease with $X \rightsquigarrow$ less production
  - But less than proportional to the increase in X
  - Overall, c increases with X
- In the no employment regime :
  - $c = X$
  - c increases one to one with X
- In the unemployment regime
  - "Multiplier > 1"
  - Spendings decrease more than one to one with X
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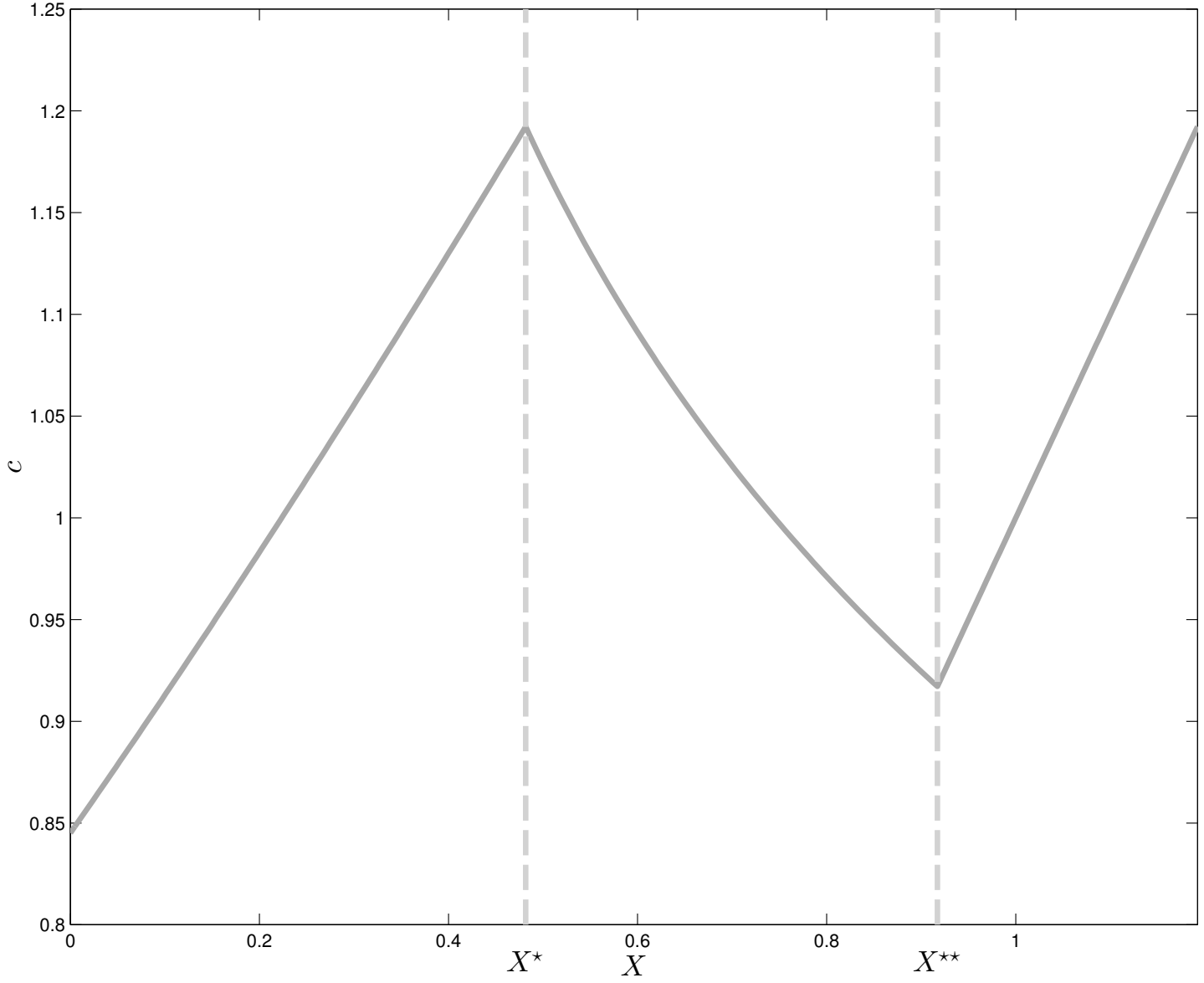
3. Interesting Properties of the Static Equilibrium

Figure 17: Proposition 3, Consumption as function of X.



3. Interesting Properties of the Static Equilibrium

Is there deficient demand in the unemployment regime?

3. Interesting Properties of the Static Equilibrium

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Definition : *Deficient demand* is a situation where

- increased demand by one agent would favor increased demand by other agents,
- a feasible coordinated increased in demand by all agents would leave everyone better off.

3. Interesting Properties of the Static Equilibrium

Is there deficient demand in the unemployment regime?

Definition : *Deficient demand* is a situation where

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Proposition 4

When the economy is in the unemployment regime ($X^\star < X < X^{\star\star}$), there is deficient demand.

3. Interesting Properties of the Static Equilibrium

Effects of changes in X on welfare

3. Interesting Properties of the Static Equilibrium

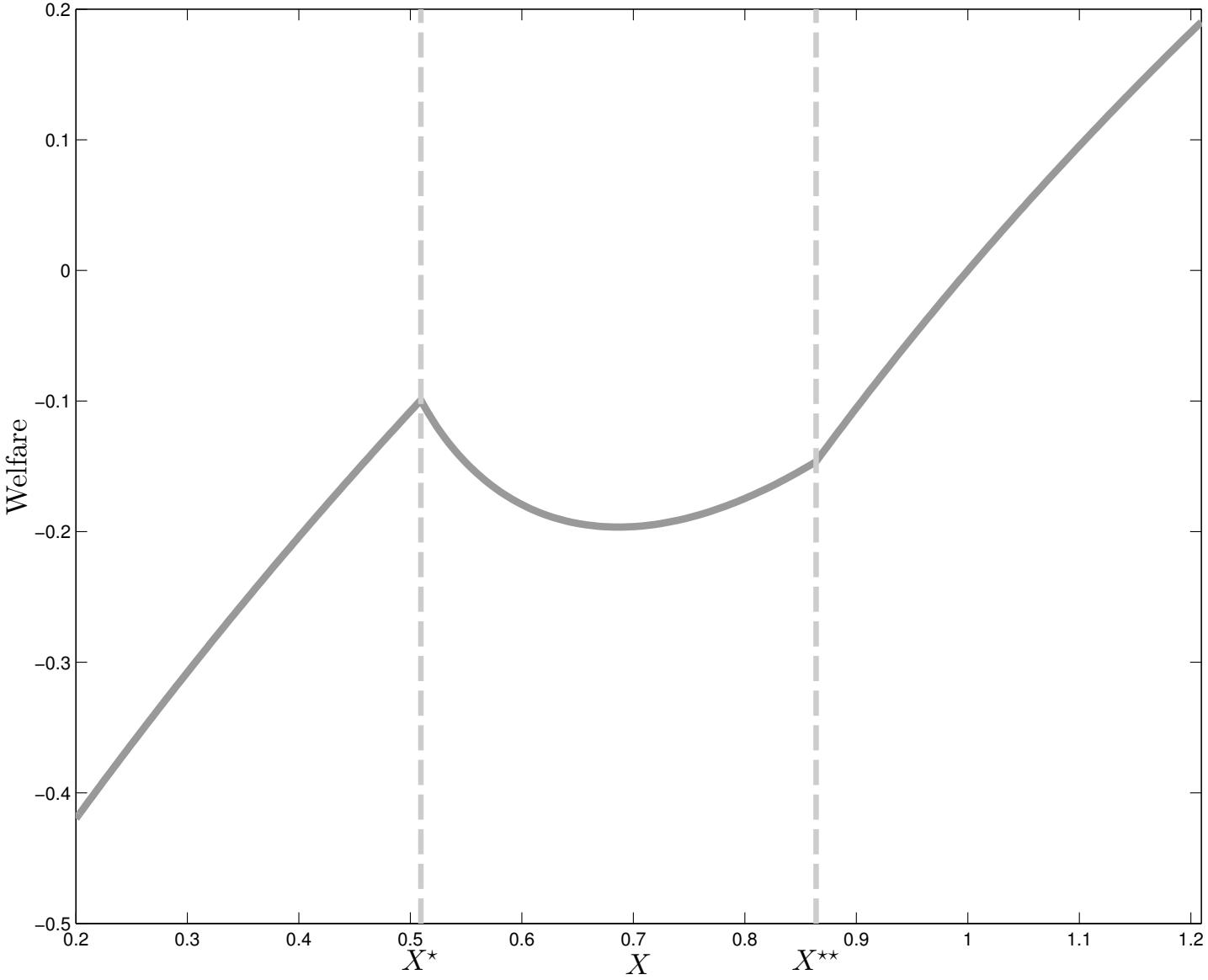
Effects of changes in X on welfare

Proposition 5 (Welfare)

- *If the economy is the unemployment regime and if τ is large enough (close enough to $\bar{\tau}$),*
- *then an increase in X leads to a fall in welfare.*

3. Interesting Properties of the Static Equilibrium

Figure 18: Welfare as function of X



3. Interesting Properties of the Static Equilibrium

Introducing government spending

- Add a government in the morning
- $u(X + e + G_n) + \gamma \widetilde{u}(G_u)$
- Government:
  - × purchase G_n that is perfectly substitutable with private consumption
  - × purchase G_w that is useless ($\gamma = 0$), or enters additively in utility
  - × Lump-sum taxes
  - × Balance budget

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3. Interesting Properties of the Static Equilibrium

Introducing government spending *(continued)*

Proposition 6 (Fiscal Mulitpliers)

- *An increase in G_n has no effect*
- *An increase in G_w increases activity.*
- *The multiplier de/dG_w is*
  - × *greater than one in the unemployment regime*
  - × *smaller than one in the full-employment regime*

3. Interesting Properties of the Static Equilibrium

Introducing government spending *(continued)*

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3. Interesting Properties of the Static Equilibrium

Introducing government spending *(continued)*

Proposition 7 (Fiscal policy and welfare)

- *In the unemployment regime*
- *in the zone where a fall in X would increase welfare,*
- *an increase in G_w will increase welfare.*

0. Introduction
Roadmap

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4. Extensions / Dynamics / Policy Trade-offs

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Relaxing functional-form assumptions

- Results are robust to:
  - × Relaxing functional assumptions (matching function)
  - × Other ways of splitting the surplus (Nash Bargaining, directed search)
  - × Introduction of productive capital
  - × Addition of another good in the morning (*cf* Krugman)
- Simple characterization is not always possible
- but main results hold.

4. Extensions / Dynamics / Policy Trade-offs

Relaxing functional-form assumptions

- Results are robust to:
  - × Relaxing functional assumptions (matching function)
  - × Other ways of splitting the surplus (Nash Bargaining, directed search)
  - × Introduction of productive capital
  - × Addition of another good in the morning (*cf* Krugman)
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- We endogenize the absence of unemployment insurance.
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Dynamic Setup

- An infinite number of periods t,
- Each period consists of a morning and an afternoon
- The only financial trade is between morning and afternoon by assumption
- $$X_{t+1} = (1-\delta)X_t + \gamma e_t$$
- $$\mathcal{U} = \sum_{t=0}^{\infty} \beta^t \Big(U(c_t) - \nu(\ell_t) + V(a_t) \Big)$$

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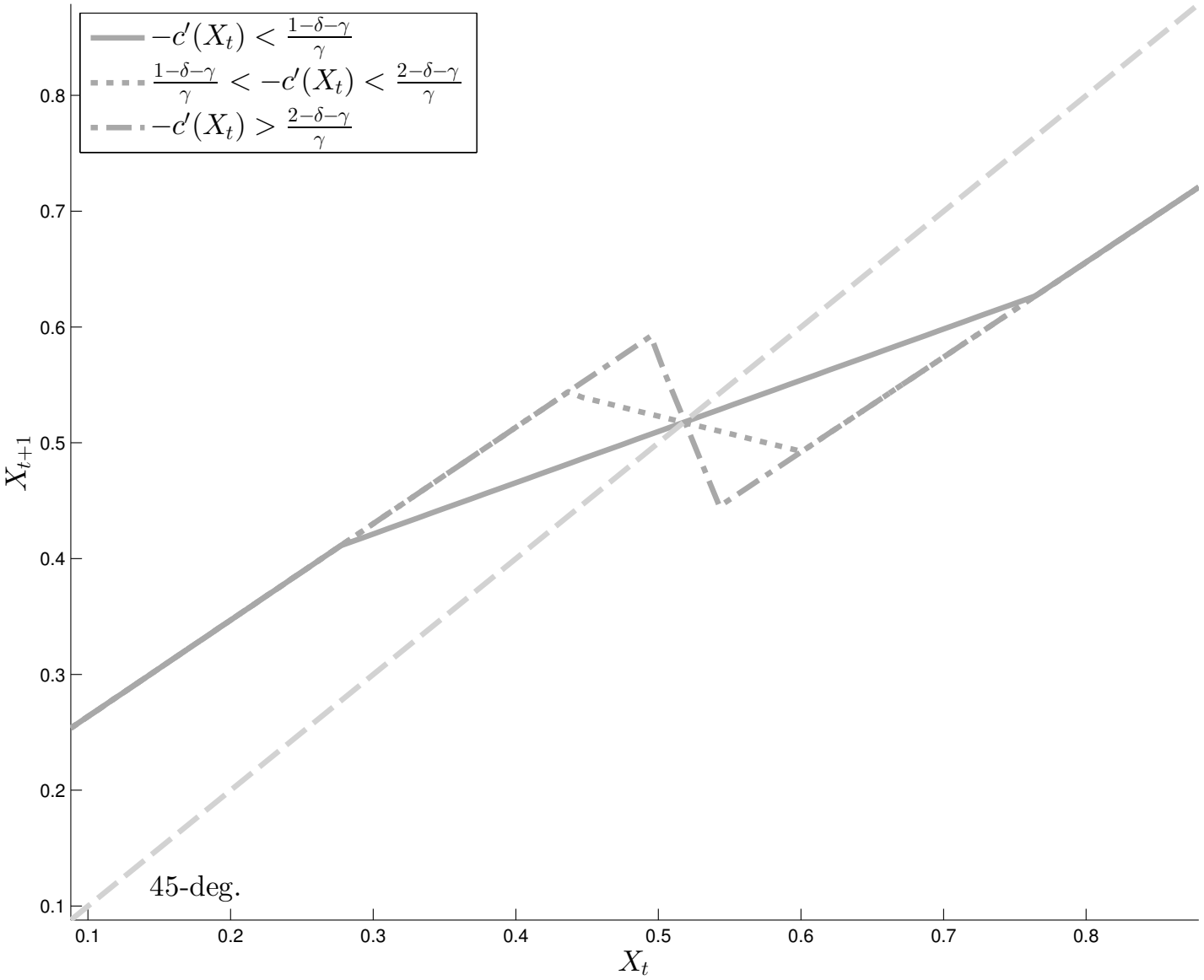
Figure 19: Global Dynamics when $\beta = 0$



Policy Trade-off

- When X is high, the economy will converge with the SS with inefficiently low demand on the way.
- Welfare today would be increased by stimulating demand today.
- But this would imply higher X tomorrow,
- And therefore lower consumption in all subsequent periods until the liquidation is complete.
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Proposition 8 (Aggregate demand management is desirable)

- *Suppose the economy is in steady state in the unemployment regime.*
- *Then, to a first-order approximation, a (feasible) change in the path of expenditures from this steady state equilibrium will increase the present discounted value of expected welfare ...*
- *... if and only if it increases the presented discounted sum of the resulting expenditure path,* $\sum_{i=0}^{\infty} \beta^i e_{t+i}$.
- *Aggregate demand management is therefore desirable.*

5. Recap
Main Mechanism

- If the economy finds itself with an *"excess"* of accumulated goods (houses, durables and/or capital goods):
  - × Consumers and firms will spend less because they already have a lot, (HAYEK *view, this is the efficient thing to do*)
  - × Firms will hire less as demand is low
  - × Consumers will consume less by fear of being unemployed,
  - × Spendings will therefore be low (KEYNES *view, a (negative) multiplier shows up*)
  - × etc...
- There is socially excessive precautionary savings
- Aggregate demand management (e.g. government spendings) can boost mutually beneficial trades ...
- ... but it will postpone the recovery by slowing down the liquidation process (*in the dynamic version of the model*)

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