

# The Political Economy of Labor Policy

Diego Huerta  
University of Chile  
Department of Economics

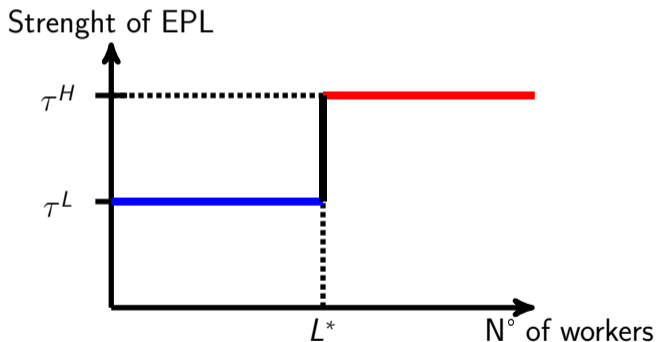
November 21, 2025

## EPL is size-contingent (*tiered*) in many countries

- Employment Protection Legislation (EPL): severance pay, reinstatement, notification.

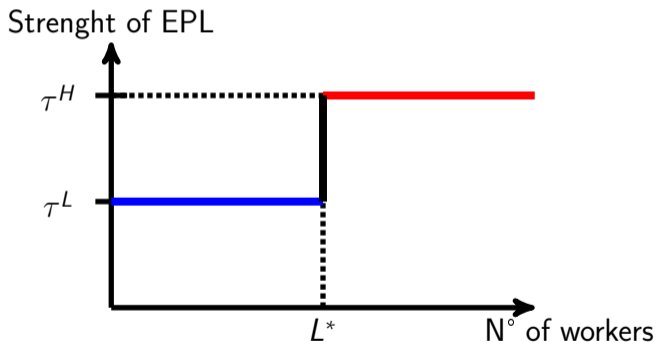
## EPL is size-contingent (*tiered*) in many countries

- Employment Protection Legislation (EPL): severance pay, reinstatement, notification.



## EPL is size-contingent (*tiered*) in many countries

- Employment Protection Legislation (EPL): severance pay, reinstatement, notification.



- Examples: Italy ( $L^* = 15$ ), France ( $L^* = 50$ ), USA ( $L^* = 100$ )

Why *tiered* EPL matters?

## Why *tiered* EPL matters?

1. Implemented by countries with different institutional backgrounds and either by leftist or right-wing governments [evidence](#)

# Why *tiered* EPL matters?

1. Implemented by countries with different institutional backgrounds and either by leftist or right-wing governments [evidence](#)
  - ▶ Left implements on average a lower threshold [evidence](#)

# Why *tiered* EPL matters?

1. Implemented by countries with different institutional backgrounds and either by leftist or right-wing governments [evidence](#)
  - ▶ Left implements on average a lower threshold [evidence](#)
2. Highly persistent within countries [evidence](#)

# Why *tiered* EPL matters?

1. Implemented by countries with different institutional backgrounds and either by leftist or right-wing governments [evidence](#)
  - ▶ Left implements on average a lower threshold [evidence](#)
2. Highly persistent within countries [evidence](#)
3. Causes large welfare costs: up to 3.5% of GDP  
Gourio and Roys (2014); Garicano et al. (2016); Aghion et al. (2023)

# Why *tiered* EPL matters?

1. Implemented by countries with different institutional backgrounds and either by leftist or right-wing governments evidence
  - ▶ Left implements on average a lower threshold evidence
2. Highly persistent within countries evidence
3. Causes large welfare costs: up to 3.5% of GDP  
Gourio and Roys (2014); Garicano et al. (2016); Aghion et al. (2023)

**Main Question:** Why countries implement *tiered* EPL?

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$
2. Occupational choice: **worker** or **entrepreneur**

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$
2. Occupational choice: **worker** or **entrepreneur**
3. **Endogenous credit constraints that depend on assets and EPL**

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$
2. Occupational choice: **worker** or **entrepreneur**
3. **Endogenous credit constraints that depend on assets and EPL**
  - ▶ **EPL-finance interaction:** credit more sensitive to EPL for smaller firms  
Simintzi et al. (2015); Serfling (2016); Michaels et al. (2019); Bai et al. (2020)

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$
2. Occupational choice: **worker** or **entrepreneur**
3. **Endogenous credit constraints that depend on assets and EPL**
  - ▶ **EPL-finance interaction:** credit more sensitive to EPL for smaller firms  
Simintzi et al. (2015); Serfling (2016); Michaels et al. (2019); Bai et al. (2020)
4. **Design of EPL is chosen by a politically-oriented government**

# The baseline model in a nutshell

1. Agents heterogeneous in wealth (assets):  $a \sim g(a)$
2. Occupational choice: **worker** or **entrepreneur**
3. **Endogenous credit constraints that depend on assets and EPL**
  - ▶ **EPL-finance interaction:** credit more sensitive to EPL for smaller firms  
Simintzi et al. (2015); Serfling (2016); Michaels et al. (2019); Bai et al. (2020)
4. **Design of EPL is chosen by a politically-oriented government**
  - ▶ EPL is potentially **firm-specific**

# Key questions and answers

**Q1:** Why countries implement *tiered* EPL?

## Q1: Why countries implement *tiered* EPL?

- Right-wing: *“regulate large firms to foster small businesses growth”*

## Q1: Why countries implement *tiered* EPL?

- **Right-wing:** *“regulate large firms to foster small businesses growth”*

*Tiered* EPL  $\Leftrightarrow$  *cross-subsidy* from large to smaller firms

## Q1: Why countries implement *tiered* EPL?

- **Right-wing:** *“regulate large firms to foster small businesses growth”*

*Tiered EPL*  $\Leftrightarrow$  *cross-subsidy* from large to smaller firms

- **Left-wing:** *“do not regulate small businesses to protect their workers”*

## Q1: Why countries implement *tiered* EPL?

- **Right-wing:** *“regulate large firms to foster small businesses growth”*

*Tiered EPL*  $\Leftrightarrow$  *cross-subsidy* from large to smaller firms

- **Left-wing:** *“do not regulate small businesses to protect their workers”*

Workers benefit from EPL only if their firms can accommodate  $\uparrow$  labor costs

## Other policy-related questions

### **Q2: Economic consequences of tiered EPL?**

Firms adjust labor strategically creating welfare distortions

## Other policy-related questions

### **Q2: Economic consequences of tiered EPL?**

Firms adjust labor strategically creating welfare distortions

### **Q3: How to eliminate welfare distortions?**

Allow unions to exist while limiting their bargaining power

## Other policy-related questions

### **Q2: Economic consequences of tiered EPL?**

Firms adjust labor strategically creating welfare distortions

### **Q3: How to eliminate welfare distortions?**

Allow unions to exist while limiting their bargaining power

### **Q4: Why tiered EPL is stable over time in many countries?**

Dynamic extension: economies reach a stationary *tiered* EPL

## Other policy-related questions

### **Q2: Economic consequences of tiered EPL?**

Firms adjust labor strategically creating welfare distortions

### **Q3: How to eliminate welfare distortions?**

Allow unions to exist while limiting their bargaining power

### **Q4: Why tiered EPL is stable over time in many countries?**

Dynamic extension: economies reach a stationary *tiered* EPL

### **Q5: Factors that (don't) affect the emergence of tiered EPL?**

Gov.'s pol. orientation, wage flexibility, electoral system, mobility frictions

# Outline

Motivation

The Model

Political preferences for EPL

Equilibrium EPL

Extensions

Conclusions

# The Model

## Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$

## Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)

# Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)

# Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)
2. EPL is a one-time decision

## Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)
2. EPL is a one-time decision
3. Wage ( $w$ ) is fully-flexible

## Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)
2. EPL is a one-time decision
3. Wage ( $w$ ) is fully-flexible
4. Endogenous probabilistic matching process

# Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)
2. EPL is a one-time decision
3. Wage ( $w$ ) is fully-flexible
4. Endogenous probabilistic matching process
  - ▶ Labor-mobility frictions prevent free relocation in the short-medium run

# Baseline model: Key assumptions

1. EPL is asset-based ( $\tau(a)$ ) and enforceable,  $\tau(a) = (\tau_I(a), \tau_C(a))$ 
  - ▶ EPL involves *employer-to-employee* transfers (Pissarides, 2001)
  - ▶ EPL acts as insurance for job loss for risk averse workers (Blanchard and Tirole, 2008)
2. EPL is a one-time decision
3. Wage ( $w$ ) is fully-flexible
4. Endogenous probabilistic matching process
  - ▶ Labor-mobility frictions prevent free relocation in the short-medium run
  - ▶ Common wage across firms

# The Baseline Model

## **Endowments**

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

## Job loss risks and EPL as insurance

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

## Job loss risks and EPL as insurance

- 1) *Collective risk*: Entrepreneurial project fails with prob.  $1 - p$

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

## Job loss risks and EPL as insurance

- 1) *Collective risk*: Entrepreneurial project fails with prob.  $1 - p$ 
  - ▶ Collective dismissal: workers receive  $\tau_C(a) \cdot w$  per unit of labor

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

## Job loss risks and EPL as insurance

- 1) *Collective risk*: Entrepreneurial project fails with prob.  $1 - p$ 
  - ▶ Collective dismissal: workers receive  $\tau_C(a) \cdot w$  per unit of labor
- 2) *Individual risk*: Separation with prob.  $s$

# The Baseline Model

## Endowments

- Agents are born with assets  $a \sim g(a)$ ,  $g'(a) < 0$ ,  $\text{supp}(g) = [0, a_{max}]$
- They have access to output-producing technology:  $f(K, L) = K^\alpha L^\beta$ ,  $\alpha + \beta < 1$

## Job loss risks and EPL as insurance

- 1) *Collective risk*: Entrepreneurial project fails with prob.  $1 - p$ 
  - ▶ Collective dismissal: workers receive  $\tau_C(a) \cdot w$  per unit of labor
- 2) *Individual risk*: Separation with prob.  $s$ 
  - ▶ Individual dismissal: workers receive  $\tau_I(a) \cdot w$  per unit of labor

Payoffs depend on “effective wage”,  $w^{effective} = [p + \phi(\tau(a))]w$

Payoffs depend on “effective wage”,  $w^{effective} = [p + \phi(\tau(a))]w$

- Entrepreneurs (risk neutral): [details](#)

$$U^E = \underbrace{p \cdot f(a + D, (1 - s)L)}_{Output} - \underbrace{w^{effective} \cdot L}_{Labor\ costs} - \underbrace{(1 + r) \cdot D}_{Debt\ costs}$$

Payoffs depend on “effective wage”,  $w^{effective} = [p + \phi(\tau(a))]w$

- Entrepreneurs (risk neutral): [details](#)

$$U^E = \underbrace{p \cdot f(a + D, (1 - s)L)}_{Output} - \underbrace{w^{effective} \cdot L}_{Labor\ costs} - \underbrace{(1 + r) \cdot D}_{Debt\ costs}$$

- Individual workers (risk averse):

$$u^w = \underbrace{u(w^{effective}) \cdot L^s}_{Income\ utility} - \underbrace{\varsigma(L^s)}_{Labor\ disutility} \quad \text{with } \varsigma' > 0, \varsigma'' > 0$$

Payoffs depend on “effective wage”,  $w^{effective} = [p + \phi(\tau(a))]w$

- Entrepreneurs (risk neutral): [details](#)

$$U^E = \underbrace{p \cdot f(a + D, (1 - s)L)}_{Output} - \underbrace{w^{effective} \cdot L}_{Labor\ costs} - \underbrace{(1 + r) \cdot D}_{Debt\ costs}$$

- Individual workers (risk averse):

$$u^w = \underbrace{u(w^{effective}) \cdot L^s}_{Income\ utility} - \underbrace{\varsigma(L^s)}_{Labor\ disutility} \quad \text{with } \varsigma' > 0, \varsigma'' > 0$$

- “Group” of workers in firm  $L$ :

$$U^W = \frac{L}{L^s} \cdot u^w$$

[welfare equivalence](#)

# The Government's Problem

- Binary decision for each firm with assets  $a$ :  $\tau^L$  or  $\tau^H > \tau^L$

$$\max_{\tau: [0, a_{max}] \rightarrow \{\tau^L, \tau^H\}} \left\{ \bar{U}(\tau; \lambda) = \lambda \mathbb{E}_g[U^W] + (1 - \lambda) \mathbb{E}_g[U^E] \right\}$$

*s.t.*  $\mathbb{E}_g[L^S] = \mathbb{E}_g[L]$  [details](#)

# The Government's Problem

- Binary decision for each firm with assets  $a$ :  $\tau^L$  or  $\tau^H > \tau^L$

$$\max_{\tau: [0, a_{max}] \rightarrow \{\tau^L, \tau^H\}} \left\{ \bar{U}(\tau; \lambda) = \lambda \mathbb{E}_g[U^W] + (1 - \lambda) \mathbb{E}_g[U^E] \right\}$$

*s.t.*  $\mathbb{E}_g[L^S] = \mathbb{E}_g[L]$  [details](#)

- $\lambda$  captures “political orientation”

# The Government's Problem

- Binary decision for each firm with assets  $a$ :  $\tau^L$  or  $\tau^H > \tau^L$

$$\max_{\tau: [0, a_{max}] \rightarrow \{\tau^L, \tau^H\}} \left\{ \bar{U}(\tau; \lambda) = \lambda \mathbb{E}_g[U^W] + (1 - \lambda) \mathbb{E}_g[U^E] \right\}$$

*s.t.*  $\mathbb{E}_g[L^S] = \mathbb{E}_g[L]$  [details](#)

- $\lambda$  captures “political orientation”
  - ▶ Micro-foundation: probabilistic voting

Political preferences

$$\left( \frac{dU^W}{d\tau} \text{ and } \frac{dU^E}{d\tau} \right)$$


## Political Preferences for EPL ( $\tau$ )

---

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		



---

## Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		




- **Small:**  $\uparrow \tau \Rightarrow \downarrow$  credit  $\Rightarrow \downarrow$  Investment and  $\downarrow$  Labor  $\Rightarrow \downarrow$  efficient.

## Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		





- **Small:**  $\uparrow \tau \Rightarrow \downarrow$  credit  $\Rightarrow \downarrow$  Investment  $\Rightarrow \downarrow$  efficient.
- **Large:**  $\uparrow \tau \Rightarrow \uparrow$  labor costs, but still  $\approx$  efficient.

## Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		





- **Small:**  $\uparrow \tau \Rightarrow \downarrow \downarrow L \gg \uparrow w^{effective}$

# Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		





- **Small:**  $\uparrow \tau \Rightarrow \downarrow \downarrow L \gg \uparrow w^{effective}$
- **Large:**  $\uparrow \tau \Rightarrow \uparrow w^{effective} \gg \downarrow L$

## Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		

- **Empirical evidence** using firm-level US data (Huerta, 2026)

## Political Preferences for EPL ( $\tau$ )

Scale sector	Worker ( $U^W$ )	Entrepreneur ( $U^E$ )
Small ( $a < \hat{a}$ )		
Large ( $a > \hat{a}$ )		

- **Result:**  $\tau$  must be monotone.

*Size threshold:*  $a^* \in [\underline{a}, a_{max}]$  such that  $\tau(a \geq a^*) = \tau^H$

# Equilibrium EPL

# The regulatory threshold and the equilibrium wage

1. Equilibrium wage goes down when  $a^*$  decreases

## The regulatory threshold and the equilibrium wage

1. Equilibrium wage goes down when  $a^*$  decreases
2. A flat labor reform is neutral ( $\Delta w^{effective} = 0$ )  
$$\bar{U}(a^* = a^{max}; \lambda) = \bar{U}(a^* = \underline{a}; \lambda)$$

## The regulatory threshold and the equilibrium wage

1. Equilibrium wage goes down when  $a^*$  decreases
2. A flat labor reform is neutral ( $\Delta w^{effective} = 0$ )  
 $\bar{U}(a^* = a^{max}; \lambda) = \bar{U}(a^* = \underline{a}; \lambda)$

Can the government increase  $\bar{U}$  by choosing  
 $a^* \in (\underline{a}, a^{max})$ ?

## The regulatory threshold and the equilibrium wage

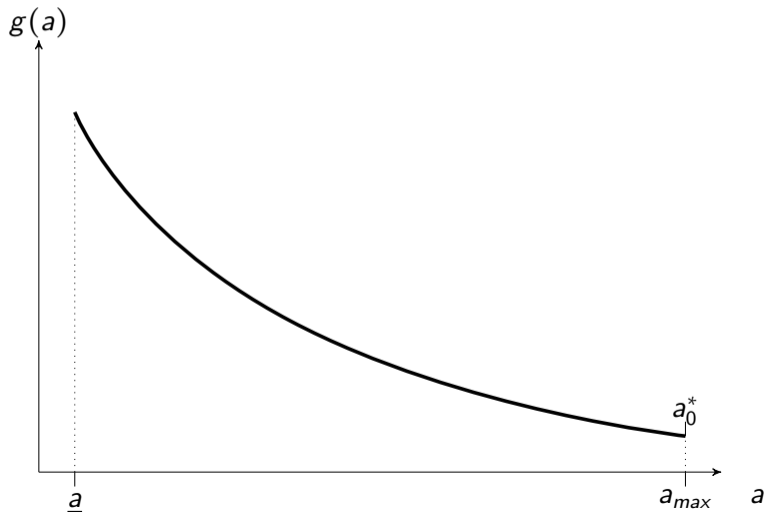
1. Equilibrium wage goes down when  $a^*$  decreases
2. A flat labor reform is neutral ( $\Delta w^{effective} = 0$ )  
 $\bar{U}(a^* = a^{max}; \lambda) = \bar{U}(a^* = \underline{a}; \lambda)$

Can the government increase  $\bar{U}$  by choosing  
 $a^* \in (\underline{a}, a^{max})$ ?

**YES!** For any  $\lambda$

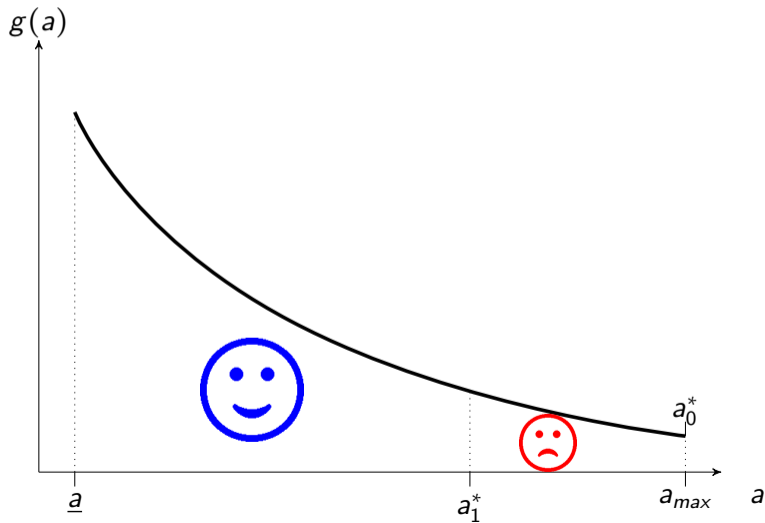
## Tiered EPL: intuition

Pro-business gov. ( $\lambda = 0$ )



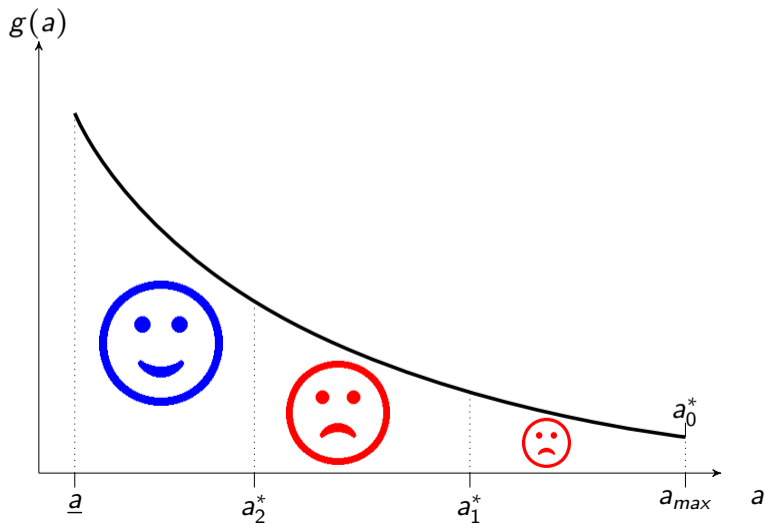
# Tiered EPL: intuition

Pro-business gov. ( $\lambda = 0$ )



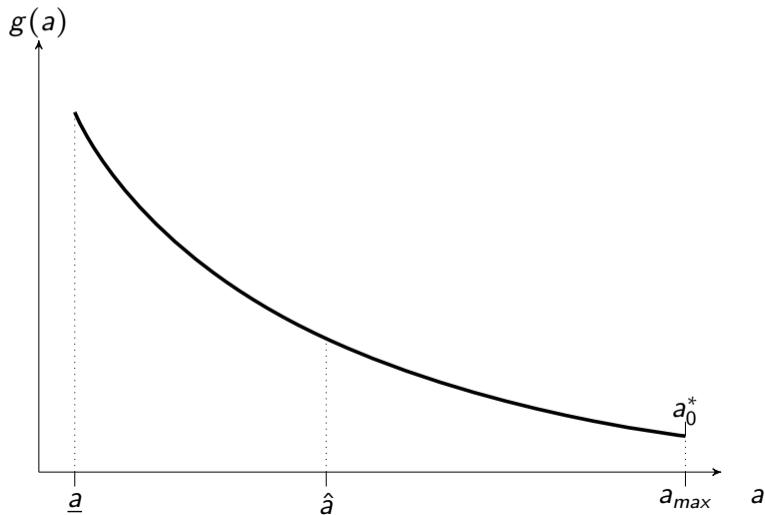
# Tiered EPL: intuition

Pro-business gov. ( $\lambda = 0$ )



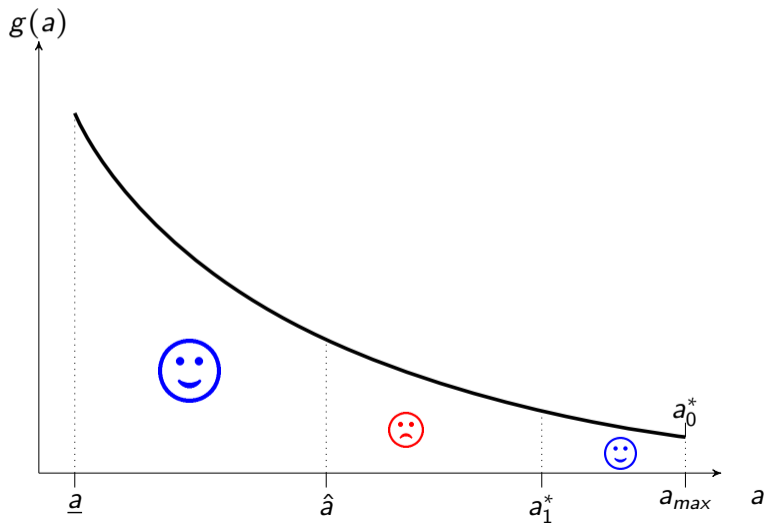
# Tiered EPL: intuition

Pro-worker gov. ( $\lambda = 1$ )



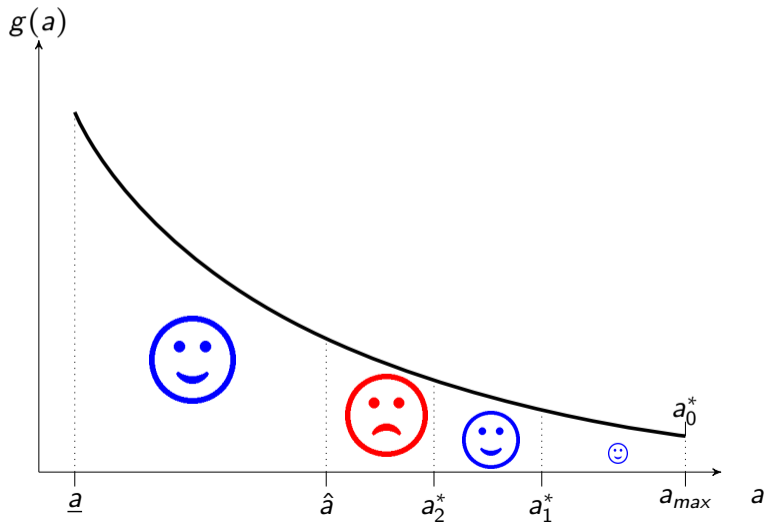
# Tiered EPL: intuition

Pro-worker gov. ( $\lambda = 1$ )

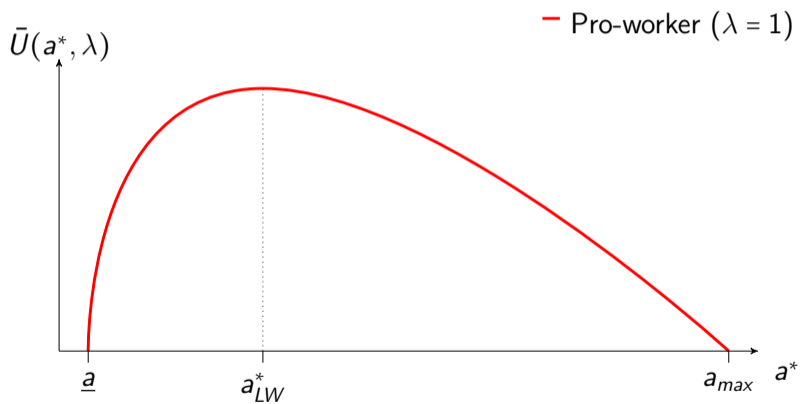


# Tiered EPL: intuition

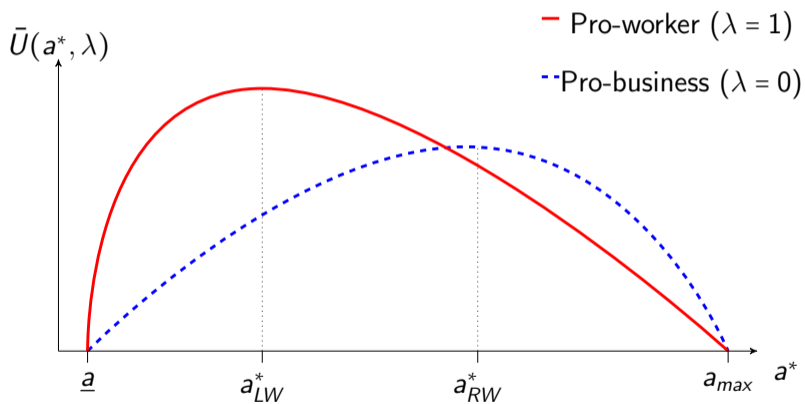
Pro-worker gov. ( $\lambda = 1$ )



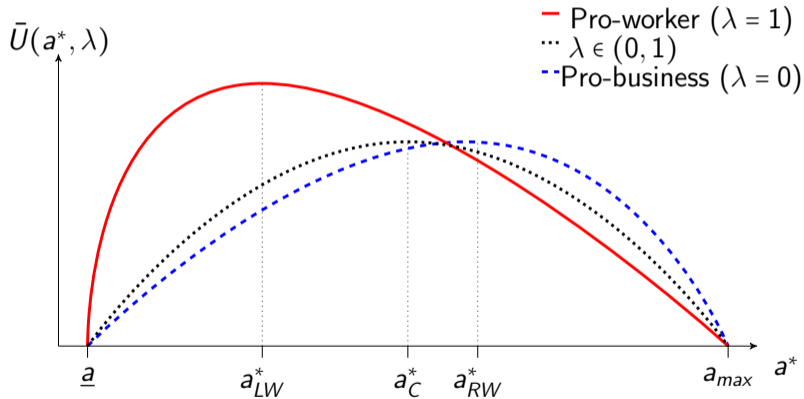
# Government's weighted-welfare



# Government's weighted-welfare



# Government's weighted-welfare



# What is needed for a *tiered* EPL?

1. **Labor-finance interaction:** credit more sensitive to EPL for smaller firms  
(Simintzi et al., 2015; Serfling, 2016; Bai et al., 2020)
2. **EPL involves some *employer-to-employee transfers***  
(Lazear, 1990; Pissarides, 2001)
3. **Effective wage gap:** at least a minimal difference between effective wage in regulated versus unregulated firms  
(Schivardi and Torrini, 2008; Leonardi and Pica, 2013)

# Extensions

- 1 EPL non-enforceable and labor-based
- 2 Independent bargaining defines EPL
- 3 Dynamic extension
- 4 EPL under proportional and majoritarian systems
- 5 Wage inflexibility
- 6 Labor mobility flexibility
- 7 Two-dimensional EPL (individual and collective simultaneously)
- 8 Regulations on capital use

# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions

# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions
- New testable predictions regarding the welfare effects of EPL (Huerta, 2026)

# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions
- New testable predictions regarding the welfare effects of EPL (Huerta, 2026)
- Model informs the labor-policy debate: How to eliminate distortions of EPL? Why *tiered* EPL persists?

# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions
- New testable predictions regarding the welfare effects of EPL (Huerta, 2026)
- Model informs the labor-policy debate: How to eliminate distortions of EPL? Why *tiered* EPL persists?
- *Fruitful research avenue*: understand origins and evolution of policies through models with dynamic interaction between inequality and policies

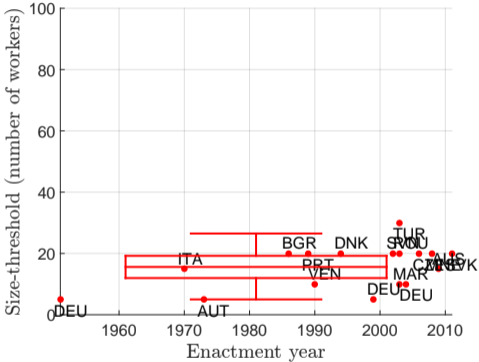
# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions
- New testable predictions regarding the welfare effects of EPL (Huerta, 2026)
- Model informs the labor-policy debate: How to eliminate distortions of EPL? Why *tiered* EPL persists?
- *Fruitful research avenue*: understand origins and evolution of policies through models with dynamic interaction between inequality and policies
  - ▶ Evolution of welfare state (Huerta, 2025)

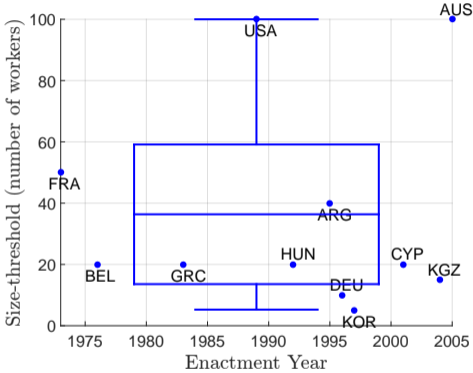
# Conclusions

- *Tiered EPL* emerges regardless of pol. orientation of the gov., degree of wage inflexibility, electoral system, and mobility frictions
- New testable predictions regarding the welfare effects of EPL (Huerta, 2026)
- Model informs the labor-policy debate: How to eliminate distortions of EPL? Why *tiered* EPL persists?
- *Fruitful research avenue*: understand origins and evolution of policies through models with dynamic interaction between inequality and policies
  - ▶ Evolution of welfare state (Huerta, 2025)
  - ▶ Size-contingent regulations on capital use: size-restrictions, financial subsidies, special tax treatments

# Tiered EPL across countries and over time



Size-threshold, left-wing.



Size-threshold, right-wing.

## Table: Determinants of *tiered* EPL

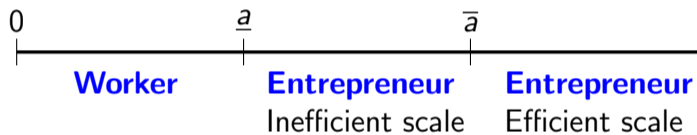
Dependent variable: Regulatory threshold (number of workers) above which EPL becomes stricter

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Full Sample</i>			<i>No outliers</i>		
Left	-13.77** (6.125)	-13.35** (6.436)	-13.97** (6.757)	-8.643* (4.841)	-7.220* (4.058)	-8.267* (4.070)
Proportionality	-2.082 (4.482)	-2.336 (4.395)	-3.573 (3.412)	3.555 (2.795)	2.416 (2.621)	1.256 (2.148)
French Legal Origin		0.414 (7.044)	-2.366 (7.410)		7.784 (5.560)	5.855 (4.518)
Scandinavian Legal Origin		-7.390 (7.810)	-12.44 (15.05)		-2.792 (5.025)	-4.432 (8.991)
German Legal Origin		-20.20*** (7.200)	-26.43*** (8.963)		-11.29*** (3.251)	-14.47** (5.535)
Ethnic Fractionalization			24.01 (17.04)			17.28 (10.52)
Electoral Democracy Index			52.75*** (17.57)			25.37** (11.08)
Constant	36.79*** (13.42)	41.07** (15.43)	-0.154 (15.37)	17.70** (7.319)	19.15*** (5.825)	-0.00413 (9.150)
Observations	38	38	38	36	36	36
R-squared	0.128	0.256	0.436	0.116	0.359	0.478

Table: Adoption of *tiered* EPL across the world

Years	(1)	Region	(2)	(3)		Legal origin	(4)
	N° obs.		N° of countries	Pol. orientation	N° obs.		N° of countries
1950-1980	8	North America	1	Left	23	French	10
1981-1990	7	South America	2	Center	2	English	7
1991-2000	7	Oceania	1	Right	16	German	4
2001-2011	19	Northern Europe	2			Socialist	10
		Southern Europe	6			Scandinavian	2
		Western Europe	6				
		Eastern Europe	6	Proportionality	N obs.	N changes	N countries
		Southern Asia	1	0	5	0	28
		Western Asia	2	1	6	1	3
		Central Asia	1	2	12	2	1
		Eastern Asia	1	3	18	3	1
		North Africa	1				
		South Africa	3				

# Ex-ante Equilibrium, $\tau_0 = \tau^L$



Back to [main](#)

# Entrepreneurs' problem and credit market

## Entrepreneurs' problem

$$\max_{D,L} U^e(a, D, L|\tau)$$

$$s.t. \quad U^e(a, D, L|\tau) \geq u^w(\tau) + (1 + \rho)a, \quad (PC)$$

$$U^e(a, D, L|\tau) \geq \psi \cdot (a + D) \quad (IC)$$

## Credit Market

- $1 - \psi$  is the *loan recovery rate*
- Minimum collateral to get credit  $\underline{a}(\tau)$  and debt limits  $d(a|\tau)$

Back to [main](#)

# Labor utility equivalence

$$\mathbb{E}(u^w|\tau) \cdot G(\underline{a}) = \int_{\underline{a}}^{+\infty} U^W(L(a))g(a)da$$

- Individual *ex-ante* expected utility:  $\mathbb{E}(u^w|\tau) = p^L \cdot u^w(\tau^H) + p^H \cdot u^w(\tau^L)$
- Matching probabilities  $p^L$  and  $p^H$  determined by the equilibrium in the labor market

Back to [main](#)

# Labor market equilibrium under *tiered* EPL

- Assume EPL is *tiered*:  $\tau(a \geq a^*) = \tau^H$

$$m_L \cdot L_L^s = \int_{\underline{a}}^{a^*} L(a|\tau^L)g(a)da$$

$$m_H \cdot L_H^s = \int_{a^*}^{a_{max}} L(a|\tau^H)g(a)da$$

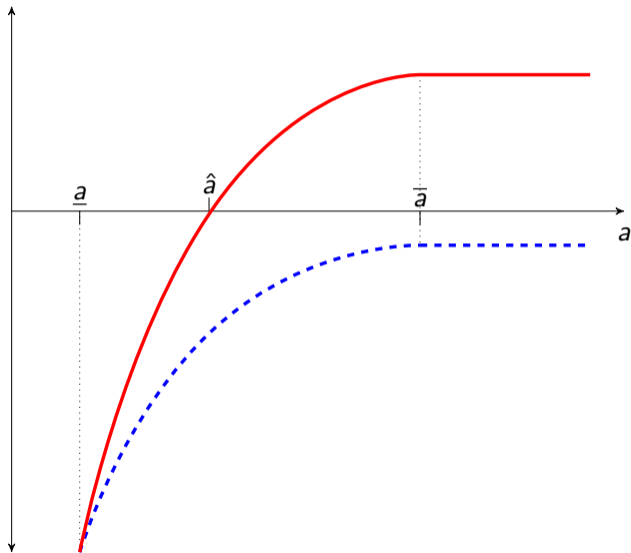
$$m_L + m_H = G(\underline{a})$$

(three equations three unknowns:  $m^L$ ,  $m^H$ , and  $w$ )

- Endogenous matching probabilities

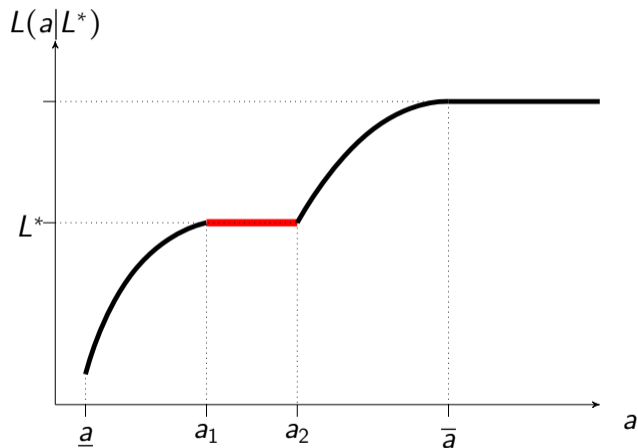
$$p^L = \frac{m_L}{G(\underline{a})} \text{ and } p^H = \frac{m_H}{G(\underline{a})}$$

# Political Preferences



---  $\partial U^E / \partial \tau$   
—  $\partial U^W / \partial \tau$

## Labor-based EPL: Strategic behavior



- Government's ability to create cross-subsidies through  $w$  is dampened

## Labor-based EPL: Strategic behavior

- Equilibrium EPL still *tiered* regardless of  $\lambda$

## Labor-based EPL: Strategic behavior

- Equilibrium EPL still *tiered* regardless of  $\lambda$ 
  - ▶ The government accounts for welfare distortions induced by strategic behavior

## Labor-based EPL: Strategic behavior

- Equilibrium EPL still *tiered* regardless of  $\lambda$ 
  - ▶ The government accounts for welfare distortions induced by strategic behavior
- Political welfare ( $\bar{U}$ ) is lower than the welfare obtained when EPL was enforceable

**Question** How to eliminate the welfare distortions of *tiered* EPL?

Back to [main](#)

# Alternative mechanism: bargaining

$t = 0$



- Agents born with  $a$
- $\tau_0(a) = \tau^L$
- Workers randomly matched to a firm

# Alternative mechanism: bargaining

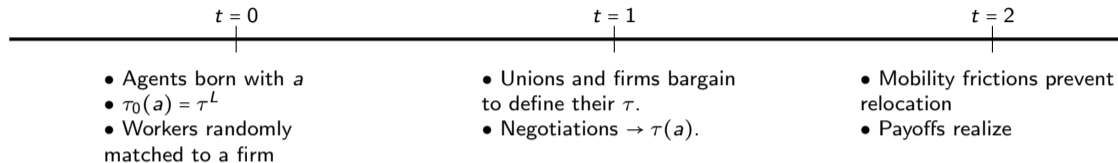
$t = 0$

- Agents born with  $a$
- $\tau_0(a) = \tau^L$
- Workers randomly matched to a firm

$t = 1$

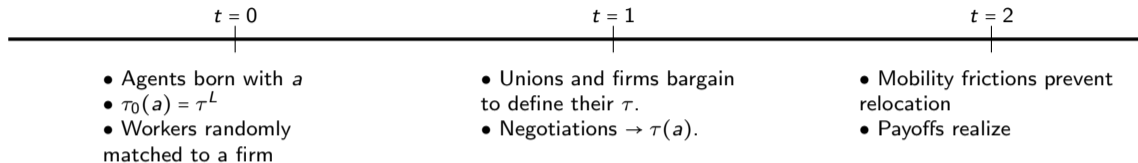
- Unions and firms bargain to define their  $\tau$ .
- Negotiations  $\rightarrow \tau(a)$ .

# Alternative mechanism: bargaining



- Random proposer model (Binmore, 1987).
  - ▶ Take-it-or-leave-it proposals: frequency  $\mu$  (unions) and  $1 - \mu$  (firms).

# Alternative mechanism: bargaining

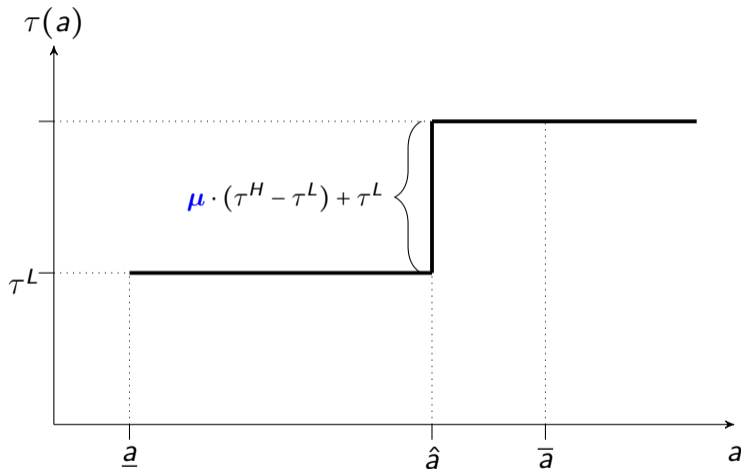


- Random proposer model (Binmore, 1987).
  - ▶ Take-it-or-leave-it proposals: frequency  $\mu$  (unions) and  $1 - \mu$  (firms).

Can the government choose  $\mu$  to achieve  $\bar{U}(a^*, \lambda)$ ?

**YES!** For a set of  $\lambda$ 's:  $\Lambda$

# Bargaining: Equilibrium



- **Result:** Government can choose  $\mu$  such that  $\bar{U}(\mu, \lambda) = \bar{U}(a^*, \lambda)$  (for  $\lambda \in \Lambda$ ).

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

- ▶ Gov. can eliminate distortions by choosing unions' bargaining power to influence negotiations in large firms

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

- ▶ Gov. can eliminate distortions by choosing unions' bargaining power to influence negotiations in large firms

**Connection to real world:** Regulations that limit unions' power

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

- ▶ Gov. can eliminate distortions by choosing unions' bargaining power to influence negotiations in large firms

**Connection to real world:** Regulations that limit unions' power

- ▶ USA Right-to-Work laws: workers can opt out joining and paying unions

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

- ▶ Gov. can eliminate distortions by choosing unions' bargaining power to influence negotiations in large firms

**Connection to real world:** Regulations that limit unions' power

- ▶ USA Right-to-Work laws: workers can opt out joining and paying unions
- ▶ Australia Fair Work Act (2009): regulations on bargaining strikes

# Independent bargaining: Summary

**Main result:** unions can eliminate welfare distortions if properly regulated

**Intuition:** EPL is still *tiered*: workers in smaller firms agree to remain unprotected!

- ▶ Gov. can eliminate distortions by choosing unions' bargaining power to influence negotiations in large firms

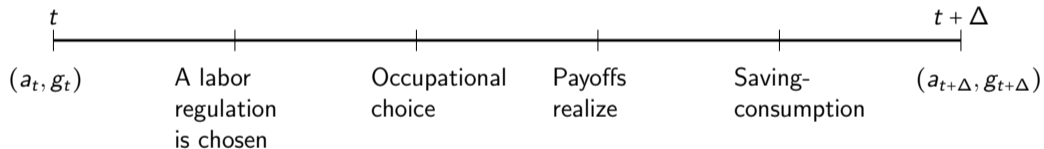
**Connection to real world:** Regulations that limit unions' power

- ▶ USA Right-to-Work laws: workers can opt out joining and paying unions
- ▶ Australia Fair Work Act (2009): regulations on bargaining strikes
- ▶ UK's Strikes Act (2023): workers in key sectors required to comply minimum service levels during strike

Back to [main](#)

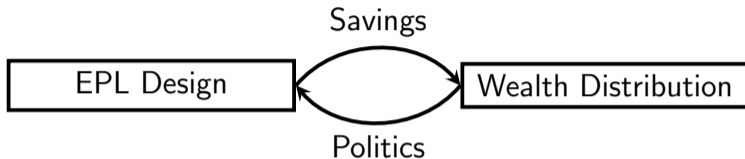
# A dynamic extension: Why *tiered* EPL persists?

*Timing within period  $t$*



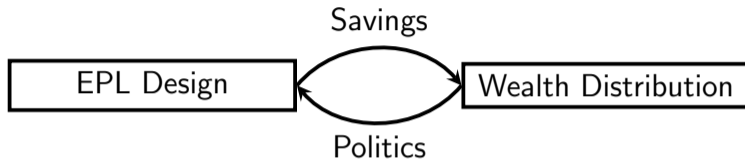
## A dynamic extension: Why *tiered* EPL persists?

- **Main feature:**



## A dynamic extension: Why *tiered* EPL persists?

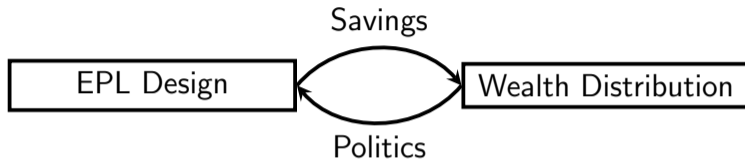
- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)

## A dynamic extension: Why *tiered* EPL persists?

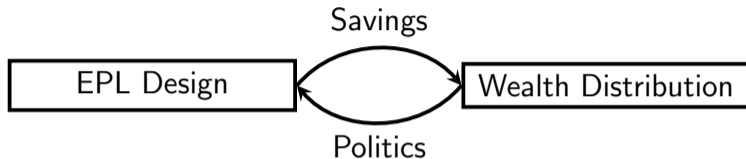
- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)
  1. The regulatory threshold  $a_t^*$  is increasing over time

# A dynamic extension: Why *tiered* EPL persists?

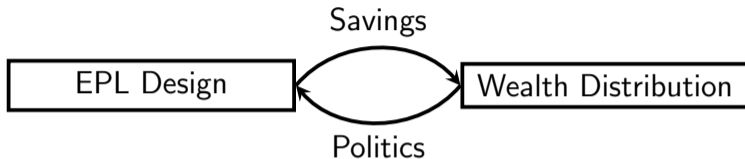
- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)
  1. The regulatory threshold  $a_t^*$  is increasing over time
  2. There is a stationary *tiered* EPL

# A dynamic extension: Why *tiered* EPL persists?

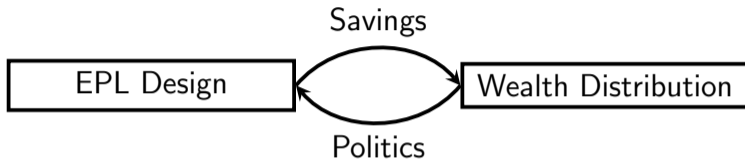
- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)
  1. The regulatory threshold  $a_t^*$  is increasing over time
  2. There is a stationary *tiered* EPL
- **Intuition:**

# A dynamic extension: Why *tiered* EPL persists?

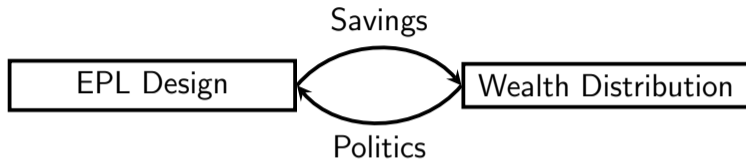
- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)
  1. The regulatory threshold  $a_t^*$  is increasing over time
  2. There is a stationary *tiered* EPL
- **Intuition:**
  1. *Tiered* EPL creates a cross-subsidy to smaller firms which grow larger  
 $\Rightarrow \downarrow$  future support for protective EPL

# A dynamic extension: Why *tiered* EPL persists?

- **Main feature:**



- **Main results:** (regardless of  $\lambda$ !)
  1. The regulatory threshold  $a_t^*$  is increasing over time
  2. There is a stationary *tiered* EPL
- **Intuition:**
  1. *Tiered* EPL creates a cross-subsidy to smaller firms which grow larger  $\Rightarrow$   $\downarrow$  future support for protective EPL
  2. *Tiered* EPL fosters wealth accumulation. Occupational choice not restricted by credit constraints in the long-run  $\Rightarrow$  stationary EPL

# EPL and electoral systems

**Concern:** EPL is positively correlated with the proportionality of electoral system (Pagano and Volpin, 2005)

# EPL and electoral systems

**Concern:** EPL is positively correlated with the proportionality of electoral system (Pagano and Volpin, 2005)

- ▶ ⇒ electoral system may limit emergence of *tiered* EPL

# EPL and electoral systems

**Concern:** EPL is positively correlated with the proportionality of electoral system (Pagano and Volpin, 2005)

- ▶ ⇒ electoral system may limit emergence of *tiered* EPL

**Extension:** EPL under proportional versus majoritarian system

# EPL and electoral systems

**Concern:** EPL is positively correlated with the proportionality of electoral system (Pagano and Volpin, 2005)

- ▶  $\Rightarrow$  electoral system may limit emergence of *tiered* EPL

**Extension:** EPL under proportional versus majoritarian system

- ▶ EPL is *tiered* regardless of electoral system: consistent with data!

# EPL and electoral systems

**Concern:** EPL is positively correlated with the proportionality of electoral system (Pagano and Volpin, 2005)

- ▶ ⇒ electoral system may limit emergence of *tiered* EPL

**Extension:** EPL under proportional versus majoritarian system

- ▶ EPL is *tiered* regardless of electoral system: consistent with data!
- ▶ More protective EPL under more proportional systems

Back to [main](#)

## Wage inflexibility

- **Concern:** emergence of *tiered* EPL may be subject to flexible wages that create cross-subsidies

# Wage inflexibility

- **Concern:** emergence of *tiered* EPL may be subject to flexible wages that create cross-subsidies
  - ▶ Wage rigidities prevent wages from falling too much (e.g. minimum wage)

# Wage inflexibility

- **Concern:** emergence of *tiered* EPL may be subject to flexible wages that create cross-subsidies
  - ▶ Wage rigidities prevent wages from falling too much (e.g. minimum wage)
- **Extension (worst case scenario):** What is the design of EPL if  $w$  is completely inflexible?

# Wage inflexibility

- **Concern:** emergence of *tiered* EPL may be subject to flexible wages that create cross-subsidies
  - ▶ Wage rigidities prevent wages from falling too much (e.g. minimum wage)
- **Extension (worst case scenario):** What is the design of EPL if  $w$  is completely inflexible?
- **Result:** EPL is still *tiered* for governments not strongly pro-business

# Wage inflexibility

- **Concern:** emergence of *tiered* EPL may be subject to flexible wages that create cross-subsidies
  - ▶ Wage rigidities prevent wages from falling too much (e.g. minimum wage)
- **Extension (worst case scenario):** What is the design of EPL if  $w$  is completely inflexible?
- **Result:** EPL is still *tiered* for governments not strongly pro-business
  - ▶ More protective EPL should arise in countries with more flexible wages

Back to [main](#)

## Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower
- **Extension:** variable labor mobility frictions (e.g. job search costs, previously signed terms)

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower
- **Extension:** variable labor mobility frictions (e.g. job search costs, previously signed terms)
  - ▶ Wage barrier friction (Adamopoulos et al., 2024): % of workers that can freely relocate

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower
- **Extension:** variable labor mobility frictions (e.g. job search costs, previously signed terms)
  - ▶ Wage barrier friction (Adamopoulos et al., 2024): % of workers that can freely relocate
- **Results:**

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower
- **Extension:** variable labor mobility frictions (e.g. job search costs, previously signed terms)
  - ▶ Wage barrier friction (Adamopoulos et al., 2024): % of workers that can freely relocate
- **Results:**
  - ▶ Minimum mobility frictions justify a *tiered* EPL

# Mobile workers

- **Concern:** flow of workers from firms with lower to higher effective wages would eliminate any wedge between regulated and unregulated firms
  - ▶ Wage paid in regulated firms is lower
- **Extension:** variable labor mobility frictions (e.g. job search costs, previously signed terms)
  - ▶ Wage barrier friction (Adamopoulos et al., 2024): % of workers that can freely relocate
- **Results:**
  - ▶ Minimum mobility frictions justify a *tiered* EPL
  - ▶ EPL is more protective under tighter mobility frictions

Back to [main](#)

# Two-dimensional EPL

- EPL involves variable and fixed costs on labor use:  $\tau(a) \cdot w + F(a)$

## Examples

- ▶  $\tau$ : severance payments
- ▶  $F$ : administrative dismissal procedures

Equilibrium EPL if  $\tau(a)$  and  $F(a)$  chosen simultaneously?

- EPL is *tiered* in both dimensions regardless of  $\lambda$
- Rationalizes some real-world examples: France and Austria

Back to [main](#)

## Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)
- **Extension** firm-specific regulations on capital use: special tax treatments and credit subsidies

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)
- **Extension** firm-specific regulations on capital use: special tax treatments and credit subsidies
- **Main result:** emergence of *tiered* regulation limited by:

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)
- **Extension** firm-specific regulations on capital use: special tax treatments and credit subsidies
- **Main result:** emergence of *tiered* regulation limited by:
  - ▶ Progressivity of transfers program

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)
- **Extension** firm-specific regulations on capital use: special tax treatments and credit subsidies
- **Main result:** emergence of *tiered* regulation limited by:
  - ▶ Progressivity of transfers program
  - ▶ Type of regulation: credit subsidies work differently than tax treatments

# Regulations on capital use

- **Concern:** Why the results apply specifically to EPL and not generally to any redistributive policy?
  - ▶ **Short answer:** emergence of *tiered* regulation depends critically on having *employer-to-employee transfers* (EPL)
- **Extension** firm-specific regulations on capital use: special tax treatments and credit subsidies
- **Main result:** emergence of *tiered* regulation limited by:
  - ▶ Progressivity of transfers program
  - ▶ Type of regulation: credit subsidies work differently than tax treatments
  - ▶ Government's political orientation

Back to [main](#)

# References I

- Adamopoulos, Tasso, Loren Brandt, Chaoran Chen, Diego Restuccia, and Xiaoyun Wei**, “Land Security and Mobility Frictions,” *The Quarterly Journal of Economics*, 2024, 139 (3), 1941–1987.
- Aghion, Philippe, Antonin Bergeaud, and John Van Reenen**, “The Impact of Regulation on Innovation,” *American Economic Review*, 2023, 113 (11), 2894–2936.
- Bai, John, Douglas Fairhurst, and Matthew Serfling**, “Employment Protection, Investment, and Firm Growth,” *The Review of Financial Studies*, 2020, 33 (2), 644–688.
- Binmore, Ken**, “Perfect Equilibria in Bargaining Models,” *The Economics of Bargaining*, 1987.
- Blanchard, Olivier J and Jean Tirole**, “The Joint Design of Unemployment Insurance and Employment Protection: A First Pass,” *Journal of the European Economic Association*, 2008, 6 (1), 45–77.

## References II

- Garicano, Luis, Claire Lelarge, and John Van Reenen**, “Firm Size Distortions and the Productivity Distribution: Evidence from France,” *American Economic Review*, 2016, 106 (11), 3439–79.
- Gourio, François and Nicolas Roys**, “Size Dependent Regulations, Firm Size Distribution, and Reallocation,” *Quantitative Economics*, 2014, 5 (2), 377–416.
- Huerta, Diego**, “The Evolution of the Welfare State,” 2025.  
[https://www.dieghuertad.com/working\\_paper/EvolutionWelfareState/](https://www.dieghuertad.com/working_paper/EvolutionWelfareState/).
- , “The Regressive Effects of Worker Protection: The Role of Financial Constraints,” *Labour Economics*, 2026, 100, 102892.
- Lazear, Edward P**, “Job Security Provisions and Employment,” *The Quarterly Journal of Economics*, 1990, 105 (3), 699–726.
- Leonardi, Marco and Giovanni Pica**, “Who Pays for It? The Heterogeneous Wage Effects of Employment Protection Legislation,” *The Economic Journal*, 2013, 123 (573), 1236–1278.

## References III

- Michaels, Ryan, T Beau Page, and Toni M Whited**, “Labor and Capital Dynamics under Financing Frictions,” *Review of Finance*, 2019, 23 (2), 279–323.
- Pagano, Marco and Paolo F Volpin**, “The Political Economy of Corporate Governance,” *American Economic Review*, 2005, 95 (4), 1005–1030.
- Pissarides, Christopher A**, “Employment Protection,” *Labour Economics*, 2001, 8 (2), 131–159.
- Schivardi, Fabiano and Roberto Torrini**, “Identifying the Effects of Firing Restrictions Through Size-Contingent Differences in Regulation,” *Labour Economics*, 2008, 15 (3), 482–511.
- Serfling, Matthew**, “Firing Costs and Capital Structure Decisions,” *The Journal of Finance*, 2016, 71 (5), 2239–2286.
- Simintzi, Elena, Vikrant Vig, and Paolo Volpin**, “Labor Protection and Leverage,” *The Review of Financial Studies*, 2015, 28 (2), 561–591.