

# Should We Insure Workers or Jobs During Recessions?

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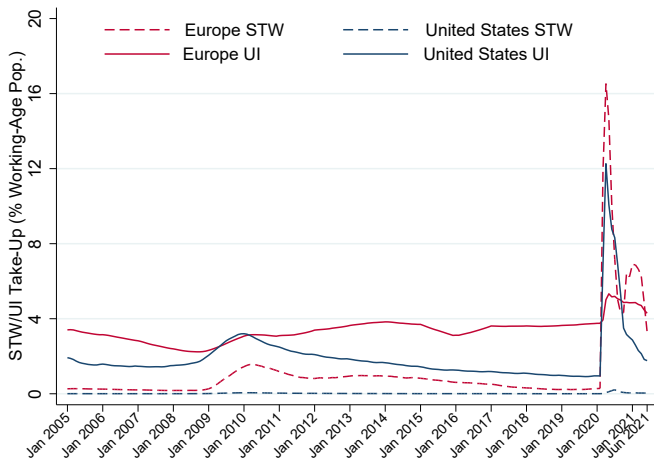
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# Labor market policy during COVID-19: US vs Europe

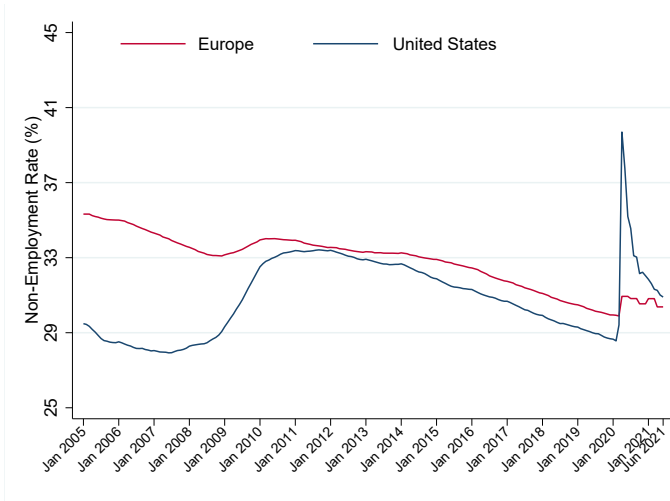
- In the wake of COVID crisis, labor market policy responses have been immediate, unprecedented in scope, but also diametrically opposed
- **US** widely extended unemployment insurance (**UI**) generosity (CARES)
  - Additional payments to those qualifying for UI
  - Extension for those whose benefits would have otherwise exhausted
  - Eligibility extended to self-employed and gig-workers
- **Europe** heavily subsidized hour reductions and temporary layoffs through short-time work (**STW**) or related schemes
  - March 2020: SURE program launched by the European Commission
  - April 2020: Coronavirus Job Retention Scheme created in the UK

# Labor market policy during COVID-19: US vs Europe



Note: Europe is weighted average of Germany, France, Italy and the UK, weighted by their working age population.

# Non-employment rate during COVID-19: US vs Europe



Note: Europe is weighted average of Germany, France, Italy and the UK, weighted by their working age population.

# Short-time work vs unemployment insurance

## Unemployment insurance (UI)

- When hit by a shock, employment relationship is severed
- If eligible, worker can claim unemployment benefits → **worker is insured** against cost of job loss

## Short-time work (STW)

- When hit by a shock, firm can temporarily reduce labor demand and decrease number of hours worked by its employees
- Firm pays for hours worked, while STW subsidizes hours not worked
- Employment relationship is preserved → **job match is insured**

# This paper

## Q: Should we insure workers or jobs?

1. Building on standard public finance framework, provide simple **conceptual model** to determine **relative welfare effects of STW vs UI**
  - Relative insurance value and fiscal externality (partial equilibrium)
  - Interaction with inefficiencies in labor market and effect on equilibrium outcomes (e.g. reallocation)
2. Collect evidence on vast literature on UI and recent stream of work on STW to **map conceptual framework to empirical evidence**

# Outline

1. Conceptual framework
2. Relative insurance value
3. Relative fiscal externality
4. Inefficiencies in the labor market
  - 4.1 Inefficient separations
  - 4.2 Search inefficiencies
  - 4.3 Reallocation inefficiencies
  - 4.4 Other externalities
5. Conclusion

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# Welfare trade-offs of STW vs UI

- Standard public finance framework: **optimal generosity** of social insurance transfer balances its insurance value against its fiscal externality
  - **Insurance value**: social benefit of transferring \$1 from good to bad state
  - **Fiscal externality**: cost of transferring \$1 due to behavioral responses
- Extend this framework to assess **optimal relative generosity** of social insurance
- Imagine to increase generosity of social insurance by \$1. Should we increase STW or UI?

# Optimal STW/UI mix

Relative value of STW/UI transfer = Relative fiscal externality

- Value of transfer:  $\mathbf{E}_{STW}[u'(c)] - \mathbf{E}_{UI}[u'(c)] \gtrless 0$
- Fiscal externality:  $\mathbf{FE}_{STW} - \mathbf{FE}_{UI} \gtrless 0$

# Optimal STW/UI mix

Relative value of STW/UI transfer = Relative fiscal externality  
+ Relative correction of LM externalities

- Value of transfer:  $\mathbf{E}_{STW}[u'(c)] - \mathbf{E}_{UI}[u'(c)] \gtrless 0$
- Fiscal externality:  $\mathbf{FE}_{STW} - \mathbf{FE}_{UI} \gtrless 0$
- Correction of **labor market inefficiencies**: social insurance can amplify or hamper pre-existing distortions
  - Inefficient separations, e.g. due to liquidity constraints
  - Search inefficiencies, e.g. rat-races for jobs during recessions
  - Inefficient reallocation, e.g. cleansing effects

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# Relative insurance value

- Value of insurance depends on:
  - How workers value insurance, i.e. their **risk aversion**
  - Whether they have other means of **consumption smoothing**
  - The **size** of the shock
- Little empirical attention to value of social insurance programs
- Value of **UI** (++) , strongly heterogeneous
- **Little evidence** on the insurance value of **STW** specifically and how it compares to UI, but they tend to insure:
  - Different **populations** (risk aversion, consumption smoothing)

## Evidence from the IAB-HOPP survey data

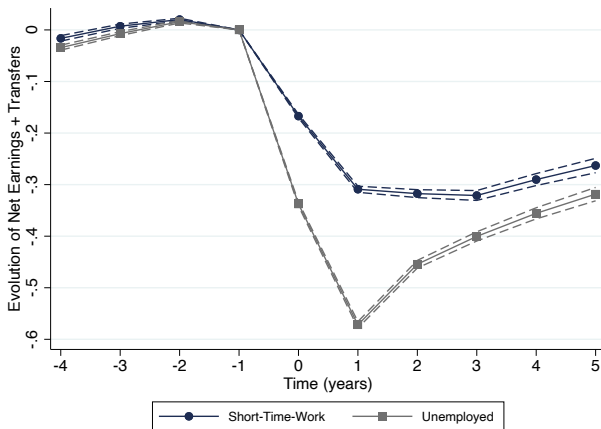
	Employed (not in STW)	STW	Unemployed	p-value of difference		
				E-S	E-U	S-U
Female	0.513	0.428	0.432	0.000	0.000	0.000
Age 18-34	0.230	0.216	0.253	0.130	0.071	0.000
Age 35-54	0.513	0.522	0.353	0.434	0.000	0.000
Age 55+	0.257	0.262	0.394	0.577	0.000	0.000
University degree	0.453	0.320	0.301	0.000	0.000	0.000
Has partner	0.712	0.684	0.491	0.005	0.000	0.000
Partner not working	0.119	0.113	0.167	0.372	0.000	0.000
Monthly HH income	4,248	3,638	2,083	0.000	0.000	0.000
MPC	0.323	0.335	0.393	0.029	0.000	0.000
Life satisfaction (1-10)	8.035	7.579	6.408	0.000	0.000	0.000
Obs	21,338	2,303	1,110			

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- **Little evidence** on the insurance value of **STW** specifically and how it compares to UI, but they tend to insure:
  - Different **populations** (risk aversion, consumption smoothing)
  - Different **shocks**

# Evidence from the Great Recession in Italy

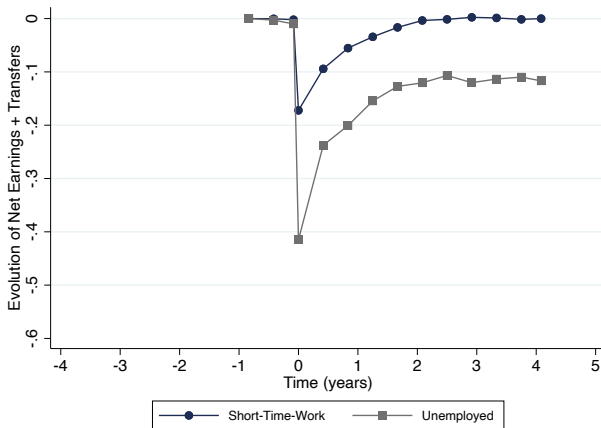
Evolution of earnings and transfers around STW/job-loss events



Source: Giupponi and Landais (2021)

# Evidence from the Great Recession in Germany

Evolution of earnings and transfers around STW/job-loss events



Source: Tilly and Niedermayer (2016)

# Relative insurance value

- Value of insurance depends on:
  - How workers value insurance, i.e. their **risk aversion**
  - Whether they have other means of **consumption smoothing**
  - The **size** of the shock
- Little empirical attention to value of social insurance programs
- Value of **UI** (++) , strongly heterogeneous
- **Little evidence** on the insurance value of **STW** specifically and how it compares to UI, but they tend to insure:
  - Different **populations** (risk aversion, consumption smoothing)
  - Different **shocks** (magnitude, persistence)
- Likely :  $\mathbf{E}_{STW}[u'(c)] - \mathbf{E}_{UI}[u'(c)] \ll 0$

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# Relative fiscal externality

- Extensive literature on moral hazard effects of UI
  - Consensus that **fiscal externality of UI is relatively large**: cost of \$1 of UI ranges from \$1.5 to \$2.5
- Limited evidence on moral hazard effects of STW
  - Conditionality on well-defined shock and monitoring prevent MH, but likely hard to enforce
  - Evidence from Great Recession (Kopp and Siegenthaler [2019]; Giupponi and Landaïs [2021]) points to **limited moral hazard**
  - Main reason for this is probably **endogeneity** to UI generosity
- Likely  $\mathbf{FE}_{STW} - \mathbf{FE}_{UI} < 0$ , but massive **extension** of STW schemes can fuel MH

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# Inefficient separations

- STW intends to **preserve matches** by insuring jobs rather than workers

**Q1** Does STW **save jobs**?

- If so, **welfare impact** will depend on whether separations are **inefficiently high** in recessions to start with

**Q2** Is saving jobs **efficient**? Would separations inefficiently high in absence of STW?

## Step 1: Does STW save jobs?

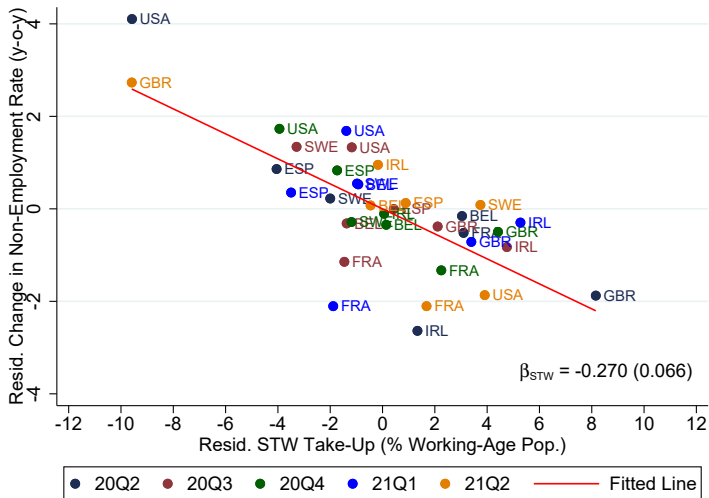
- Leverage variation in STW usage across countries during COVID crisis
- Country-level quarterly data for period 2019q2 to 2021q2
- Correlation between STW take-up and non-employment rate

$$\begin{aligned}\widehat{\text{non-emp}}_{i,t} &= \text{non-emp}_{i,t} - \text{non-emp}_{i,t-4} \\ &= \beta_{STW} \widehat{STW}_{i,t} + \beta_{UI} \widehat{UI}_{i,t} + \beta_1 \widehat{\text{cases}}_{i,t} + \beta_2 \widehat{\text{cases}}_{i,t}^2 + \delta_t + \epsilon_{i,t}\end{aligned}$$

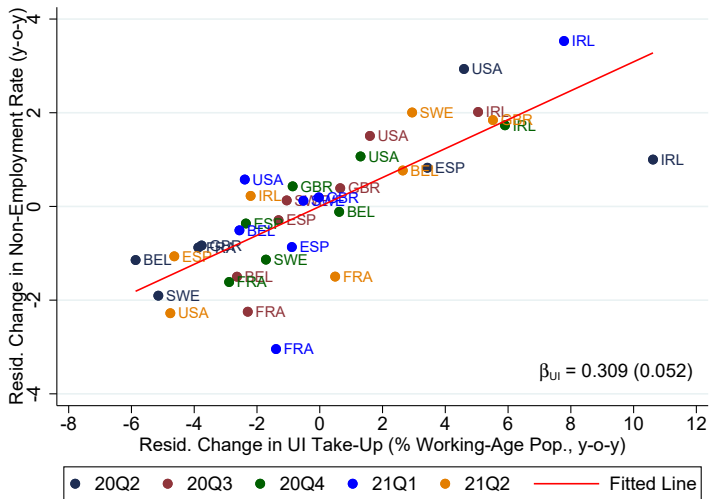
where

- $i$  is country,  $t$  quarter
- First difference transformation, using one-year lag:  $\widehat{x}_{i,t} = x_{i,t} - x_{i,t-4}$
- Controls: quarter fixed effects, UI take-up, and COVID cases
- Standard errors clustered at the country level

# Employment effects of STW



# Employment effects of UI



# Inefficient separations

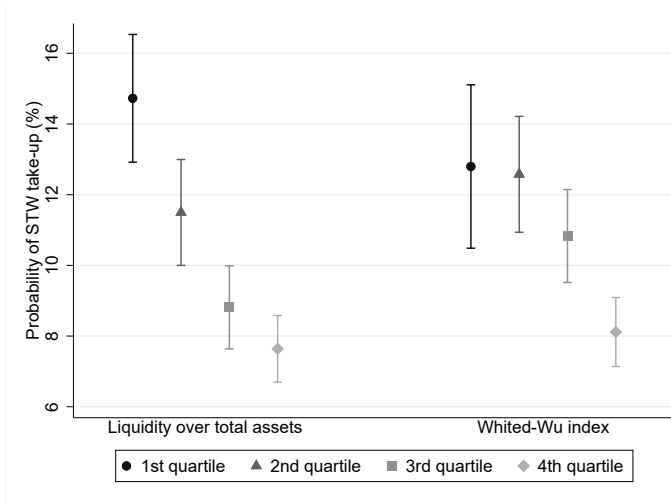
## Q1: Does STW save jobs?

- Robust cross-country evidence from COVID crisis
- Consistent with evidence from Great Recession: Kopp and Siegenthaler [2019]; Cahuc, Kramarz and Nevoux [2021]; Giupponi and Landais [2021]

## Q2: Is this efficient? Would separations be inefficiently high absent STW?

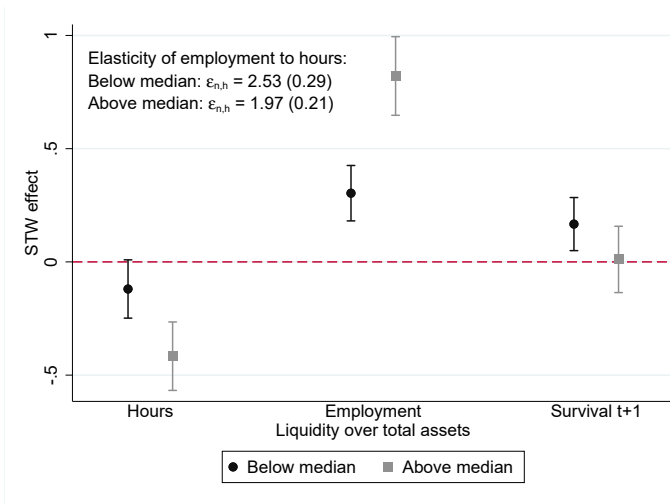
- Matches are valuable due to
  - Cost of dismissal and hiring
  - Specific human capital
  - Long run scarring effects of unemployment
- Why would firms not hoard optimally?
  - Liquidity constraints
  - Bargaining frictions
  - Generous and imperfectly experience-rated UI

# Heterogeneous take-up by liquidity constraints



Source: Giupponi and Landais (2021)

# Heterogeneous treatment effects by liquidity constraints



Source: Giupponi and Landaïs (2021)

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# Search inefficiencies

- Recessions are usually characterized by labor market slack (i.e. **low tightness**): many workers search for jobs and firms post few vacancies
- Low tightness can be **socially inefficient**: if jobs are rationed, search can become rat race (Michaillat [2009], Landais, Michaillat and Saez, [2018a])
- **Social insurance** affects **equilibrium tightness** by affecting workers' search effort and firms' labor demand
- **Welfare consequences** will depend on
  1. Direction and magnitude in which STW/UI affect tightness
  2. How inefficiently tight or slack the labor market is to begin with

# How does tightness respond to STW/UI?

- Build consistent measure of **job-filling probability** across countries computed as ratio of hires to vacancies:  $q(\theta) = h/v$
- Leverage variation in STW usage across countries during COVID crisis
- Correlation between job-filling probability and STW/UI take-up

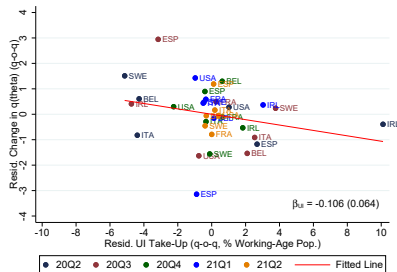
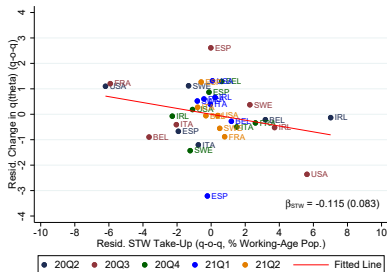
$$\begin{aligned}\widetilde{q(\theta)}_{i,t} &= q(\theta)_{i,t} - q(\theta)_{i,t-1} \\ &= \beta_{STW} \widetilde{STW}_{i,t} + \beta_{UI} \widetilde{UI}_{i,t} + \beta_1 \widetilde{cases}_{i,t} + \beta_2 \widetilde{cases}_{i,t}^2 + \delta_t + \epsilon_{i,t}\end{aligned}$$

where

- $i$  is country,  $t$  quarter
- First difference, using one-quarter lag:  $\widetilde{x}_{i,t} = x_{i,t} - x_{i,t-1}$
- Controls: quarter fixed effects, STW/UI take-up, and COVID cases
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# How does tightness respond to STW/UI?

Vacancy-filling probability  $q(\theta)$  and STW/UI take-up



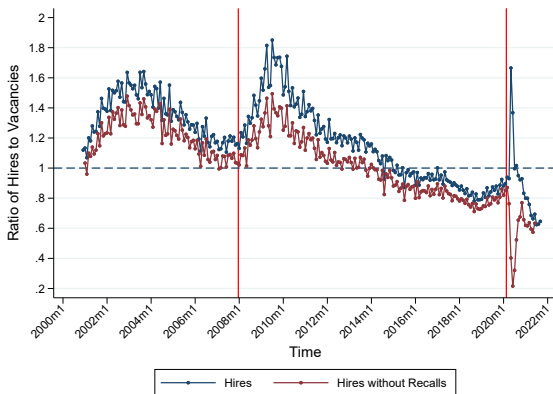
- Both STW and UI usage correlated with decline in the job-filling probability, i.e. with increase in tightness  $\theta = v/(e \cdot u)$
- Stronger correlation with UI in 2020: more effective way of alleviating search externalities?

# Is labor market tightness too low or too high in recessions?

- During recessions, many workers search and few firms post vacancies
- Labor market **tightness typically low** during downturns (see Michailat and Saez [2020] for the US)
- **Pushing tightness up** and increasing job-finding probability of workers is **socially desirable**
- **How about in the current recession?**

# Is labor market tightness too low or too high in recessions?

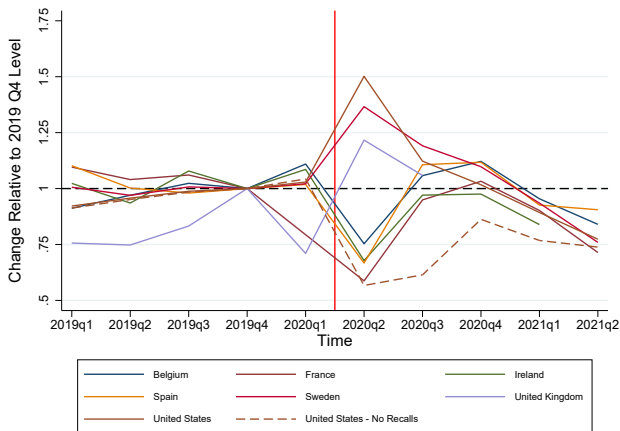
Evolution of  $q(\theta)$  over time in the US



- Average vacancy-filling probability hit historic low in current crisis
- Brief surge in 2020Q2 entirely driven by early recalls from unemployment
- Suggests unique recession, in which **labor market is tight**

# Is labor market tightness too low or too high in recessions?

Evolution of  $q(\theta)$  over time in Europe



- Sustained level of tightness in current recession in the US and Europe
- Need to understand its drivers to guide policy response for the recovery

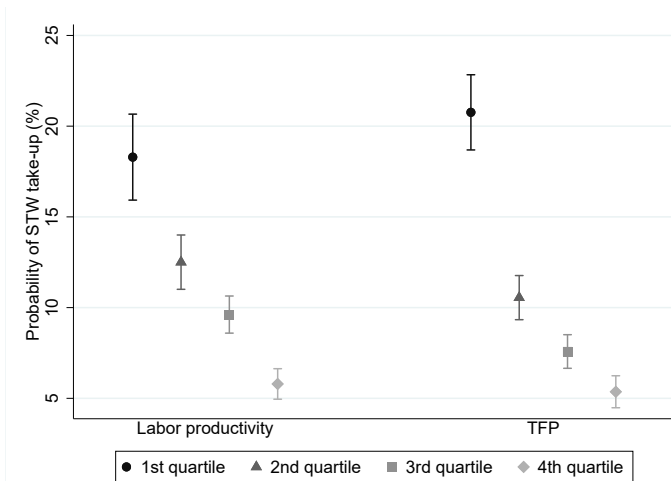
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# Reallocation Inefficiencies

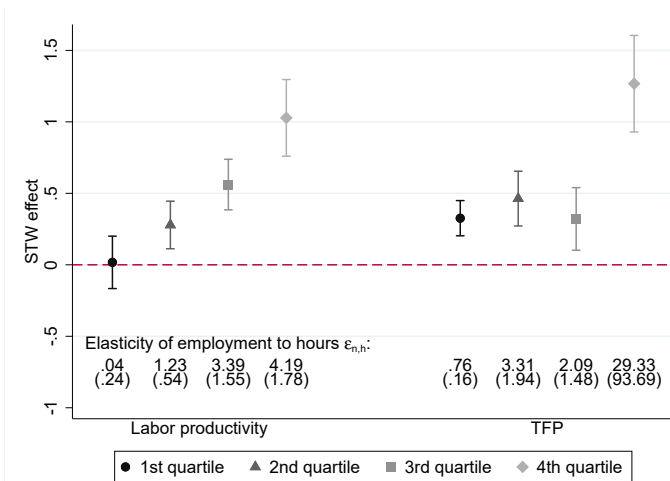
- Recessions usually trigger significant reallocation across firms/sectors, enhancing aggregate efficiency (e.g. see Barrero et al. [2020])
- UI and STW differ in the type of reallocation they hinder
  - **UI** is a brake to **aggregate reallocation**: ↓ aggregate search effort
  - **STW** is a brake to **sectoral/firm reallocation**: prevents workers in firms/sectors hit by productivity shocks to reallocate
- How serious are these reallocation effects in practice?
  - Little knowledge on reallocation effects of UI
  - For STW, evidence from the Great Recession in Italy suggests that – when shock is permanent – negative selection of firms into program can have negative reallocation effects
  - Magnitude of those effects small, but now massive extension of STW (and prolonged usage)

# Heterogeneous take-up by productivity



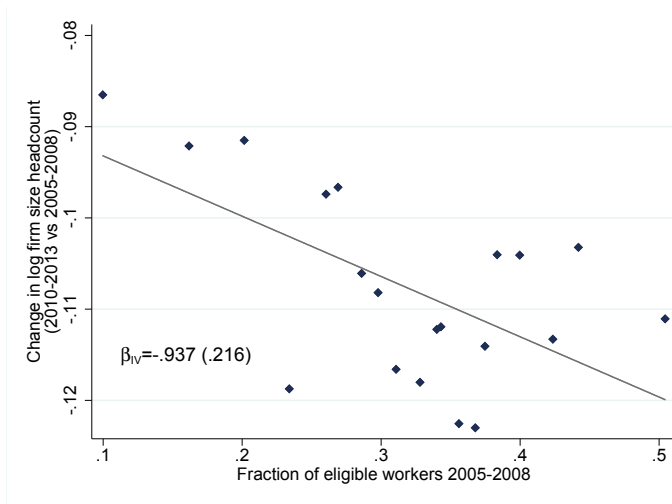
Source: Giupponi and Landaïs (2021)

# Heterogeneous employment effects by productivity



Source: Giupponi and Landais (2021)

# Spillover effects on employment



Source: Giupponi and Landais (2021)

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# Aggregate demand externalities

- Usual argument in favor of generous social insurance during recessions relates to their **fiscal multiplier effects**
- UI and STW transfer money to individuals who tend to have higher than average **MPC** → trigger positive **aggregate demand externalities**
- **How large** are fiscal multiplier effects? And are they larger for STW or UI?
- UI insures **larger shocks** and people less able to smooth consumption
- STW improves employment **expectations**, reducing precautionary savings
- Moderate differences in MPCs unlikely to generate large differences in aggregate demand externalities, because fraction of labor force on UI/STW small relative to employed (McKay and Reis, 2016)

# Further externalities

## **Fairness**

- Fairness appears to be important institution in European labor markets
- STW may be more desirable, since costs of recession less concentrated on small number of workers suffering large losses

## **Health**

- Ability to flexibly reduce hours and keep workers away from workplace can have positive health externalities

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# Conclusion

**Table:** Key Elements of Welfare Trade-Off

	Value of Transfer	Moral Hazard / Fiscal Externality	Other Externalities		
			Layoff	Search	Reallocation
STW	?	+/-	- -	?	-
UI	+ +	+ +	?	- -	?

**Notes:** The symbols reported in the table refer to the magnitude of each feature/estimated effect, as per the following legend: (+ +) Large positive, (+) Positive, (+/-) Both positive and negative, (-) Negative, (- -) Large negative, (?) No evidence.

# Conclusion

- We provide a general framework to think about welfare trade-offs between STW and UI
  - UI has greater insurance value, but STW likely entails lower fiscal externality
  - STW useful tool to prevent inefficient layoffs, with limited reallocation effects
  - UI might be more effective at reducing search externalities
- Strong cyclical programs like STW can be valuable complement of UI to respond to recessions, especially in countries with generous UI and/or strict EPL
- We document that labor market is uniquely tight in current crisis. Research on drivers of high tightness needed to determine optimal path out of the crisis