### What Have We (Not) Learned About Taxes and Transfers in the Last Twenty-Five Years?

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## What to Include and What to Leave Out?

"Optimal tax formulas are either guides to action or nothing at all." Frank Hahn (1973)

### Focus:

- Research since James Mirrlees' Nobel Prize in 1996
- Research that could be guide to action

### Organization:

- 1. Methodological Developments Methods
- 2. Taxes
- 3. Transfers
- 4. Gender Inequality and Public Policy

# Taxes on Top Earners

## **Top-Income Laffer Rate**

Laffer rate in top bracket:

$$\tau^L = \frac{1}{1 + \varepsilon \cdot \alpha}$$

where  $\varepsilon$  is the earnings elasticity and  $\alpha$  is the Pareto parameter

### Sufficient statistics:

- Earnings elasticity  $\varepsilon$  (at the Laffer point)
- Pareto parameter  $\alpha$  (at the Laffer point)
- Key empirical insights:
  - $\alpha$  does not vary with the bracket threshold
  - $\blacktriangleright \alpha$  does vary across economies

### Top-Income Laffer Rate = Optimal Top Tax Rate Saez (2001)

Optimal tax rate in top bracket:

$$\tau^* = \frac{1-g}{1-g+\varepsilon \cdot \alpha}$$

where g is the social marginal welfare weight on top earners

- For standard social welfare functions, g converges to zero at the top  $\Rightarrow \tau^*$  converges to  $\tau^L$  at the top
- No-Distortion-At-The-Top result
  - At the upper bound of income, we have  $\alpha \to \infty$  and  $\tau^L \to 0$
  - The result has zero practical relevance

## **Critical Assumption**

- The preceding results are very general in terms of preferences, the distribution of ability, and the social welfare function
- But they do rely on one strong assumption:
  - No non-tax externalities
- Kleven (2021a) provides a general framework for welfare analysis with externalities/internalities
  - In this case, the optimal top tax rate may be higher or lower than the Laffer rate

### Extension to Non-Tax Externalities

Building on the framework by Kleven (2021a), the optimal top tax rate with non-tax externalities can be written as

$$\tau^* = \frac{1 - g^E \cdot E \cdot \varepsilon \cdot \alpha}{1 + \varepsilon \cdot \alpha}$$

where E is the marginal net externality from top incomes, and  $g^E$  is the welfare weight on those affected by the externalities

### Sufficient statistics:

- Earnings elasticity  $\varepsilon$
- Pareto parameter  $\alpha$
- Marginal externality E
- Welfare weight  $g^E$

### Possible Non-Tax Externalities

- Non-tax externalities from behavioral responses at the top
  - 1. Trickle down (positive *E*)
  - 2. Political influence (negative E)
  - 3. Wage bargaining (negative E)
  - 4. Rat race (negative E)

 We have little conclusive evidence on the magnitudes of these externalities

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- 2. Political influence (negative E)
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- 3. Wage bargaining (negative E)
  - This externality may have  $g^E \approx 0 \Rightarrow$  ignore
- 4. Rat race (negative E)
  - This externality may have  $g^E \approx 0 \Rightarrow$  ignore
- We have little conclusive evidence on the magnitudes of these externalities

- How to interpret ε?
  - Long-run, macro elasticity of real earnings with respect  $1 \tau$
- Quasi-experimental evidence suggests that ε is small, but this evidence captures only contemporaneous, micro elasticities
- What do these estimates miss?
  - 1. Dynamic compensation: Return to effort is dynamic, especially at the top

### 2. Optimization frictions:

Wage-hours contracts cannot be changed without friction

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- $\Rightarrow$  Earnings responses are discrete
- $\Rightarrow$  Earnings changes  $\neq$  effort changes

### How To Make Progress?

Kleven, Kreiner & Larsen (2022)

Quasi-experimental approach to estimating welfare-relevant dynamic  $\varepsilon$  that does not rely on any specific structural model

- 1. Evidence on dynamic compensation among top earners
  - ► Top earnings driven by occupation×firm switches, with no changes in contemporaneous effort ⇒ return to past effort
- 2. New approach to estimating dynamic elasticity using switchers
  - Much larger elasticity than in standard approach Results
- 3. Policy implications
  - Dynamic elasticity implies much smaller top-income Laffer rate Results

# Other Developments in Taxation

## Behavioral Responses to Taxes

### Elasticity of Taxable Income:

Feldstein (1995); Saez, Slemrod & Giertz (2012)

- ETI can be large due to avoidance/evasion responses
- Avoidance/evasion responses reflect policy choices and should be minimized

### Bunching:

Saez (2010); Chetty et al. (2011); Kleven & Waseem (2013); Chetty, Friedman & Saez (2013); Kleven (2016)

- Optimization frictions
- Evasion and avoidance

### Other Dimensions of Behavioral Response:

- Capital and wealth responses (Jakobsen et al. 2020)
- Mobility responses (Kleven et al. 2013, 2014, 2020; Akcigit et al. 2016)

### **Theoretical Developments**

### Revival of Optimal Tax Theory:

Diamond (1998); Saez (2001); Kleven et al. (2009)

► Link to empirical elasticities and data on income distributions ⇒ empirical statements about optimal tax policy

NDPF

### Sufficient Statistics Approach:

Chetty (2009); Kleven (2021a)

Envelope theorem logic 

express welfare effects and optimal policy in terms of reduced-form elasticities

### Tax Evasion and Enforcement

New empirical literature based on administrative tax/audit data and RCTs with tax agencies

 Third-Party Information Reporting: Kleven et al. (2011); Kleven et al. (2016)

Third-party information is critical for tax compliance Evidence

- Public Finance and Development: Kleven & Waseem (2013); Besley & Persson (2013); Pomeranz (2015); Best et al. (2015); Kleven et al. (2016); Jensen (2022)
  - Focus on enforcement and administration
  - Focus on investments in fiscal capacity
  - Focus on the choice of policy instruments

# Transfers to Bottom Earners



### Redistribution in Extensive Margin Model Saez (2002)

Optimal participation tax rate on workers:

$$\frac{\tau(w)}{1-\tau(w)} = \frac{1-g(w,1)}{\eta(w)}$$

where  $\eta(w)$  is the participation elasticity at skill w, and g(w, 1) is the welfare weight on participants at skill w

- Optimal transfers to non-workers pinned down by E[g] = 1
- Sufficient statistics:
  - Participation elasticities  $\eta(.)$
  - Welfare weights g(.)
- Arguments for EITC and welfare benefits rely on welfare weights, not on participation elasticities

## **Estimating Participation Elasticities**

- Model assumes elasticities are independent of whether incentive comes from taxes or transfers → "a dollar is a dollar"
- Evidence on responses to tax and welfare reform
  - My reading: Responses to welfare benefits > responses to taxes
  - EITC and welfare reform in the US
- Why might welfare responses be larger?
  - Differences in administration and design
  - Differences in information and salience
  - Tax reforms about nonlinear schedule, welfare reform often about ordeals and enforcement

### Earned Income Tax Credit

- Early literature estimates large extensive margin responses for single mothers (Eissa & Liebman 1996; Meyer & Rosenbaum 2001)
- A few RCTs with EITC-like policies
  - Card & Hyslop (2005) study earnings subsidy in Canada
- Reappraisal of quasi-experimental literature on EITC and welfare reform (Kleven 2021b)
  - Behavioral responses concentrated in mid-late 1990s, driven mainly by welfare reform Evidence
  - No consensus

# Gender Inequality and Public Policy



### Gender Inequality $\approx$ Child Penalties

 Gender inequality is driven primarily by child penalties (Kleven, Landais & Søgaard 2019; Kleven et al. 2019; Kleven 2022)

Burgeoning literature on the mechanisms (not) driving child penalties

- Biology (Kleven, Landais & Søgaard 2021)
- Comparative advantage (Kleven, Landais & Søgaard 2021)
- Job flexibility (Goldin 2014; Goldin & Katz 2016)
- Gender norms (Bertrand 2020; Kleven 2022)
- Public policy (Kleven et al. 2021; Kleven 2021c)
- Are public policies important for child penalties?
  - Overall, their explanatory power is small



## Impact of Public Policies on Child Penalties

### Parental Leave Policy:

Dahl et al. (2016); Kleven et al. (2021)

Consistent finding: Zero long-run impact

### Child Care Policy:

Baker, Gruber & Milligan (2008); Havnes & Mogstad (2011); Kleven et al. (2021)

- Mixed findings
- But even under optimistic interpretations of possible effect sizes, child care policy is a small part of the story

### • Welfare Benefits:

Kleven (2021c)

Potentially important for single mothers

#### Conclusion

### Child Penalties in the US vs Denmark

Employment Penalties are Much Larger in the US



### Child Penalties in the US vs Denmark

Employment Penalties on Single Mothers are Much Smaller in the US



### US-Denmark Child Penalty Asymmetry

- Why are child penalties on married vs single women strongly asymmetric between the US and Denmark?
- Interpretation: Effect of welfare benefit generosity
  - Married mothers can specialize
  - Single mothers can't specialize system pays for their children
  - An income effect of welfare benefits
- Methodological idea
  - ► Action in female labor supply happens mostly around child birth → use child penalties to uncover policy impacts (similar to switcher idea for top earners)

### Child Penalties vs Welfare Generosity Within US

Using State Variation in Maximum Monthly AFDC/TANF Benefits



# Conclusion

### Good News & Bad News

Huge progress since James Mirrlees' Nobel Prize in 1996

- See tribute to Mirrlees by Dixit & Besley (1997)
- Theoretical work has provided clarity and empirical content
  - We now know what we need to know
- Empirical work has provided lots of compelling evidence and insights
  - But what we estimate is not (necessarily) what we need to know
- Little convergence on major policy questions
  - Enough model uncertainty for people to fall back on their priors

# Literature

## Literature

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# Appendix



Source: Currie, Kleven & Zwiers (2020)



### **Quasi-Experimental Methods**

Textual Analysis of Papers in Applied Microeconomics



NBER Working Papers --- Top-5 Journals

NBER Working Papers Source: Currie, Kleven & Zwiers (2020)

--+ -- Top-5 Journals



### Earnings Impact of 2009 Tax Reform in Denmark Standard Approach



Source: Kleven, Kreiner & Larsen (2022)

Occupation×Firm Movers: 2008-10





Occupation×Firm Movers vs Stayers: 2008-10





Occupation×Firm Movers: 2008-10 vs 2006-08



Occupation×Firm Movers vs Stayers: 2008-10 vs 2006-08





Occupation×Firm Movers vs Stayers: 2010-12 vs 2006-08





## **Top-Income Laffer Rate**

	Denmark	United States
Actual Top MTR	66%	46%
Pareto Parameter	3.3	1.5
Standard Earnings Elasticity	0.1	0.1
Dynamic Earnings Elasticity	0.4	0.4
Standard Laffer Rate	75%	87%
Dynamic Laffer Rate	43%	62%



### Evasion Rate vs Fraction of Income Self-Reported

Kleven, Knudsen, Kreiner, Pedersen & Saez (2011)



### Average Tax Rates on Single Women Over Time Kleven (2021b)































