

# Lost jobs, new jobs and optimal tax-transfers reforms

Ugo Colombino, Nizamul Islam

3rd Banca d'Italia Workshop on Microsimulation modelling

Discussion: Antonio Coran

4 July 2025

# Optimal labor income taxation

- ▶ Conceptually, optimal labor income taxation problem ([Mirrlees \(1971\)](#), [Saez \(2001\)](#), [Saez \(2002\)](#)) is government maximizes SWF subject to:
  - ▶ Government budget constraint
  - ▶ Individual consumption-leisure optimal trade-off
- ▶ With respect to such a problem from the traditional literature:
  - ▶ Microsimulation tools are used
  - ▶ Additional constraint in the model: labor market equilibrium ("reduced form" labor demand function with constant elasticity)

## This paper

- ▶ This paper finds that the optimal tax and transfer rule is close to an affine function of income (demogrant + linear tax).
  - ▶ No negative marginal tax rates at the bottom (no EITC)
  - ▶ Limited tax progressivity
  - ▶ No very high marginal tax rate at the top

## This paper

- ▶ This paper finds that the optimal tax and transfer rule is close to an affine function of income (demogrant + linear tax).
  - ▶ No negative marginal tax rates at the bottom (no EITC)
  - ▶ Limited tax progressivity
  - ▶ No very high marginal tax rate at the top
- ▶ Other scenarios (jobless, polarized) see a similar optimal schedule

## This paper

- ▶ This paper finds that the optimal tax and transfer rule is close to an affine function of income (demogrant + linear tax).
  - ▶ No negative marginal tax rates at the bottom (no EITC)
  - ▶ Limited tax progressivity
  - ▶ No very high marginal tax rate at the top
- ▶ Other scenarios (jobless, polarized) see a similar optimal schedule
- ▶ In this discussion I will focus on:
  1. What elements of the model are driving the results?
  2. How do these conclusions compare to the traditional optimal tax literature? What could be reasons for divergence from the literature?

## EITC vs NIT

- ▶ This paper finds NIT optimal, no negative marginal tax rates (no EITC). What is driving this result?

## EITC vs NIT

- ▶ This paper finds NIT optimal, no negative marginal tax rates (no EITC). What is driving this result?
- ▶ It seems that flexible wages (finite elasticity labor demand) key:
  - ▶ Authors show if wages not flexible in this model EITC better than NIT
  - ▶ [Aaberge and Colombino \(2013\)](#) with no labor demand find EITC-like policy optimal
- ▶ Literature on the topic?

## EITC vs NIT

- ▶ Historical literature:
  - ▶ [Saez \(2002\)](#) model with ext margin labor supply (but no labor demand/involuntary unemployment), finds that EITC can be optimal if extensive margin labor supply responses more significant than intensive margin ones
  - ▶ Historically empirical literature struggles to find intensive margin responses, finds large extensive margin responses. Therefore support for EITC



# EITC vs NIT

- ▶ Historical literature:
  - ▶ [Saez \(2002\)](#) model with ext margin labor supply (but no labor demand/involuntary unemployment), finds that EITC can be optimal if extensive margin labor supply responses more significant than intensive margin ones
  - ▶ Historically empirical literature struggles to find intensive margin responses, finds large extensive margin responses. Therefore support for EITC
- ▶ More recently, jury seems still out:
  - ▶ Empirical papers that question the relative importance of extensive and intensive margin responses ([Chetty, Friedman, and Saez \(2013\)](#), [Kleven \(2024\)](#), [Kleven, Kreiner, Larsen, and Sørgaard \(2024\)](#)). If so, even within [Saez \(2002\)](#) framework NIT could be optimal
  - ▶ Papers that question [Saez \(2002\)](#) framework by introducing labor demand and involuntary unemployment: [Kroft, Kucko, Lehmann, and Schmieder \(2020\)](#), [Ferey \(2022\)](#), [Hummel \(2025\)](#). Mixed results with respect to the NIT vs EITC debate
- ▶ This paper fits the more recent literature

# Progressivity

- ▶ Saez (2001) finds more progressivity in contrast to earlier numerical simulation of the model in Mirrlees (1971)
- ▶ Mankiw, Weinzierl, and Yagan (2009) argue the importance for the Saez (2001) result of the shape of the earnings distribution
  - ▶ Does the shape of the earnings distribution matter? Different scenarios, similar results (some difference for Luxembourg but MTRs do not rise much)
  - ▶ Surveys struggle to estimate right tail. Does this matter? Thin tails reduce the benefit of increasing marginal tax rates

# Progressivity

- ▶ SWF and U:
  - ▶ With  $k$  large enough can span all SWFs until Rawlsian. How much is  $k = 0.5$  (max in the paper)?
  - ▶ Utility function. Does MU become quickly flat ? Does the result change with a different functional form?

# Progressivity

- ▶ SWF and U:
  - ▶ With  $k$  large enough can span all SWFs until Rawlsian. How much is  $k = 0.5$  (max in the paper)?
  - ▶ Utility function. Does MU become quickly flat ? Does the result change with a different functional form?
- ▶ Are labor supply elasticities increasing in income? Does that drive the result?

## Top tax rate

	US	Denmark	IT
Pareto parameter	1.5	3.3	?
Standard $e$	0.2	0.2	0.2
Dynamic $e$	0.5	0.5	0.5
Top rate Rawlsian (standard $e$ )	0.77	0.60	?
Top rate Rawlsian (dynamic $e$ )	0.57	0.38	?
Top rate this paper			$\approx 0.45$

Adapted from [Kleven, Kreiner, Larsen, and Sørgaard \(2024\)](#)

- Does not look very different conditional on SWF: if same SWF (Rawlsian), top tax rate higher in this paper (or viceversa others would be lower with no Rawlsian)
- Other potential differences include: implied elasticity at the top, estimated thickness right tail (does it matter in this model, potential issue with survey data) ?

## Concluding remarks

- ▶ Congratulations on an interesting paper about an important topic!!!
- ▶ It argues that moving to a system with a NIT + a linear tax could boost social welfare by increasing output and reducing poverty, despite some additional inequality
- ▶ It would be interesting to unpack a bit more what is behind the limited tax progressivity in the results

## Literature I

Aaberge, R., and U. Colombino (2013): “Using a microeconomic model of household labour supply to design optimal income taxes,” *The Scandinavian Journal of Economics*, 115(2), 449–475.

Chetty, R., J. N. Friedman, and E. Saez (2013): “Using Differences in Knowledge across Neighborhoods to Uncover the Impacts of the EITC on Earnings,” *American Economic Review*, 103(7), 2683–2721.

Ferey, A. (2022): “Redistribution and unemployment insurance,” .

Hummel, A. J. (2025): “Unemployment and tax design,” *Journal of Public Economics*, 246, 105359.

Kleven, H. (2024): “The EITC and the extensive margin: A reappraisal,” *Journal of Public Economics*, 236, 105135.

Kleven, H., C. Kreiner, K. Larsen, and J. Søgaaard (2024): “Micro vs Macro Labor Supply Elasticities: The Role of Dynamic Returns to Effort,” .

## Literature II

- Kroft, K., K. Kucko, E. Lehmann, and J. Schmieder (2020): "Optimal income taxation with unemployment and wage responses: A sufficient statistics approach," *American Economic Journal: Economic Policy*, 12(1), 254–292.
- Mankiw, N. G., M. Weinzierl, and D. Yagan (2009): "Optimal taxation in theory and practice," *Journal of Economic Perspectives*, 23(4), 147–174.
- Mirrlees, J. A. (1971): "An exploration in the theory of optimum income taxation," *The review of economic studies*, 38(2), 175–208.
- Saez, E. (2001): "Using elasticities to derive optimal income tax rates," *The review of economic studies*, 68(1), 205–229.
- (2002): "Optimal income transfer programs: intensive versus extensive labor supply responses," *The Quarterly Journal of Economics*, 117(3), 1039–1073.