Fairness and openess: friend or foe in optimal income taxation?

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1. Is 75% optimal in an open economy?

- François Hollande has implemented for two years
  - a new bracket for top incomes beyond 1 Million of €
  - In fact more than 75% since on top of that, there is another income tax for financing social security, CSG, about 8% on labor incomes
  - At least 83% for about 3000 households.
- Escape by migrating
  - London, Bruxelles, Geneve
- Focus here on labor income

2. Important difference with the mobility of capital

- Financial capital can move from one place to the other to small expenses
- In first approximation, assumption of perfect mobility
    - Probably not true even if useful
- Imperfect mobilility of labor, High Migration costs (Borjas)
- Labor as been described as immobile in optimal income taxation. Is it a good first approximation for this century ?

3. Low Mobility but increasing

- Fall of transportation costs all along the second half of the 20st century

- ▶ ▶ Huge fall of communication costs (Internet,Skype)
    - ▶ Emergence of a lingua franca at the global scale: "globish".
    - ▶ Free movement of labor within the EU

Specific trade-off

4.

- ► Mobility for tax reasons is **specific:** inducing losses of fiscal revenues & productive capacities
    - ► Different from the brain drain.
    - ► Different from tax evasion.
    - ► Specific trade-off between the redistributive aim and maintaining national productive capacities.
- ► Does imperfect mobility of top income earners changes the predictions of the Mirrlees model of income tax ?

5. To optimize on whom?

- The people who stay (*resident criterion*)
  - Immigrants do not matter
- The citizens, whatever the country they live (*citizen criterion*)
  - Citizen abroad matter for the social welfare, if they migrate, they are more happy abroad that they would have been had they stay,
  - But they don't finance public goods and income support for the poor any more.
- The citizens who stay.(*national criterion*)
  - The social decision maker aims at maintaining all citizens at home.

6. Adapting the model of optimal income tax to an open economy

- Introduction of participation constraints
  - The indirect utility generated by the tax scheme must be as least as great to the indirect utility abroad $=$ a reserve utility
  - Not new in contract theory but in optimal income taxation

- Possible pertubation of the incentive constraints.
  - "Countervailing incentives" (Jullien 2000)
  - Under some conditions (Guesnerie-Seade 1982), the incentive constraints are downward looking
  - Here, low types may also want to imite the high types.

7. Key Questions

- ► An empirical question
  - ► What do we know about the tax mobility of top income earners ?

- ► Theoretical questions
  - ► By how much should we reduce the top marginal tax rate?
  - ► The impact of the threat of tax migration on the whole tax schedule?

8. Outline

- **Estimation & use of migration elasticities**
  - Mike Brewer, Emmanuel Saez and Andrew Shephard "Means-testing and Tax Rates on Earnings" *Mirrlees Review (2010)*
  - Liebig, T., P. A. Puhani, and A. Sousa-Poza, "Taxation and Internal Migration: Evidence from the Swiss Census using Community-Level Variation in Income Tax Rates," *Journal of Regional Science* 2007 .
  - H.K Kleven, C Landais & Emmanuel Saez, "Taxation and International Migration of Superstars: Evidence from the European Football Market" *AER 2013*
  - H.K Kleven, C Landais, Emmanuel Saez & E. Schultz, Taxation and International Migration of Top Earners: Evidence form the Foreigner Tax Scheme in Denmark, *QJE 2014*
  - C. Young and C. Varner, "Millionaire Migration and State Taxation of Top Incomes: Evidence from a Natural Experiment," National Tax Journal, (2011)

8. Outline

- **Migration elasticity is not the good sufficient statistics**:
  E. Lehmann, L. Simula, and A.Trannoy: "Tax me if you can!
  Optimal Nonlinear Income Tax Between Competing
  Governments", *QJE 2014*

Part 1: Estimation & use of migration elasticities

- Reduced form model
    - Emmanuel Saez RES 2001: To base optimal tax formula on parameters (sufficient statistics approach) that we can estimate thanks to econometrics
    - $P(c; y)$: proportion of the population who stays in the country of origin and receives disposable income c for gross income y
    - Out-migration Elasticity :

$$\eta_m = \frac{\partial P}{\partial c} \frac{c}{P(c; y)}$$

    - When this elasticity is estimated, it is endogenous to the tax schedule

Part 1: Model à la Ramsey

- No adjustment for labor supply at the intensive margin (Mirrlees JPUBE 1982, Brewer, Saez and Shepard 2011 web appendix)
- Resident criterion
    - Optimal tax formula about the average tax rate $T(y)$:

    $$\frac{T(y)}{y - T(y)} = \frac{1}{\eta_m}(1 - V(y))$$

    - $V(y)$: the value the government places on increasing income of those with an income y

Part 1 Marginal tax rates at the top with intensive margin

- e elasticity of the labor supply to the intensive margin
- The optimal income tax ends up with constant marginal tax rate
- No income effect
- Ralwsian case (peak of the Laffer curve)
  - Formula for the marginal tax rate at the top τ :

  $$\tau = \frac{1}{1 + ae + \eta_m}$$

  - a: Pareto coefficient

Switzerland

- The "*only country*" where regions (cantons) are free to design regional income tax as they want

- "*For example, in 2000, for a single who earns CHF 100,000 per year, the combined cantonal and local tax burden across Switzerland in communities varied*

from CHF 8,954 in Freienbach (Canton Schwyz) to CHF 22, 784 in La–Chaux–de–Fonds (Canton Neuchatel)".

- "*In 2000, for the top income levels, total marginal rates (including all government levels) for an annual income of CHF 500,000 ranged*

from about 21 percent Freienbach, Canton Schwyz) to more than 46 percent (in Lauterbrunn, Canton Bern)".

Empirical estimations

- A upper bound for the tax-migration elasticity at the international level (small country,very good transport infrastructures)
- Causal effect? Rich set of control variables but no instrumentation
- Significant impact of tax deviations & differences of tax increases between 1995 & 2000 **only** for young tertiary educated people
- An increase of 1 point of the total tax rate entails an emigration of 7 Swiss college graduates (21-35) over 1000
- We deduce (average net-of-tax rate is about 85%)

$$\eta_m \simeq 0,6$$

Tax on millionaires in New Jersey

- A trend becoming known as the "millionaire tax movement" to compensate at the state level the decrease in progressivity at the federal level

- A raise of the marginal rate by 2.6 percentage points on income above $500,000 in NJ (from 6% to 8%).

- Millionaires can move to NY, Connecticut, and Pennsylvania without leaving the Metro Area of NY

- An increase of 1 point of the total tax rate entails an outflow of 1.8 millionaires over 1000

- We deduce (average net-of-tax rate is about 74%)

$$\eta_m \simeq 0,13$$

The European market of top footballers

- Exploitation of "quasi-experiments"
- The 1995 Bosman Rule opened the job market in EU
- Discriminatory tax regimes in favour of foreigners
  - In Spain the "David Beckam law": a flat tax of 24% for the foreigner footbal players instead of 45%
  - Similar tax regimes in Danemark
- An estimate of around 1 for the elasticity of foreign players in average and 1.6 for top players
- For the out-migration of domestic players

$$\eta_m \simeq 0.15$$

Estimation of out-migration elasticity with the Danish tax scheme

- How many high-skilled emigrant can you attract by a discriminatory tax schedule?
- Natural experiment in Denmark
- In 1991, a preferential tax scheme targeted to highly paid migrants (over €103,000) for three years
- Average tax pay of 30% instead of 55%
- Diff-in-diff estimators with control group foreigners who are paid at 80%-90% of the eligibility threshold
- The tax scheme doubled the number of highly-paid foreigners wrt to slightly less paid ineligible foreigners
- It corresponds to an estimate of immigration tax elas of about 1.5-2%.

What optimal top tax rates in the Rawlsien case?

- In the "Ramsey " model
- The top average tax rate with the Swiss elasticity:

$$\frac{T(y)}{y} = \frac{1}{1 + \eta_m} \simeq 59\%$$

- In the more sophisticated model

The top marginal tax rate

$$\tau = \frac{1}{1 + ae + \eta_m} = 45\%$$

with $a = 2; e = 0,3$ (Lehman, Marical, Rioux 2011)

- Can we neglect tax migration elasticity? Setting it at 0, we get $\tau = \frac{1}{1+ae} = 63\%$

Strengths and Weaknesses

- It allows to deduce predictions with a small theoretical apparatus
- To find plausible values
- Assumption: the impact of the threat of migration is limited to the last bracket
- Because countervaling incentives, it might be untrue.
- If you lower the tax rate for top incomes, you should also lower the tax rate for the incomes just below because IC
- Global impact on the schedule and not local