

# Taxation of top incomes in the presence of income shifting

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# Introduction

- Would lowering the top tax rate increase tax revenue?
  - Question often raised in policy discussion
  - In general, distortive effects of income taxes are fairly small cf. recent ETI-literature
    - ETI = elasticity of taxable income
  - But the question is relevant for top taxes
    - Marginal tax rates are high
    - Tax avoidance opportunities are prevalent
- Welfare implications

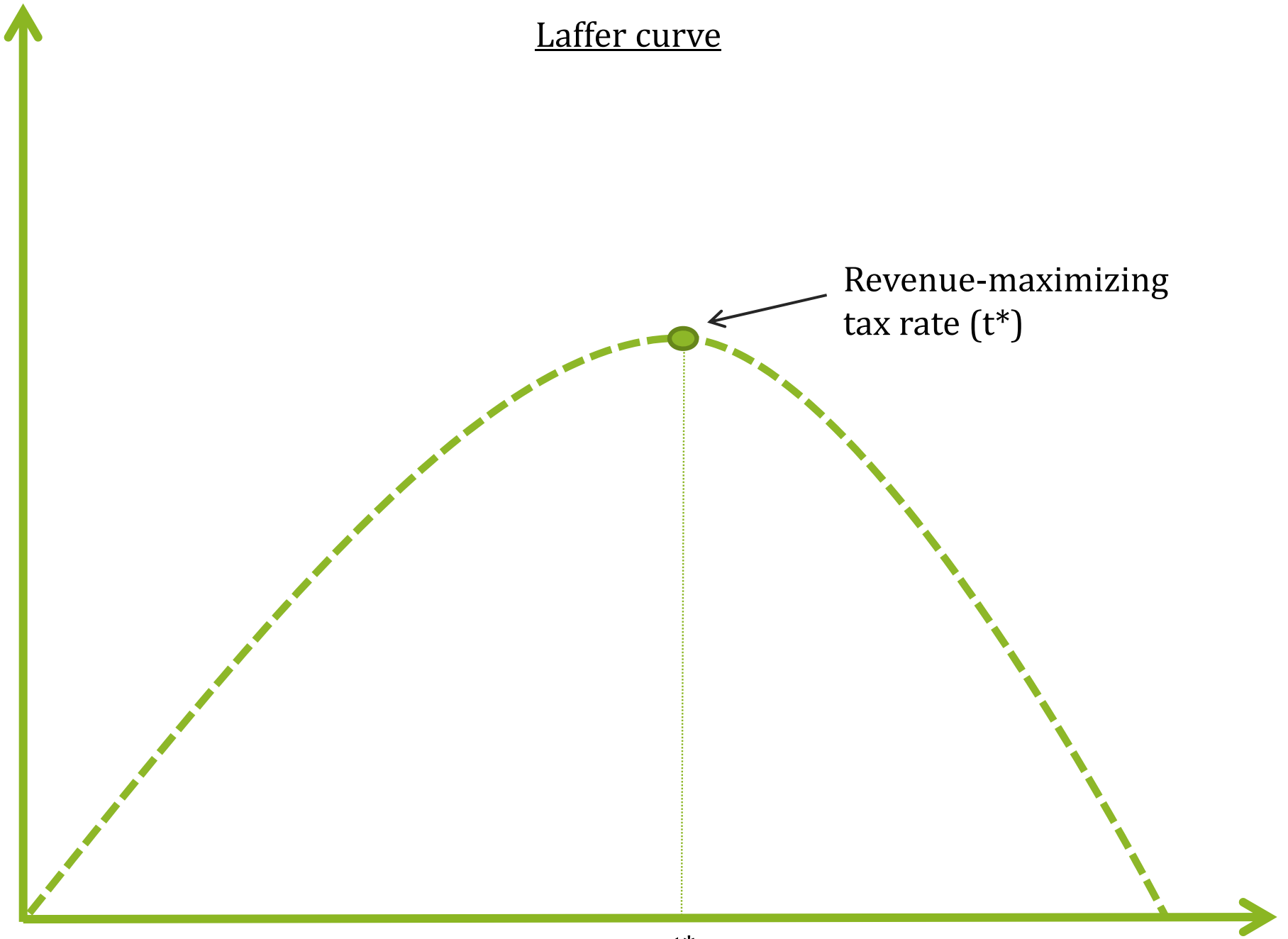
Tax  
revenue

Laffer curve

Revenue-maximizing  
tax rate ( $t^*$ )

$t^*$

Tax rate



## This paper

- We provide a systematic discussion of assumptions behind top tax rate calculations
  - Calculating the current effective top marginal tax rate
  - Accounting for income shifting
- We apply top tax rate formulas and elasticity estimates from recent research to the Finnish case

## Theoretical background: revenue-maximizing top tax rate (Piketty et al. 2014)

- Consider the taxation of incomes ( $z$ ) above a certain limit ( $\bar{z}$ )
- The revenue-maximizing tax rate depends on
  - how taxable income reacts to taxes (ETI):  $e = \frac{1-t}{z} \frac{dz}{d(1-t)}$
  - shape of the income distribution:  $a = \frac{z}{z-\bar{z}}$  is the Pareto-parameter (thickness of the top tail)
- The revenue maximizing top tax rate is given by

$$t^{max} = \frac{1}{1+a \cdot e}$$

## Theoretical background: revenue-maximizing top tax rate with income shifting (Piketty et al. 2014)

- If part ( $s$ ) of the response to high taxes is due to income-shifting, some revenue is recouped via the alternative tax base (with tax rate  $t_2$ )
  - ETI is not sufficient to measure revenue or welfare loss
- The revenue-maximizing tax rate is now higher (for fixed  $t_2$ ):

$$t^{max} = \frac{1 + t_2 \cdot a \cdot s \cdot e}{1 + a \cdot e}$$

# Laffer curve calculations: choice of parameter values

1. Current effective marginal tax rate
  - Consumption taxes and social security contributions are part of the tax wedge on labour supply
2. Tax rate of the alternative tax base
3. Elasticity of taxable income
4. Shape of the income distribution

→ The presence and nature of income shifting has to be considered in steps 2, 3 and 4

# 1. Current effective marginal tax rate

- Consumption taxes
  - We include consumption taxes in EMTR
- Social security contributions (SSC)
  - Employer and employee SSC levied on wage income
  - In principle it should not matter which side of the market nominally pays the tax
  - If SSC confer direct personal benefits in the future, their effects may differ from general taxation: pension contributions
  - We include only employee social security contributions in EMTR
  - This choice is consistent with the ETI estimates we use
- Top earned income tax rate with employee social security contributions is 57 % and with commodity taxes **65 %**



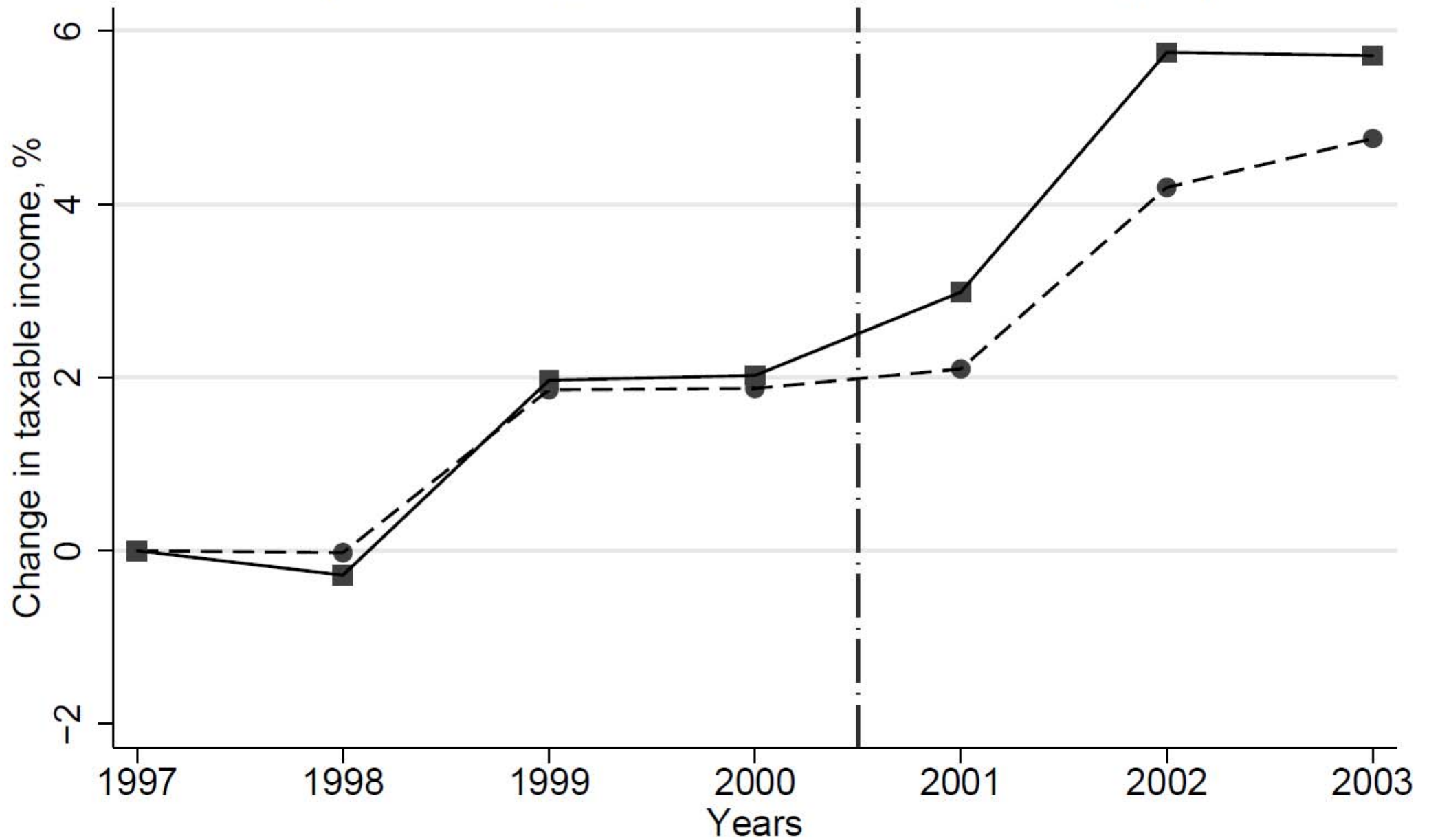
## 2. Tax rate on the alternative tax base: dividends

- General capital income tax rate 30 % or 34 % - much lower than tax rate on top earnings
- The most relevant form of income-shifting in Finland: dividends from a privately held corporation (Harju & Matikka 2016)
- Taking into account (i) details of dividend tax rules; (ii) taxation of company profits and (iii) commodity taxation, the relevant EMTR is 40 %

### 3. Elasticity of taxable income

- The ETI literature estimates the causal effect of changes in tax rates on taxable income
  - takes into account all margins at which incomes react to taxation: hours worked, effort, avoidance, evasion
  - Exogenous variation in tax rates needed to estimate causal effects
- Matikka (2018) has estimated the ETI for Finland
  - Variation in income taxes across municipalities: similar individuals face different tax range changes
  - Average ETI in Finland is 0.2
  - Corresponds to ETI estimates in other comparable countries
- Another key parameter: share of income shifting in earnings response
  - could be high for top income earners, but evidence is scarce (e.g. Harju & Matikka 2016, Kreiner et al. 2014)

Proportional changes in taxable income for different groups



● Municipal tax rate increase    ■ No change or tax rate reduction

Source: Matikka (2018)

## 4. Shape of the income distribution

- Which income distribution to look at?
  - Ideally should consider distribution of earnings prior to shifting response – not observable
  - Distribution of earnings:  $a = 3$
  - Distribution of earnings + capital income:  $a = 2.25$

# Results

elasticity of taxable income, ETI (e)	share of income-shifting in ETI (s)	pareto-parameter (a)	top tax rate on dividends (incl. commodity tax) ( $t_2$ )	revenue-maximizing top tax rate ( $t^{max}$ )
0.2	0	3	-	0.63
0.1	0.5	2.25	0.40	0.85
0.2	0.5	2.25	0.40	0.75
0.3	0.5	2.25	0.40	0.68
0.5	0.5	2.25	0.40	0.58
0.1	0.7	2.25	0.40	0.87
0.2	0.7	2.25	0.40	0.78
0.3	0.7	2.25	0.40	0.71
0.5	0.7	2.25	0.40	0.62

## Discussion

- The current top tax rate exceeds the revenue-maximizing rate if...
  - $ETI > 0.35$  (if the share of income-shifting in ETI is 0.5)
  - $ETI > 0.42$  (if the share of income-shifting in ETI is 0.7)
- Most ETI-estimates in the relevant literature are below these numbers
- Accounting for income shifting is crucial for the results
- Considerable uncertainty in the results

# Discussion

- Recall welfare implications
  - We are likely to be on the left of the peak of the Laffer-curve – this is good news
  - Where exactly we should be depends on social preferences
- Income-shifting provides an argument for moving the top earned income and capital income tax rates closer together

## Discussion

- The analysis has pointed out a number of issues where further research would be welcome
  - Extent and determinants of income-shifting behaviour
  - More evidence on ETI for different population groups
  - ETI with respect to different types of tax instruments: labour income taxes vs. social security contributions vs. commodity taxes
  - The effect of taxation on migration decisions



# References

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Kreiner, C. T., Leth-Petersen, S. and Skov, P. E. (2016). Tax reforms and intertemporal shifting of wage income: Evidence from Danish monthly payroll records. *American Economic Journal: Economic Policy*, 8, 233-257.

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Piketty, T., Saez, E. and Stancheva, S. (2014). Optimal taxation of top labor incomes: A tale of three elasticities. *American Economic Journal: Economic Policy*, 6(1), 230–271.