

# From Empirical Research to Policy: Two Examples from Public Finance

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EEA lunch session on  
The Policy Impacts of Empirical Research

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## Two examples from Public Finance

Motivation: “I realized that it is not easy to find examples of empirical research with real policy implications.” Andrea

### **Example #1: Why difficult to find examples?**

Few studies w. direct (visible) policy impact because policy impact is **not** aligned with academic impact

### **Example #2: Significant impact on policy?**

Many studies w. indirect (invisible) policy impact that have important implications for society

# #1 The Danish tax compliance experiment

Tax audit experiment carried out together with the Danish Tax Agency including more than 40,000 randomly selected individuals

Kleven et al.: "Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark." *Econometrica*, 2011

Kreiner: "What makes tax payers comply? Lessons from a tax audit experiment in Denmark." *European Economy Papers* 463. European Commission, 2012.



## Example of result

	Share of total net income (%)	Evasion rate(%)
<b>Total net income</b>	<b>100</b>	<b>2,3</b>
<b>Personal income</b>	<b>102</b>	<b>1,1</b>
...		
<b>Stock income</b>	<b>3</b>	<b>5,0</b>
<b>Self-employment income</b>	<b>5</b>	<b>15,7</b>
<b>Third-party reported income</b>	<b>95</b>	<b>0,3</b>
<b>Self-reported income</b>	<b>5</b>	<b>41,5</b>

# Impact

## Policy impact

Introduction of full 3rd-party reporting on stock income in Denmark (buying/selling prices + dividends) + ...

## Academic impact

Q: Why is overall tax evasion so low?

Is it because taxpayers are **unwilling or unable** to cheat?

A: They are **unable** to cheat because of 3rd-party information

The classic theory of tax evasion (Allingham-Sandmo, JPubE, 1972) extended with 3rd-party information is consistent with the evidence

⇒ **Policy impact ≠ Academic impact**

## #2 The Elasticity of Taxable Income (ETI)

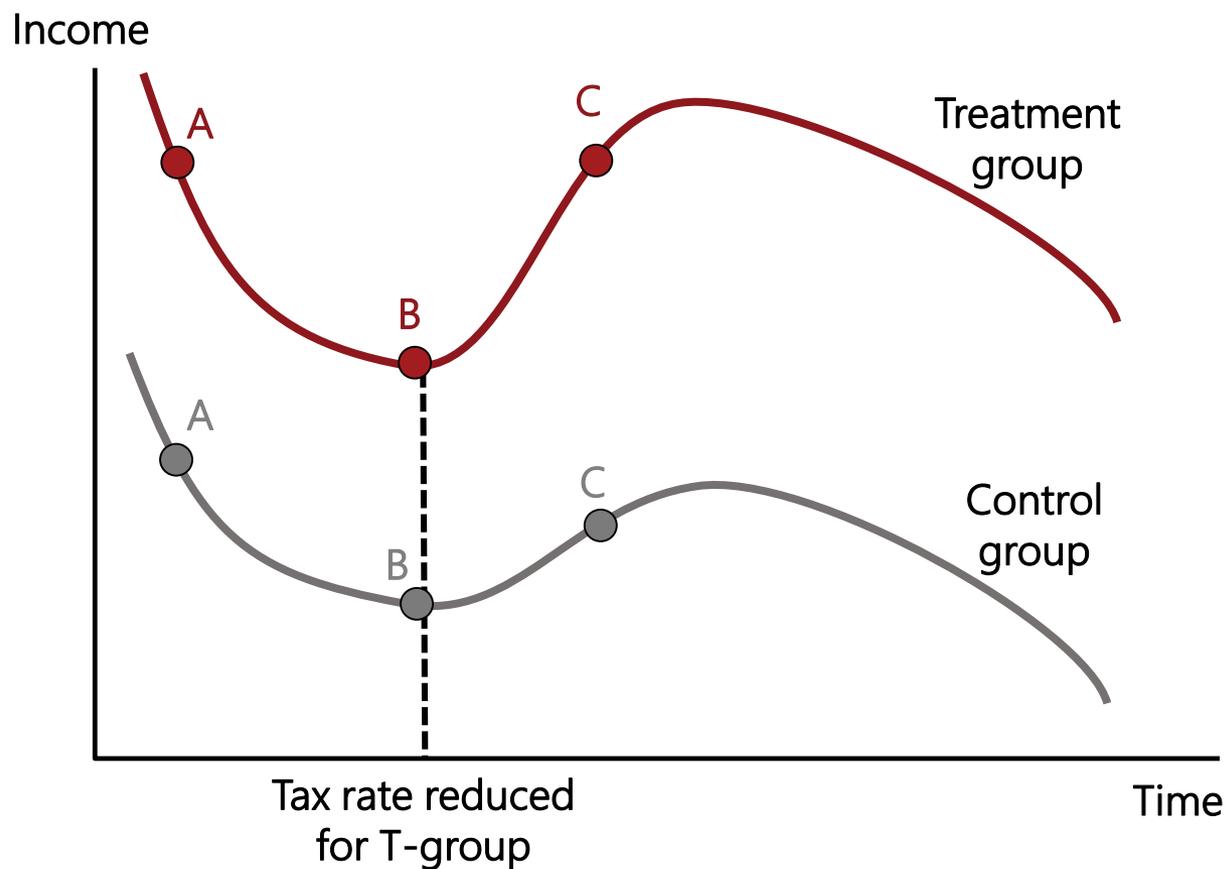
Key parameter for the Ministry of Finance

Example: The top marginal tax rate in Denmark is 66%. Consider an increase in this tax. Loss in tax revenue from behavioral responses in proportion of mechanical increase in revenue:

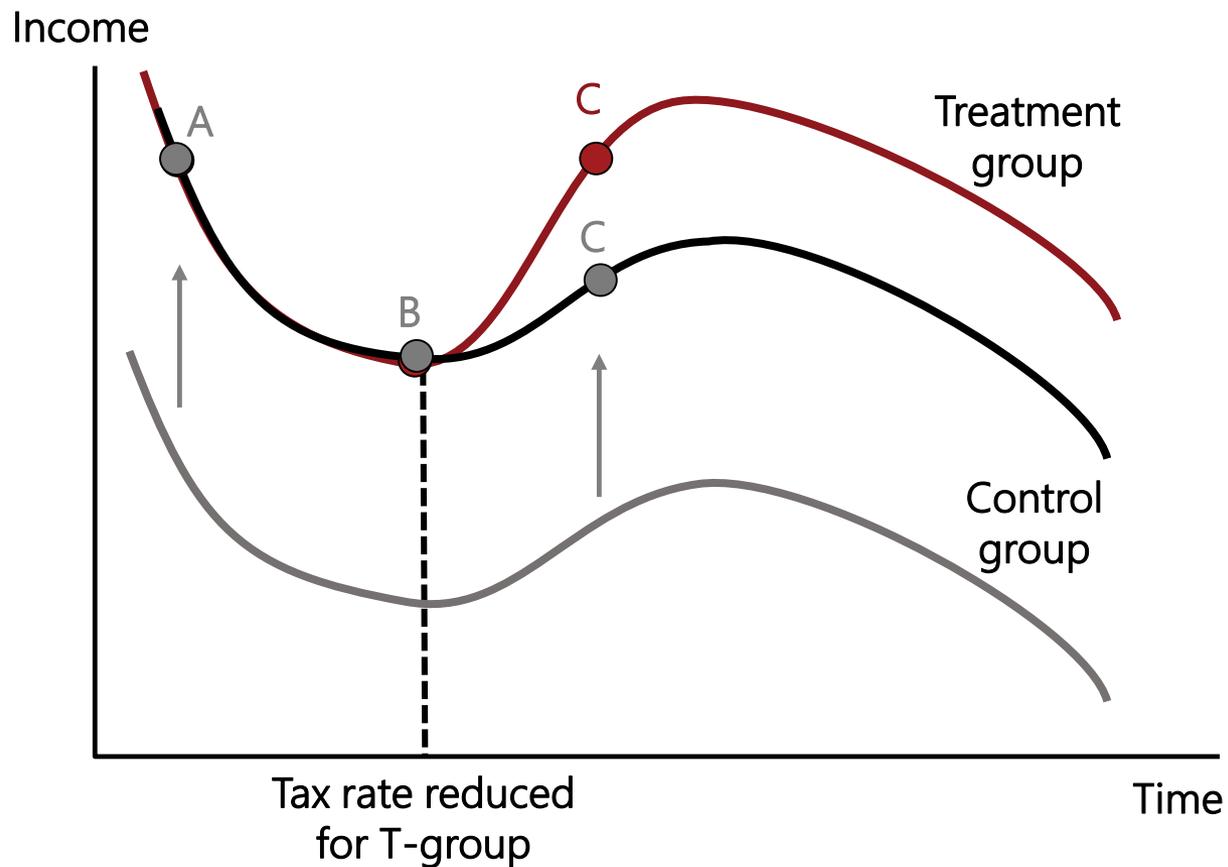
$$Loss = \frac{t}{1-t} \cdot \alpha \cdot ETI$$

	ETI	Loss
Benchmark	0,1	60%
Higher elasticity	0,2	120%
Lower elasticity	0,05	30%

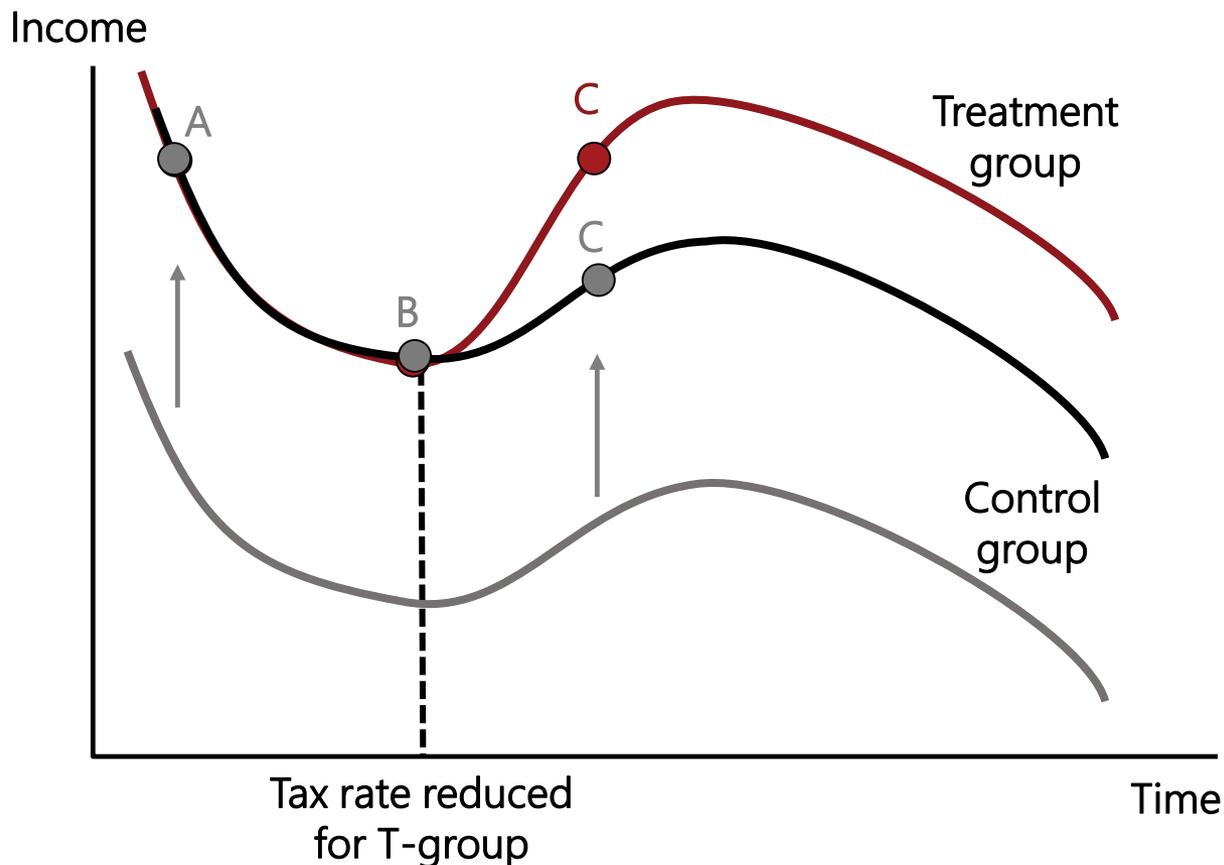
# Method to measure ETI



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## Method to measure ETI



US: "The best available estimates range from 0.12 to 0.40... midpoint of 0.25". Saez et al., *Journal of Economic Literature*, 2012

DK: ETI in range 0.05 to 0.2. Kleven and Schultz, *American Economic Journal: Economic Policy*, 2014

# Method to measure ETI

## May overestimate the ETI

... because of large intertemporal shifting around reform. Kreiner et al., *American Economic Journal: Economic Policy*, 2016

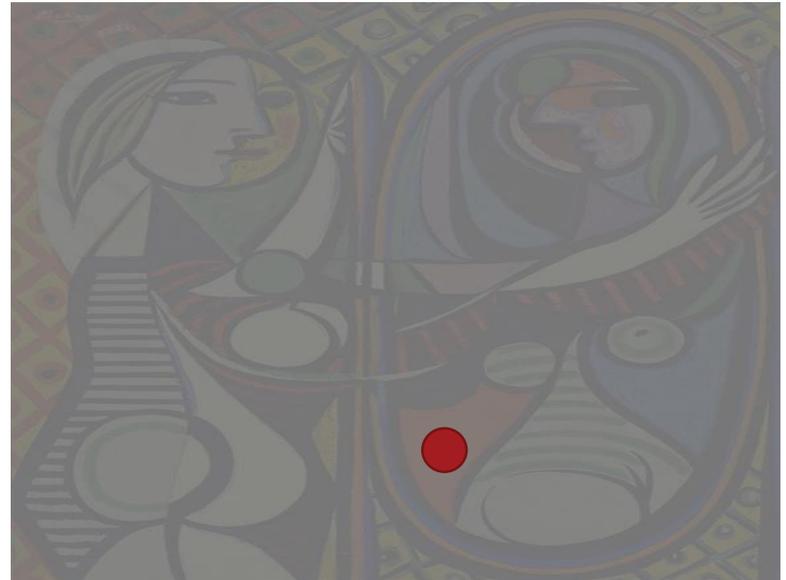
## May underestimate the ETI

... because the method is not good at detecting effects on job mobility. Kreiner et al., 2015, *Journal of Public Economics*



# What ETI should the Ministry of Finance apply?

Should not base it on a single study...



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Should **not** base it on a single study... but rather on a qualified reading of all the evidence



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## Current status in Denmark

A ministerial working group headed by the Danish Ministry of Finance currently works on the empirical foundation behind the ETI. **Advisory board of 5 academics** (Henrik Kleven, Claus Thustrup Kreiner, Søren Leth-Petersen, Jakob Søgaard, Peter Birch Sørensen)

## Access to administrative data is crucial

The Danish ministries use administrative data to make policy analyses (**evidence based policy advice**) ⇒

- Admin data contains important knowledge for society
- Need independent researchers to **control policy making** (important for democracy)
- Researchers provide **new important evidence** that are useful for policy makers
- Researchers **teach the next generation** of policy-makers inside the ministries (e.g. I am supervising econ students who have access to data through the ministries)
- Economic Policy Research Network (EPRN) consisting of applied research groups + econ ministries in DK to foster **exchange of knowledge**