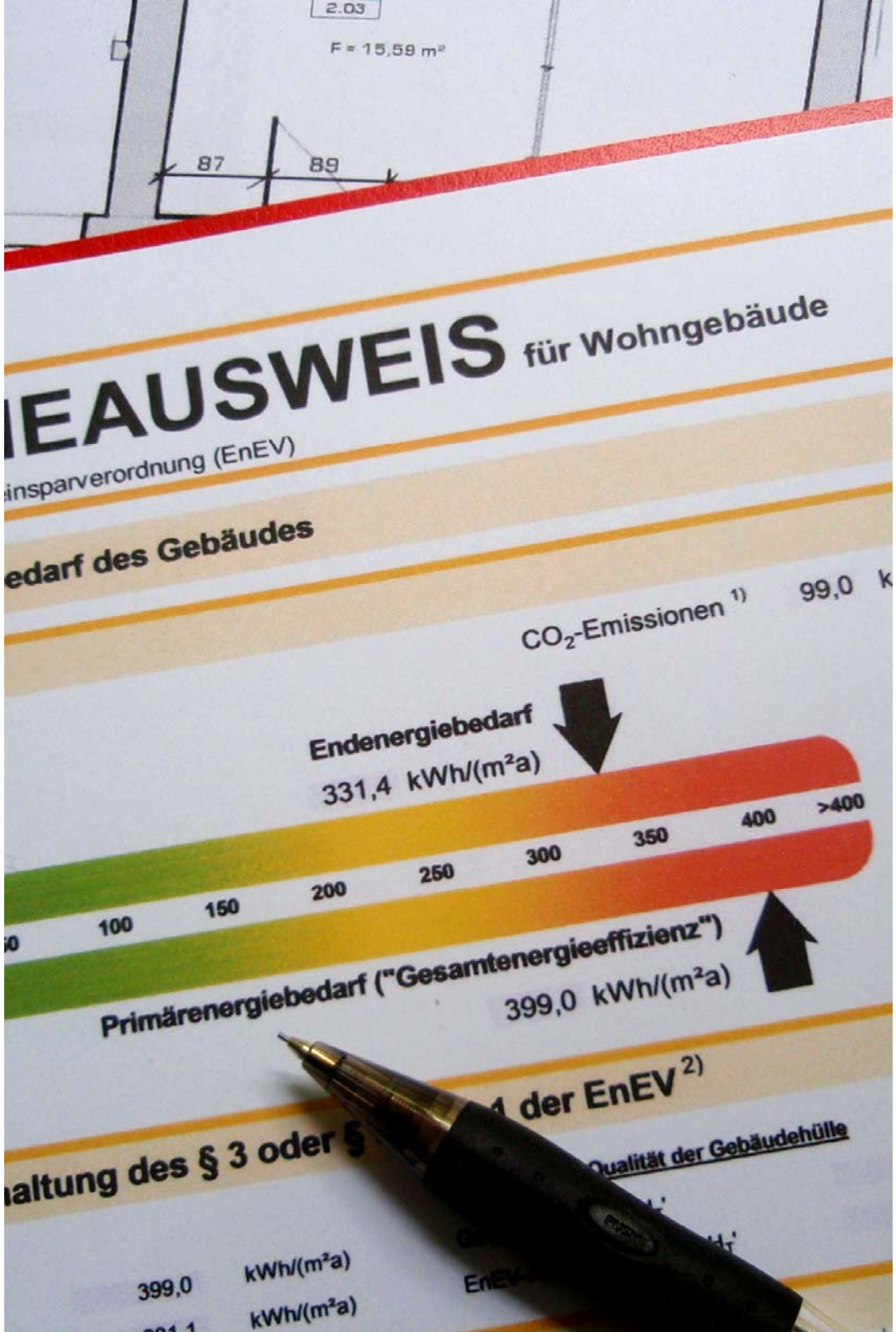
Putting a value on energy efficient buildings

Energising Property Valuation

Hedonic Pricing Model

- Find: RENT PER sq.ft.

- Given:
  - SIZE in sq. m.
  - AGE in year
  - QUALITY
  - ELEVATIOR
  - AIR CONDITION
  - MAINTENANCE
  - YEAR
  - ENERGY COSTS per sq. m.



Sample

- German properties
- office buildings
- 532 observations
- 57 cities
- 2002 to 2005

Description	Mean	Std.-Dev.
RENT	13,72 € / sq. m. / m	5,81
AGE	14,37	13,39
ELEVATOR	99%	–
ENERGY	0,839 € / sq. m. / m	0,667 € / sq. m. / m

Result

- If the energy costs **double** the rent per sq.m. will decrease by

9.5%.

- linear regression
- Std.-Error
  0.035
- Adjusted R^2 37%

Second thinking

- If energy cost will rise by

• +10%

- the rent will be influenced by less then

• -1%

Change

- **Second analysis**

  mixed regression modell

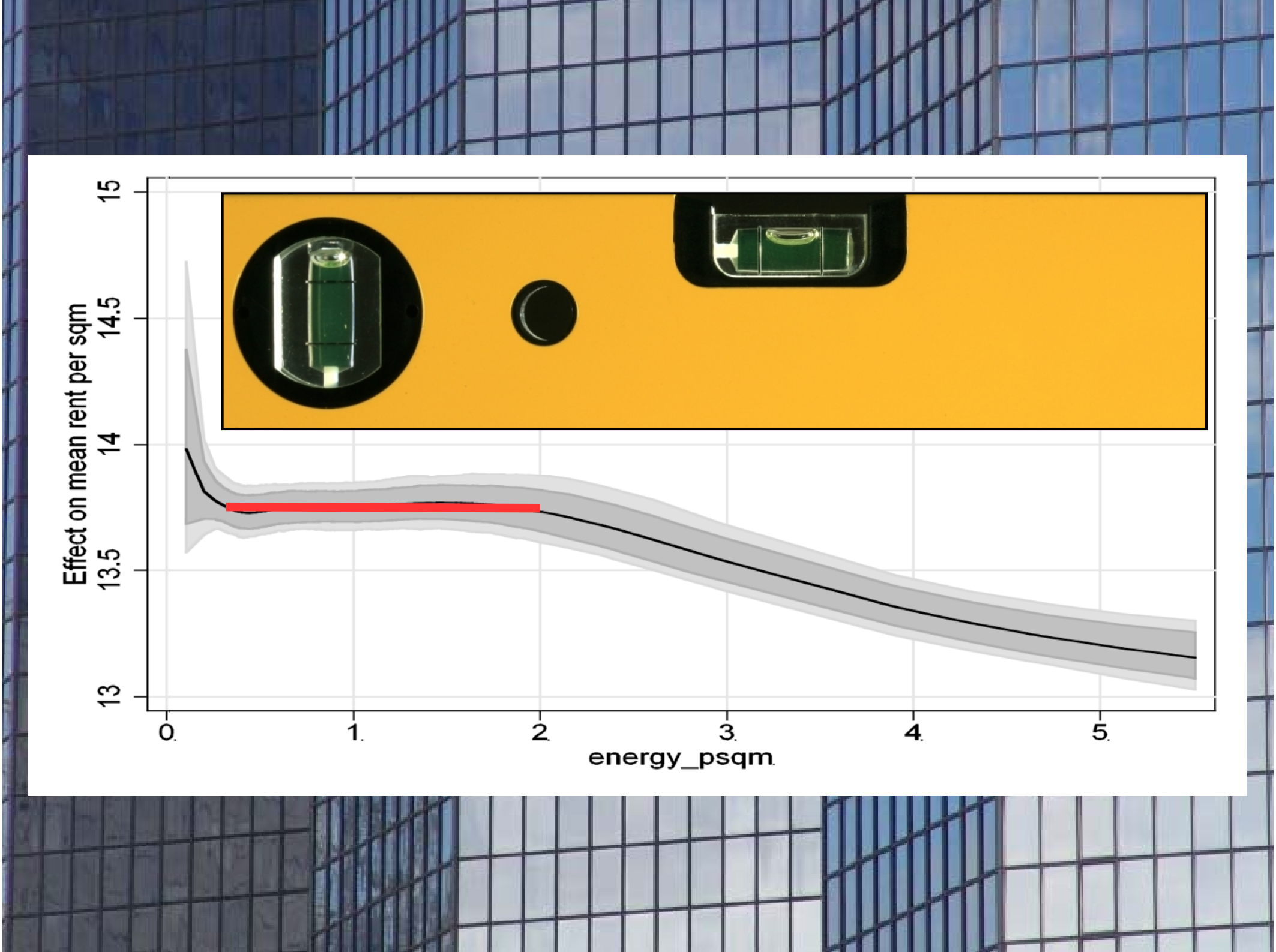
- **Zone of Indifference**

  between

  0.2 €/sq. ft./m

  and

  2.0 €/sq. ft./m


Effect on mean rent per sqm
15
14.5
14
13.5
13
0.
1.
2.
3.
4.
5.
energy_psqm

Surprise

- Rising energy costs up to

2 €/sq.m./month

hardly influence the rents

Surprise?

- No

- If tenants - by majority - would really care about energy, sustainability or green buildings our environment would look differently

Remarks

- Data from 2002 to 2005
- just German properties
- just offices

- hope future data will give other results
- in Germany and else where
- for all kind of properties

Thank you

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