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
  • ELEVATOR
  • AIR CONDITION
  • MAINTENANCE
  • YEAR
  • ENERGY COSTS per sq. m.
### Sample

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std.-Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RENT</td>
<td>13,72€/sq. m./m</td>
<td>5,81</td>
</tr>
<tr>
<td>AGE</td>
<td>14,37</td>
<td>13,39</td>
</tr>
<tr>
<td>ELEVATOR</td>
<td>99%</td>
<td>-</td>
</tr>
<tr>
<td>ENERGY</td>
<td>0,839€/sq. m./m</td>
<td>0,667€/sq. m./m</td>
</tr>
</tbody>
</table>
Result

• If the energy costs double the rent per sq.m. will decrease by 9.5%.

• linear regression

• Std.-Error
  0.035

• Adjusted R²  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
• 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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