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FACULTY OF ECONOMICS  
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# Housing-induced Poverty and Rent Deregulation: A Case Study of the Czech Republic

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- JAHODA, R.,D. ŠPALKOVÁ (2012). Housing-induced poverty and rent deregulation: a case study of the Czech Republic. *Ekonomický časopis / Journal of Economics*, Bratislava: EÚ SAV, 60, 2, od s. 146-168, 23 s. ISSN 0013-3035.



## Motivation

- (1) we would like to carry out a closer examination of the relationship of poverty and housing expenditures in the Czech Republic
- (2) there is currently under way a deregulation of large part of rented flats in the Czech Republic → how it influences poverty



# Syllabus

- 1. Literature overview**
2. Methodology and data
3. Poverty
4. Poverty and rent deregulation
5. Conclusions



# 1. Literature overview

- Discussion on financial housing affordability (Orshansky, 1965; Whitehead, 1991; Thalmann, 1999; Bramley, 1994; Stone, 2006a)
- Ratio concept → housing allowance; housing cost overburden rate
- Residual approach (Bourassa, 1996) → Kutty (2005) housing-induced poverty (HIP)
- Lux, Sunega (2003); Mikeszová, Lux, Morisseau (2009)

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## 2a. Methodology and data

- Czech EU-SILC 2008 - 2010
- poverty concepts
  - “at-risk-of-poverty” indicator (threshold of 40 - 60 %)
  - residual income

|  |                                     |        |         |
|--|-------------------------------------|--------|---------|
| Residual income (RI)                               | = disposable income – housing costs |        |         |
| Poor households (narrower concept – HIP)           |                                     | RI ≤   | 100% SM |
| Poor households (a broader concept – near poverty) | 100% SM                             | < RI ≤ | 150% SM |
| Household is not poor                              | 150% SM                             | < RI   |         |

- MSM → first round effects of policy change  
 (assumption of unchanged household behavior)

$$RI_0^i = F(z_0^i, y_0^i, \alpha_0, r_0^i)$$

## 2b. (De)regulation - policy change

- „new beginning“ in 2007 (Act on Deregulation)
- target to reach the desired level (5 % of the price of “similar” flats realized at the market) by 2010 (alternatively 2012 for biggest cities)

$$MRI_t^i = 2011-t+(+2) \sqrt{\frac{TMR_{t-1}^i}{CRS_{t-1}^i}}$$

- (unilaterally) maximum increase

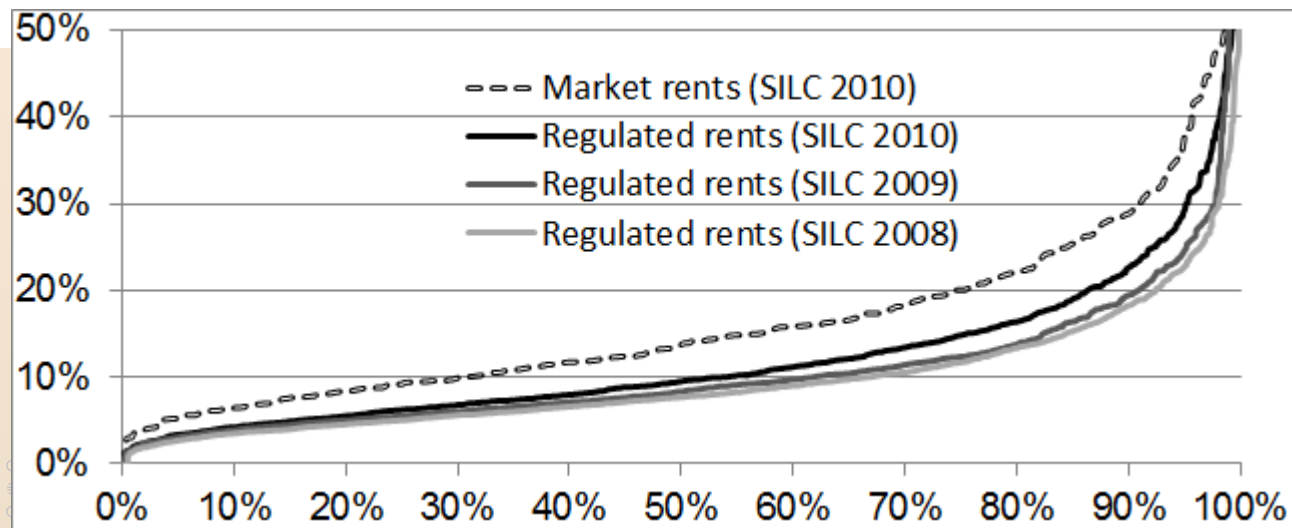
- the current rent, the “target” rent and the time remaining until regulation ends
- This implies (2007) that rents should be increased by around 100 % (almost 200 % in Prague)



## 2c. Data: Households with regulated rent

| SILC                                  | 2005                 | 2006   | 2007   | 2008   | 2009                 |
|---------------------------------------|----------------------|--------|--------|--------|----------------------|
| Total N of households                 | 4351                 | 7483   | 9675   | 11294  | 9911                 |
| Of which living ...<br>regulated rent | 863                  | 1431   | 1737   | 1803   | 1475                 |
| Total N of households                 | 100 %<br>(4.012.695) | 100 %  | 100 %  | 100 %  | 100 %<br>(4.116.364) |
| Of which living ...<br>regulated rent | 20,0 %<br>(802.641)  | 19,7 % | 19,0 % | 17,6 % | 16,3 %<br>(672.702)  |

### Distribution of Households According to the Rent Share on Disposable Household Incomes



## DATA

- Podstata českých mikrodat EU-SILC
- Podstata evropských mikrodat EU-SILC
- (obecně) dostupnost ostatních datových souborů: Eurostat (LFS, ECHP, SES, EAS, CIS, EHIS, CSIS, CVTS), ČSÚ (VŠPS, SRÚ)
- Okamžitá dostupnost dat pro projekty výzkumu na ESF a práce s nimi
- EU-LFS and EU-SILC 3rd European User Conference, Mannheim, 21-22.3.2013 (<http://www.gesis.org/veranstaltungen/veranstaltungsarchiv/german-microdata-lab/european-user-conference-3/>)
- Espelage: Eurostat data
- Van Houten: Eurofound data

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### 3a. Intersection of absolute/relative definition of poverty (SILC, 2008)

|                                |     | Share of disposable income to the equalized median income |             |             |           |            |           | Total       |  |
|--------------------------------|-----|---|-------------|-------------|-----------|------------|-----------|-------------|--|
|                                |     | <0;0,4)   | <0,4;0,5)   | <0,5;0,6)   | <0,6;0,7) | <0,7;inf.) |           |             |  |
| Recipient of social assistance | Yes | 19 737  | 17 908      | 18 281      | 6 360     | 19 507     | 81 793    | <b>2,0%</b> |  |
|                                | No  | 75 705  | 89 519      | 200 291     | 385 217   | 3 249 328  | 4 000 059 | 98,0%       |  |
| Recipient of housing allowance | Yes | 29 320  | 27 332      | 25 392      | 13 110    | 26 056     | 121 211   | <b>3,0%</b> |  |
|                                | No  | 66 122  | 80 095      | 193 180     | 378 467   | 3 242 778  | 3 960 642 | 97,0%       |  |
| Total                          |     | 95 442  | 107 427     | 218 572     | 391 577   | 3 268 834  | 4 081 852 | 100,0%      |  |
|                                |     | <b>2,3%</b>   | <b>2,6%</b> | <b>5,4%</b> | 9,6%      | 80,1%      | 100,0%    |             |  |

## 3b. Intersection of HIP and relative poverty (SILC, 2008)

| Residual income indicator | Share of equalized disposable income to median income |             |            |                |             |
|---------------------------|---|-------------|------------|----------------|-------------|
|                           | <0;0,5)   | <0,5;0,6)   | <0,6;inf.) | All households |             |
| HIP                       | 84,3%   | 11,6%       | 4,1%       | 100,0%         | <b>3,5%</b> |
| Near poverty              | 29,1%   | 44,4%       | 26,5%      | 100,0%         | <b>5,0%</b> |
| Not poor                  | 0,6%  | 3,0%        | 96,4%      | 100,0%         | 91,5%       |
| Total                     | <b>5,0%</b>   | <b>5,4%</b> | 89,7%      | 100,0%         | 100,0%      |

### 3c. Intersection and the Tenure Status (in %)

| Housing-induced poverty |   |            |             |                       |      |
|-------------------------|---|------------|-------------|-----------------------|------|
|                         | Share of disposable income to median income |            |             |                       |      |
| Category                | <0; 0.5)                                    | <0.5; 0.6) | <0.6; inf.) | total in the category |      |
| Owned                   | 83.9  | 11.2       | 5.0         | 100.0                 | 2.2  |
| Rent-market rates       | 75.3  | 15.5       | 9.2         | 100.0                 | 10.5 |
| Rent-regulated          | 87.0  | 11.9       | 1.1         | 100.0                 | 6.9  |
| Other                   | 100.0                                       | 0.0        | 0.0         | 100.0                 | 4.0  |
| Near-poverty            |   |            |             |                       |      |
|                         | Share of disposable income to median income |            |             |                       |      |
| Category                | <0; 0.5)                                    | <0.5; 0.6) | <0.6; inf.) | total in the category |      |
| Owned                   | 35.1  | 44.0       | 20.8        | 100.0                 | 3.7  |
| Rent-market rates       | 12.9  | 35.9       | 51.2        | 100.0                 | 11.5 |
| Rent-regulated          | 21.5  | 49.7       | 28.8        | 100.0                 | 8.4  |
| Other                   | 63.7  | 34.7       | 1.6         | 100.0                 | 3.9  |

Source: Own calculations based on the EU-SILC Czech data for the year 2008.

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## 4a. Poverty after deregulation (simple MSM)

### Extent of Poverty of Households in Apartments with Regulated Tenancies Prior to Deregulation (based on recorded SILC 2008 data) (in %)

|                         |              | Share of disposable income to the equalized median income |            |             |       |       |
|-------------------------|--------------|---|------------|-------------|-------|-------|
|                         |              | <0; 0.5)  | <0.5; 0.6) | <0.6; inf.) | total |       |
| Residual income concept | HIP          | 87.0  | 11.9       | 1.1         | 100.0 | 6.9   |
|                         | Near poverty | 21.5  | 49.7       | 28.8        | 100.0 | 8.4   |
|                         | Not poor     | 0.7   | 3.1        | 96.2        | 100.0 | 84.6  |
|                         | Total        | 8.5   | 7.6        | 83.9        | 100.0 | 100.0 |

### Scope of Household Poverty in Apartments with Regulated Tenancy after Deregulation (based on MSM using SILC 2008 data) (in %)

|                         |              | Share of disposable income to the equalized median income |            |             |       |       |
|-------------------------|--------------|---|------------|-------------|-------|-------|
|                         |              | <0; 0.5)  | <0.5; 0.6) | <0.6; inf.) | total |       |
| Residual income concept | HIP          | 50.4  | 19.0       | 30.6        | 100.0 | 14.3  |
|                         | Near poverty | 7.1   | 29.0       | 63.8        | 100.0 | 13.2  |
|                         | Not poor     | 0.4   | 1.5        | 98.1        | 100.0 | 72.5  |
|                         | Total        | 8.5   | 7.6        | 83.9        | 100.0 | 100.0 |



## 4b. Poverty after deregulation (simple MSM)

### Household Poverty in Apartments with Regulated Tenancy during the Process of Deregulation (in %)

|                            |              | SILC 2008 data |       | SILC 2009 data |       | SILC 2010 data |       |
|----------------------------|--------------|----------------|-------|----------------|-------|----------------|-------|
|                            |              | recorded       | MSM   | recorded       | MSM   | recorded       | MSM   |
| Residual<br>income concept | HIP          | 6.9            | 14.3  | 6.9            | 13.1  | 8.0            | 13.6  |
|                            | Near poverty | 8.4            | 13.2  | 8.5            | 11.0  | 9.0            | 9.8   |
|                            | Not poor     | 84.6           | 72.5  | 84.5           | 75.9  | 83.0           | 76.6  |
|                            | Total        | 100.0          | 100.0 | 100.0          | 100.0 | 100.0          | 100.0 |

## 4c. Poverty after deregulation (complex MSM)

**Main Factors of Household Poverty in Apartments with Regulated Tenancy (in %)**

|                         |              | 2010            | MSM for 2012              |               |             |               | all changes |
|-------------------------|--------------|-----------------|---------------------------|---------------|-------------|---------------|-------------|
|                         |              | recorded values | impact of partial changes |               |             |               |             |
|                         |              |                 | $\Delta$ DI               | $\Delta$ rent | $\Delta$ SM | $\Delta$ cost |             |
| Residual income concept | HIP          | 8.0             | 6.6                       | 8.3           | 9.4         | 8.6           | 8.8         |
|                         | Near poverty | 9.0             | 7.5                       | 9.2           | 10.0        | 8.9           | 9.0         |
|                         | Not poor     | 83.0            | 85.9                      | 82.5          | 80.7        | 82.5          | 82.2        |
|                         | Total        | 100.0           | 100.0                     | 100.0         | 100.0       | 100.0         | 100.0       |

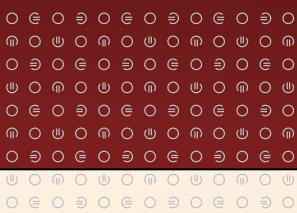
## 4d. Poverty after deregulation (complex MSM)

### The Impact of the Social System on Household Poverty in Apartments with Regulated Tenancy in 2009 (in %)

|                            |              | Recorded SILC<br>2009 values | MSM for 2012                             |                                       |
|----------------------------|--------------|------------------------------|--|---------------------------------------|
|                            |              |                              | without a change<br>in the social system | with a change<br>in the social system |
| Residual income<br>concept | HIP          | 6.9                          | 13.1                                     | 11.0                                  |
|                            | Near poverty | 8.5                          | 11.0                                     | 11.9                                  |
|                            | Not poor     | 84.5                         | 75.9                                     | 77.1                                  |
|                            | Total        | 100.0                        | 100.0                                    | 100.0                                 |

### The Impact of Change in Apartment's Size on Household Poverty in Apartments with Regulated Tenancy (in %)

|                            |              | Recorded SILC<br>2010 values | MSM for 2012                            |                                      |
|----------------------------|--------------|------------------------------|---|--------------------------------------|
|                            |              |                              | without a change<br>in apartment's size | with a change<br>in apartment's size |
| Residual income<br>concept | HIP          | 8.0                          | 13.6                                    | 12.0                                 |
|                            | Near poverty | 9.0                          | 9.8                                     | 9.3                                  |
|                            | Not poor     | 83.0                         | 76.6                                    | 78.6                                 |
|                            | Total        | 100.0                        | 100.0                                   | 100.0                                |



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## 5a. Conclusions

- Present indicators in the CR don't involve "housing induce poverty" concept
- There is a chance, that the number of household which find themselves in HIP will be doubled in 2012 (in the segment of rent flats)
- → one would expect, that government will have to tackle this problem, but ...

## 5b. Conclusions (future research?)

- the number of household in HIP will be doubled, but from 3 % to 6 % in total population; doubled or growing?
- Our MSM is rather simple:
  - Will all home-owner increase rents?
  - What will be the reaction of tenants: their income (income effect) or their patterns of living (substitution effect)
- what will be the impact of economic crisis → lower prices of houses? → lower rents?



**Thank you for your  
attention**

