



Healthy Homes and Healthy Occupants

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Environmental conditions and health

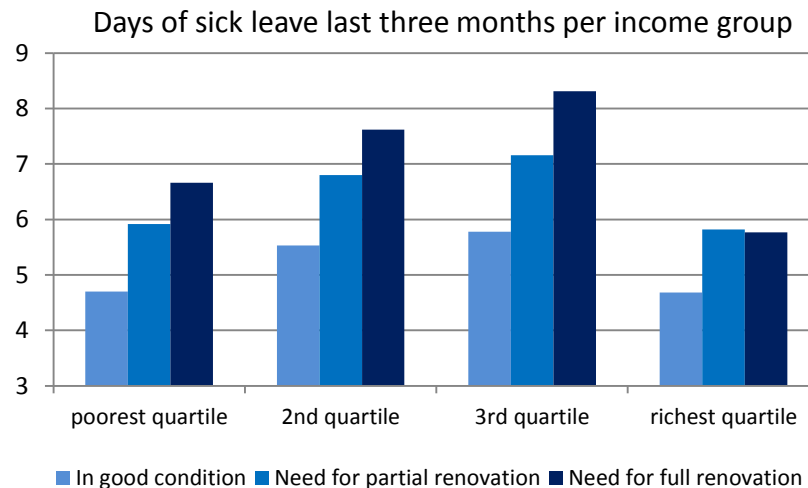
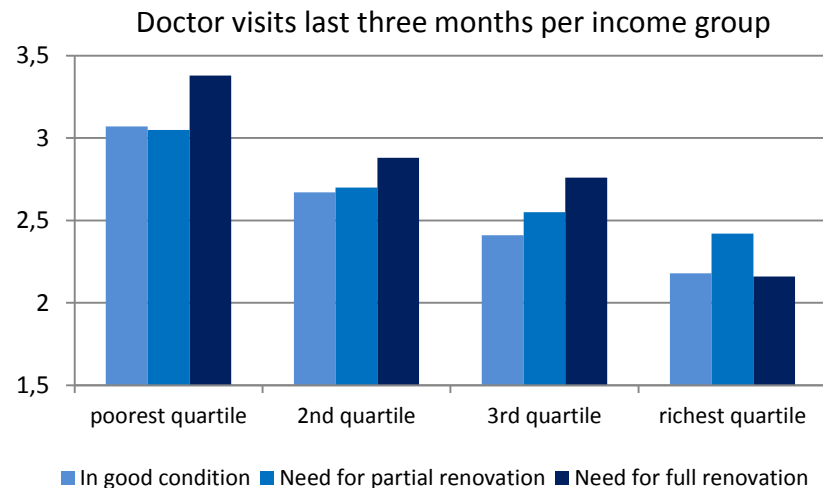
We estimate impact of housing conditions on occupants' health



- Use Household survey, representative of **German population**
- Analysis based on waves **1992-2014** in west Germany
 - **360,912** observations, **57,581** households followed up to **20 years**
- Every year, individuals are asked to evaluate:
 - **Health**
 - Mental and physical health
 - Number of visits to the doctor
 - Days of sick leave
 - **The conditions of their house**
 - House in good condition: 47,554 households
 - House in need for partial renovation 28,647 households
 - House in need for full renovation 4,952 households

Impact of Dwelling Conditions on Health

First look at data suggests remarkably strong relationship for all income groups



Estimating the Effect of Housing

Isolating the effect of housing conditions from socio-economic and environmental factors

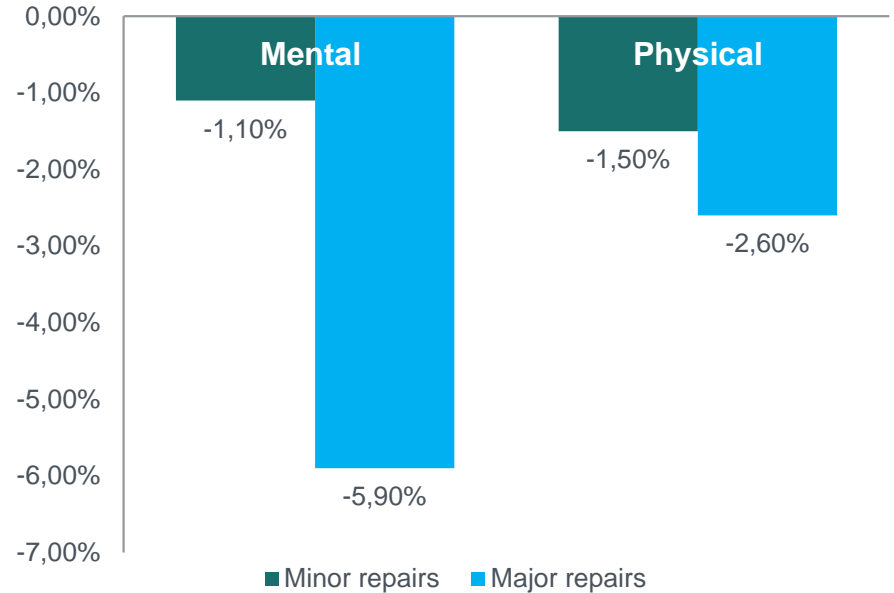
$$Health_{i,t} = \beta HousingConditions_{d,t} + \lambda X_{i,t} + \delta Z_{d,t} + \alpha_i + \tau_t + \varepsilon_{i,d,t}$$

- Controlling for socio-economic characteristics:
 - Education
 - Income
 - Labor status
 - Household composition
- Subsample analysis: Measure of housing affordability rents
- Analysis based on within individual variation (individual fixed effects)
- Robustness: Movers are excluded from the simple

Estimation Results

Effect of house conditions on health status

- Individuals under bad housing conditions:
 - Perform up to 6% worse on mental health scale than average respondent
 - Perform up to 2.5% worse on physical health scale than average respondent

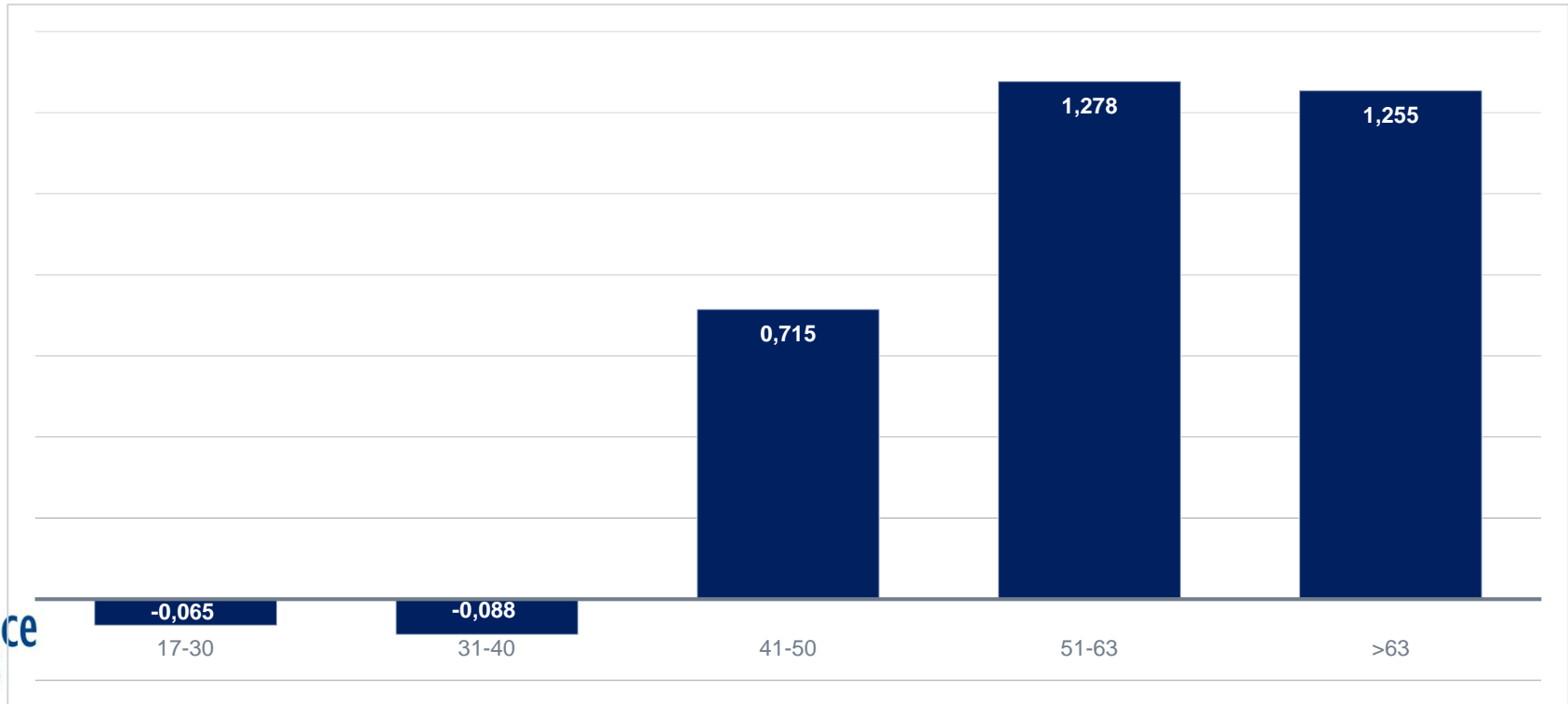


Ongezonde huisvesting: wie lijdt het meest?

- 17 tot 30-jarige
- 31 tot 40-jarige
- 41 tot 50-jarige
- 51 tot 63-jarige
- 64-jarige en ouder

Who suffers the health costs of bad housing?

Increase visits to the doctor by age group when house needs major repairs

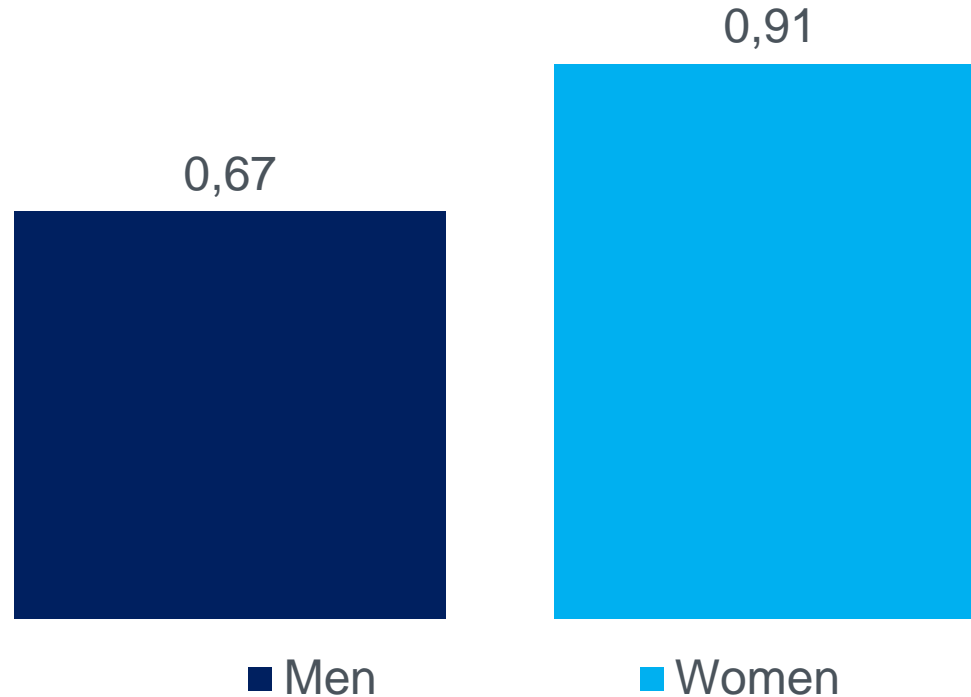


Ongezonde huisvesting: wie lijdt het meest?

- Vrouwen
- Mannen

Who suffers the health costs of bad housing?

Increase visits to the doctor by gender when house needs major repairs



Conclusions

- Poor housing conditions negatively affect reported health
- Leads to an increase in the number of doctor visits and sick leave
- The effect is strongest among women and elder people
- Robust to changes in health behavior (smoking, drinking, weight)