

# Housing deprivation and health: A European comparison.

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## 1 Extended abstract

Poor housing conditions have long been recognized as a source of health deprivation, which is supported by a big amount of mainly cross-sectional studies. However, empirical evidence scrutinizing that relationship with panel data is still surprisingly sparse. On the one hand this could be due to difficulties in finding an appropriate identification strategy to carve out a causal link between the socioeconomic status, housing conditions and various health measures. On the other hand, it could also reflect the absence of suitable data to deal with those questions. So far, evidence is mainly found for single countries and there is still lacking evidence in a comparative manner on an international basis.(for recent evidence see Pevalin et al. (2008) for UK and Navarro et al. (2010) for Spain)

Therefore, this article intends to deal with these above mentioned issues and in particular aims firstly, to identify a causal link between housing deprivation and subjective health and secondly, aims to deliver for the first time comparative results on an European level on that issue. To this end, we will make use of four waves of the EU-SILC data set, covering the years from 2005 to 2008. The EU-SILC data delivers a large set of socioeconomic variables that possibly confound the effect of housing deprivation on health and thus simplifies the identification strategy. Furthermore, due to its international focus it allows an comparison of different EU countries.<sup>1</sup>

In our paper we measure health as a binary variable with value one when an individual reports a (subjective) bad or very bad health status and zero

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<sup>1</sup>Our analysis includes the following countries: Belgium, Spain, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom, Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia and Norway.

otherwise. According to EU-SILC the share of people reporting a bad or very bad health status varies between 22% in Lithuania and 3% in Ireland in 2008. This indicates that there is considerable variability between countries. Our main independent variable of interest, deprived housing conditions, includes several items, namely shortage of space, leaking roofs, damp walls/floors/foundation or rot, the ability to keep the home warm, access to toilet and bath in the dwelling as well as the availability of a washing machine. In a first step these indicators were considered individually in the model.

To establish a causal link between these measures of deprived housing conditions and subjective health we will estimate on the one hand a logistic two-way fixed effects model to identify causal links on an individual basis. On the other hand, for the sake of comparing different countries we will estimate a multi-level model to assess also the influence of different policy measures on effect heterogeneity.

First results of the two-way fixed effects models show that, while controlling for education, income, age, sex, marital status and economic status, living in a dwelling with leaking roofs, damp walls or rot significantly increases the likelihood of reporting a bad or very bad health status. This also holds for the effect of the ability to keep the home warm. Thus, worsening living conditions affects self-reported health. However, whereas an increasing shortage of space, measured by the number of rooms divided by the number of household members, results in a significant increase of the risk of bad health in the pooled logit model, it is no longer significant after controlling for unobserved individual time-constant effects. This indicates that the choice of accommodation - which affects health - may also vary according to individual specific attributes like the socialisation in a specific housing setting. The fixed effects model also provides some evidence that the likelihood of reporting bad health significantly increases from 2005 to 2008, given all other control variables.

Concerning the second research focus, preliminary results of model specifications including between country variation show that there is a significant effect of country fixed effects (country dummies) on the dependent variable.

Keywords: Housing deprivation, health, EU-SILC

## 2 References

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