ABSTRACT

PARA LA SESIÓN ESPECIAL EN ACCESIBILIDAD

Título: Accesibilidad a la vivienda en España. Problemas y soluciones

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Resumen:

The literature approached the lack on housing as one of the consequences of household poverty. This paper turns around the argument and assesses how housing tenure triggers poverty situations. It estimates several affordability indicators associated to housing tenure, finding empirical evidence of different poverty threshold among Spanish households depending on their tenant status. Using micro-data of the Survey of Quality of Life for Spain, data is segmented by residential tenure and calculate poverty lines for homeowners, renters (both at a market prices and below market prices) and the free housing , the four tenure formulas existing in the Spanish housing market. Results suggest that high ownership rate has prevent from poverty to a large number of homeowners with income below the poverty line, especially after the economic crisis in Spain.

Key words: housing affordability, Spain , rent, homeownership

(This summary is a part of the final paper currently in draft)

Introduction

Housing inducing poverty is a concept defined by Kutty (2005) to estimate the impact of housing costs on the household poverty or deprivation. It stablishes that after cover housing costs if remaining income underpasses 2/3 of the poverty line, the household fall on housing induce poverty. This measure can be used to discriminate when a household is poor due to a lack on income or due to housing.

The relevance of housing cost to understand the complexity of poverty phenomenon is large. Tunstall et al (2013:2[1]) sets that "*Not taking housing costs into account means a significant underestimate of the risk of poverty and material deprivation for workless households, minority ethnic groups, single people and renters*." This report, one of the exceptions covering the role of housing on poverty, mentions the role of low-income and renters as main groups condemned to poverty when they cover the costs of housing. Other reports treat housing as a new tool for Poverty Policy measures (like in Boate, 2009[2]), but most of the literature fails on define more clearly the channels to which housing can affect poverty increasing deprivation or extreme situations of homeless.

The relevance for any society to have a healthy housing-related-population is clear following the urban economy: Homeless is the extreme case of poverty; poor household try to cover their housing needs paying low housing costs through concentrate in poor-quality homes. ; very poor quality homes are normally over-used and concentrated in disadvantaged neighbourhoods (like favelas), where the vicious circle of poverty contributes to degraded and enlarge the marginal urban areas.

The role of housing costs on poverty has increased since the Global Financial Crisis started mainly through the severe impact on affordable housing construction. The market disruption made housing policy measures to fail and force most countries to identify and try to define new tools to be applied with not so much (yet) success (see UNECE,2015[3], or Boate, 2009).

The key issue in this topic seem to be to identify the channels to which housing affects or induce to poverty. Theoretically, Thalmann (1999, 2003) model defined the linkages between housing costs and poverty unifying the view of different types of unaffordability that the literature described.

This paper attempts to identify the role of housing costs explaining poverty situation and approaching the extreme effort that poor household should face when they meet their housing costs. Empirical evidence about different housing tenancy role is

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[1] Tunstall, R., Bevan, M., Bradshaw, J., Croucher, K., Duffy, S., Hunter, C., ... & Wilcox, S. (2013). The links between housing and poverty: an evidence review. *JRF Report, York: Joseph Rowntree Foundation*

[2] Boate, K. S. (2009). *Public housing as a poverty intervention measure: Examining the usefulness of poverty threshold method as a measure of affordability, the case of Summit County, Ohio* (Doctoral dissertation, The University of Akron). Available at https://etd.ohiolink.edu/rws_etd/document/get/akron1239045399/inline (accessed 26/07/2017)

[3] UNECE (2015), Social Housing in the UNECE region. Models, Trends and Challenges, Geneva: United Nations.

presented here approaching the theoretical principles to estimate housing affordability in a real data coming from a large region in Spain, the Valencia Community. The evidence covers the economic growth period, the crisis and the start of the recovery: 2004-2015.

The contribution of this paper is threefold. First, it develops a new affordable index and combine it with the more used in order to find a classification tool for policy purposes. Second, it is one of the first to test the housing induce poverty hypothesis. On our best knowledge, there is no other work with this approach. Third, it is the first empirical evidence for an Spanish region so that, this paper contributes to the knowledge in the topic relating housing and poverty.

The paper develops the contents in the following sections. Section 2 revise the literature defining when a household is housing poor and the empirical measures to be applied. Section 3 presents the data and approach the evolution on income distribution and poverty in the region and sub-regions. Section 4 present the empirical evidence on housing induce poverty and section 5 concludes.

III. Data, description of income distribution and poverty in the region and sub-regions.

The data source used for the analysis comes from the European Union Statistics on Income and Living Conditions (EU-SILC) provided by INE (Spanish Statistical Institute) from 2004 to 2015. The sample dataset consists of more than 1.9 millions observations aggregate at household level. The reference unit, indeed, is a household with a concept of resource utilized for this empirical research based on equalised annual disposable income. Household income is provided in euro currency in the annual mode. The EU-SILC database provides a harmonized information on poverty, inequality, standard of living and other social issues within EU Member States. Also, it allows to gather detailed information on households' income along with material and demographic conditions, financial situation, housing situation as well as social relations. This survey provides data at regional (NUTS II) by thanks of a special extraction, it has been possible to identify the province level as well as city and metropolitan level. There has been a change in the methodology during 2013 but the source has homogenized the data until 2007. The data regarding the households' income proceeded from interviewed declarants participating in the survey and combined by information coming from

households' income tax[4]. Furthermore, there is another problem with the dataset. The monetary disposable income may give a biased representation of actual distribution of income in society.

Valencia Community is the third region in Spain related to the economic size. It locates the third main city (Valencia) and very active-industry and tourism related areas in Spain. The sample is divided into the three provinces and also four other areas: capitals, metropolitan areas, interior and coastal areas, independently of their population density.

The microdata base contains housing information as well as income and household details, allowing this paper to estimate the following indicators for every urban dimension:

- Income distribution, based on equivalised disposable income[5], through the Gini Index.
- Poverty line: A household is understood to be in poverty when its equivalised disposable income is less than 60% of the national median equivalised disposable income (Eurostat, 2011).
- Affordability ratio, estimating as eq(1)
- Housing Stress
- IAM ratio.

IV.- Methodology

A third index is proposed in this paper called IAM ratio (maximum affordability index) explained below. The purpose is to estimate a ratio which could classify households in the extreme situation where housing make them to fail in severe poverty. The aim is to find a combination of ratios to conveniently classify the households and be used for policy purposes. Once the ratios have been estimated, the hypothesis to be tested is whether or not housing costs induce poverty, so that we hypothesized here that housing costs does not induce poverty and will need to reject the null in order to support the

[4] Several works reported underestimation income accounts for 10-20% (Aktinson and Brouguingnon, 2000, Kot, 2004, Aksman, 2008, Anand and Segal, 2008). That is why the correction on income is done crossing self-declared information with official tax income since 2007

[5] Equivalised disposable income (EDI) is the quantity of income available on average for each household member. EDI is calculated dividing the total household income by the number of 'consumption units' existing on it. The consumption units (CU) refers to the number of household members but it is not exactly the total. It is calculated accordingly the modified scale of OECD formula: f=1+0,7(μA-1)+ 0,5μC , where: μA means the number of adults (over 16 years) in each household, and μC number of children (Buhmann et al., 1988).

For instance, the first member worth one; the second 0.5 and the assigned value to the rest depends on whether they are children or other type of members. This information is provided in the database. EDI is the ratio between the total income divided by the CU, in euros a year.

'house induce poverty' principle. Failing to reject the null that housing induce poverty is similar to also reject the neutrality principle of housing related to poverty (Talmann, 2005)

V.- Data and exploratory analysis

The hypothesis are tested using information from a source of subjective data such as the Survey of Living Conditions (Eu-Silc) with a temporal coverage from 2004 to 2015 INE source. Microdata of 1,9 million households are included into the DB with income, housing and other characteristics information allowing to build the required variables to test the hypothesis. Data refers to Valencia community, a region accounting around 15% of total Spanish population and the third main city.

The spatial distribution of the observations (accounted at zip code level) is shown in map 1.

Map 1. ECV in Valencia Community

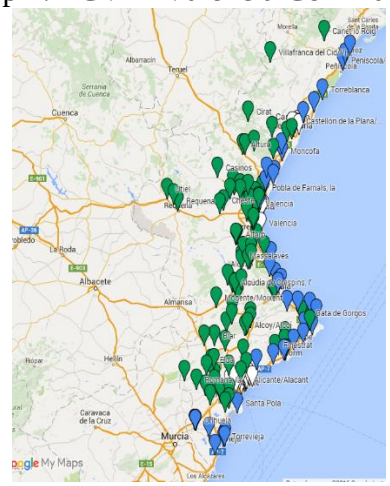

Table 1 contains a brief description of the statistical data used in this work with the variables contained in the survey , we used 11 household characteristics that were used to segment the sample of 104,475 households and estimate the indicators listed below.

Insert Table 1 here

The literature on housing market provides empirical evidence on the different distribution of income that occurs between households depending on the formula tenure adopt (Gabriel et al. , 2005), with a higher average income homeowners in the remaining households , implying that the poverty thresholds may differ depending on the housing tenure that detente home . Therefore , estimates of poverty at home should consider the situation of household residential tenure.

The census statistics and Eu-Silc , report on the existence of four forms of tenure in Spain , which are the homeownership, the rent at market prices , the rent below market prices, and the free transfer . Table 2 shows the distribution of total households and households below the poverty line is detailed , as such schemes tenure . The tenure distribution shows households without payments which mainly are those homeowners with the mortgage over. Table 3 reports how the 47% of households (in mean) covers some type of housing costs while 53% enjoy their house free. In total, 10,9% of total population are tenants with another 7,3% living in a house provided free, and the rest (81,8%) are homeowners, 36,1% still have got mortgage payments to be covered. Such share of population covering housing costs by area is shown in Table 4.

Include tables 2 to 4 around here

Tenure dynamics is shown in Figure 1. It demonstrates the GFC impact in tenure status reducing homeownership by increasing tenure and also homeownership with payments, in a process when households have lost their houses (evictions) and move to rent, as well as increase the mortgage to cover other expenses.

About 22,2% of total households are classified below poverty line in the Valencian Community. The distribution of every area is in Table 5. Most of them (67,7%) are homeowners. And around a 20% are tenants at market prices.

Include table 5 around here

The estimated affordability ratios are shown in Table 6 and 7. In the case of the total population, DtI and IAM show the absence of housing affordability among the whole territory. However, when housing stress is analyse, it shows a mostly generalized strong housing costs coverage in the group of medium to low income households, with ratios ranged between 38-47% (table 6). Sharing for people falling under poverty line, DtI does not show large problems with ratios between 24-33% (the latter in coastal areas). On the contrary, poor households under housing stress and IAM shows strong affordability problems suggesting that house cost coverage could have induce them into the poverty.

Table 6 and 7 around here

In order to estimate the robustness of the affordability measures to capture poverty, the correlation among them with two poverty indicators (contained into the database) are calculated and showed in Table 8. The three of them including the calculation of poverty line are significantly correlated with those two (household on poverty risk and severe material poverty) with ratios showing the correlation under 0.5% allowing to be included into the model.

Table 8 around here

Consistency in the results are also checked in order to explore the classification capacity of those affordability ratios for policy purposes. Figure 2 shows the profile of pair-ratios relationships.

Figure 2 around here

VI.- Empirical evidence on housing induce poverty and discussion

Equation (5) represent the model testing the hypothesis. It has been estimated and results are in Tables 9 to 12 for the aggregate and segmented by areas and tenure models. Every model is controlled by housing characteristics (variable 'x') and estimated separately by each affordability ratio.

Results are consistently showing that any increase of one point in the ratio affects rising the poverty likelihood in 1,2% (in the case of DtI), 0,8% (in housing stress, HS) and 0,2% (in IAM, in this case, the parameter is negative because the index construction). IAM capture larger effect in Valencia province, coastal areas and interior while the effect is lower in province capitals. The effect of DtI and HS are consistent in all models and all areas.

Tables 9-11 around here

Segmenting by tenancy type, IAM shows strong effect on renters at market price: one point less in this index increases 2,1% the likelihood to fall in poverty, 10 times more than in the other tenure status. HS affects more to homeowners so as any increase of one point in the ratio makes likelihood to become poor to rise 0,9% (one point more than average).

VII.- Conclusions

This is a work in progress, still obtaining conclusions and testing robustness in parameter results.

Three measures to capture HIP, one is proposed in index shape: the extreme housing poverty conditions

The exercise results provide evidence that housing poverty affect the likelihood to fall below the poverty line. It affects to lower than 50% of population as it is only applied to households with housing payment.

The effects seems to be very homogeneous but with different impacts depending on the geographic areas and population as the tenancy structure is biased towards ownership.

Segmenting by tenancy, the effects differs across the affordability ratios. IAM capture stronger impact on the poverty likelihood in tenants rather than in homeowners or tenant underpaying rents: Effect of increasing between 1%-1,2% the likelihood to become poor, 2% in IAM