## Who lives there now? Differences in affordability and income between housing tenure groups in Europe over the last decade

The role of housing policy in the overall social policy mix in post-war Europe has been object to a longstanding debate. The discussion gained a strong momentum in the 1980s and 1990s with now widely cited works by Harloe (1985, 1995) Kemeny (1995). Kemeny identifies two types of rental systems. In the dualistic system, predominant in Anglo/liberal nations, the bulk of rental housing is provided in the private market whereas the social sector is seen as a residual safety reserved for low income households. Governments support home-ownership and a wide range of income groups owns their home. This in general then leads to growth in owner-occupation. The other type is referred to as unitary rental market with Sweden, Germany and the Netherlands as typical examples. Here, state-subsidized social housing plays a large role in overall housing and is open to broad classes of the population. Consequently, in unitary countries access to home-ownership is distributed relatively equally across the income spectrum. Ultimately, as Kemeny argued in 1995, dual rental countries will depart further from unitary rental countries as time progresses.

Harloe (1995) distinguishes between the mass model of social housing provision that aims at a broad range of income groups and the residual model, limited to the least well-off who cannot find affordable housing on the private market. Examining the US and four western European countries differentiates the history of social housing into 5 phases of development. The residual model became the normal form of social housing provision in the long run, whereas the mass model was only dominant for a short period after the main wars. However, it is not clear whether this is still valid beyond the 1990s, also considering that Europe experienced two macro-economic crisis 2000 to 2010 that may have affected policymaking in the housing realm and might have made it more difficult for private household to get access to mortgage loans.

In general, the Harloe and Kemeny typologies have not very often been empirically tested (Hoekstra 2009) or extended to the full range of European countries (e.g. Eastern Europe and Baltic States). In our paper, we investigate two aspects: 1) the income structure of inhabitants in different tenure types and the 2) subjective affordability of these tenure types. Furthermore, the focus in the literature is often on ownership. As policy makers face a trade-off between a narrow targeting of low-income groups on the one hand and segregation on the other hand, we specifically focus on social housing.

Similar as in Norris (2012), Dewilde (2017), Kemeny (2001) and Hoekstra (2009) we derive several hypotheses related to inhabitants' social structure from Kemeny's typology. First, we expect that a dual housing regime country accommodates a wide range of income groups in ownership but excludes the poorest. Vice versa, the association between income/social class and social housing tenure should be stronger in these countries. Housing costs and affordability is the second dependent variable of interest in this paper. As Hoekstra (2009) argues, due to highly unequal degrees of rent regulation, one can expect larger differences between the rents in the social and private rental sectors in a dualist rental regime. In contrast, direct competition between the social and the private rental sector in integrated rental systems should result in smaller differences between rents. We should also find less affordability problems of inhabitants of social housing in dualist countries. In integrated rental systems, however, we expect a bigger social rental sector and more middle-income households in social housing. Finally, Eastern European countries should exhibit a relatively low association between socio-economic status and social housing.

To address these research questions we use pooled cross-sections from the EU SILC UDB 2004 to 2015. Our analysis covers 29 European countries (unbalanced time series: AT BE BG CH CY CZ DE EE ES FI FR GR HR HU IE IS IT LT LU LV MT NO PL PT RO RS SI SK UK). We use the equivalised household

income for all estimations in the paper. For tenure groups we used the categories provided in the variables hh020/hh021 which covers the following 4 (since 2010 five) groups: outright owner/owner paying mortgage, tenant or subtenant paying rent at prevailing or market rate, accommodation is rented at a reduced rate (lower price that the market price), accommodation is provided free. However, in some countries there is no clear distinction between a market rent' sector and a 'reduced rent' sector (SILC: Denmark, Netherlands, Sweden) and Eurostat classifies all renters in the former category. Consequently, these countries are excluded from our analysis. Data on rent payments mainly refer to the SILC variable hh060 and for subjective affordability to hs140.

First, we will present various cross-country comparative bivariate descriptive statistics on the likelihood of selection into tenure groups conditional on income and on the subjective affordability in different tenure groups. In a second step, we estimate country-specific multivariate logistic regression models to condition the income effect on a broad range of socio-demographic variables. Third, we will apply decomposition methods (Theil) to analyze income inequality between and within different tenure groups similar as in Haffner (2010, for the Netherlands). This also helps to answer if tenure groups have become more homogenous over time.

Preliminary results show that the effect of income in the likelihood to reside in a dwelling with a reduced rate is still (and throughout 2005-2015 has been) most articulated for countries traditionally assigned to Kemeny's dualistic type of housing regime (e.g. UK, IE, FI). Moreover,