
Article

How housing affects the association between low income and living conditions-deprivation across Europe

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Abstract

To explain an emerging trend towards deteriorating living conditions among low-income households across several (West-)European countries, it makes sense to investigate domains of socio-economic regulation that impact on expenditures, rather than incomes. I focus specifically on the domain of housing. Multilevel analyses for 28 countries (*EU-SILC*) demonstrate that redistributive housing policies such as rental market regulation and housing allowances weaken the cross-sectional (between-country) positive association between a low-income and living conditions-deprivation, while also benefiting living conditions across the broader population. Regarding changes over time, increased uptake of housing allowances throughout the Great Financial Crisis (2008/2009) seems to have shielded in particular renters from deteriorating living conditions, and might have compensated for declining availability of social housing. Higher house prices and price volatility, indicating housing market financialization, are associated with increased living conditions-deprivation for renters and low-income owners, both cross-sectionally and within countries over time. Anti-poverty policies should thus take a broader perspective, and take better account of provision for housing and other basic needs.

Key words: housing and poverty, housing policy, welfare states, financialization of housing, living conditions

JEL classification: I32 Measurement and Analysis of Poverty; I38 Provision and Effects of Welfare Programs; Z13 Social and Economic Stratification

1. Introduction

1.1 Contextual and theoretical background

In spite of European Union (EU)-benchmarks, 2020 is not the year by which 20 million Europeans were lifted out of poverty or social exclusion. Though income poverty has ‘stabilized at a high level’ (Cantillon 2011), behind this aggregate stability (EU-27: 16.5% in 2005; 17.1% in 2018) several dynamics are taking place. While poverty rates are currently still declining for the elderly, across welfare state types they are increasing for households of working age (Dewilde, 2020). Within the latter group, a further bifurcation is occurring between ‘insider’-households holding secure jobs associated with high-quality social insurance, and those in precarious labor market positions or out-of-work, who are increasingly relegated into ‘a secondary world of welfare’ consisting of needs-based social assistance supplemented with ad hoc ‘anti-poverty’ measures (Palier and Thelen, 2010, p. 133; Clasen and Clegg, 2012; Emmenegger *et al.*, 2012; Rueda, 2014; Cantillon *et al.*, 2018). Even in Northern-European social-democratic welfare states, financing problems have forced governments to restrict access to contributory benefits, increase conditionality and decrease generosity (Greve 2017; Cronert and Palme, 2018).

Throughout the post-war period, economic growth and increasing affluence have generally produced better living conditions for subsequent cohorts. A potential deterioration of living conditions among ‘outsider’ households of working age facing less adequate income protection should, in the aggregate (similar to the overall stability in income poverty), be compensated for by improving living conditions among the elderly. This article, however, starts from the observation that accounts regarding destitution and hardship have soared in recent years. Although such a trend may partly result from the Global Financial Crisis (GFC, 2008/2009), other developments, in particular declining (urban) housing opportunities, are of a more structural nature.

The impression that incomes of low-income households nowadays seem to stretch less far is indicated by the increased use of foodbanks (e.g. Fitzpatrick *et al.*, 2016; BFVB, 2017), as well as the rise of over-indebtedness (Angel and Heitzmann, 2015). Fuel poverty, defined as ‘households’ inability to afford an adequate level of warmth and energy services’ (Bosch *et al.*, 2019, p. 1), has been identified as a major problem, particularly in Southern- and Eastern-Europe. Contributing factors not only are low energy-efficiency of low-quality housing, but also price increases following the liberalization of energy markets. Another indication relates to homelessness. Bearing in mind that given the lack of common definitions and methodologies, homelessness is hard to compare between countries and over time, it is nonetheless striking that available indicators reveal a clear upward trend across the EU (bar Finland) (The Foundation Abbé Pierre and FEANTSA, 2017). While increased homelessness partly results from declined social protection, housing is a major contributing factor. Changes in housing policies and markets—over the long term and in the wake of the GFC—have strongly impacted on tenure structures [e.g. declined homeownership of youth (e.g. Lennartz *et al.*, 2016), the ‘revival’ of private renting (e.g. Crook and Kemp, 2014)], and on the stratification of housing wealth (e.g. Ronald and Dewilde, 2017). Intersections between location, price/market developments and urban restructuring have rendered housing increasingly unaffordable for in particular young, urban, low-income and renting households (e.g. Dewilde 2018; Haffner and Hulse 2019). Signals indicating an emerging ‘housing affordability crisis’ are however only slowly picked up by policy. This may be due to: traditional views on poverty as caused by insufficient income to be tackled by welfare benefits; the fact

that housing policy/regulation and social protection are considered different competences, handled by different administrations¹; or the reluctance of more ‘financialized’ countries to implement radical interventions,² given the dependence of their economies on house price inflation (e.g. [Maclennan and Miao, 2017](#)).

Given these developments, I argue that we need to look beyond what happens in labor markets and welfare states, to include *developments in other domains of social and economic regulation affecting not only resources of the poor, but also expenditures, and therefore living conditions more generally*. Compared to previous times, it is possible that, overall, low-income households spend more of their income on basic needs. Even if ‘small’ signs of increased living conditions-deprivation (see Section 2.1 for terminology) are emerging, this implies a radical inversion of the secular improvement in living conditions associated with economic growth under post-war welfare capitalism.

1.2 Research questions

I thus focus on the social and economic regulation of housing across Europe, particularly how this domain influences to what extent a low income translates into better or worse living conditions. Although housing policy is an important welfare state pillar, the welfare system *sensu stricto* (income protection) and the housing system (housing-related social policies and market regulation)³ do not necessarily align (e.g. [Stephens, 2016](#)). For reasons of ideology and history, the organizing principles underpinning welfare and housing systems may be either similar, or different. Though this issue is often problematized in terms of the ‘neglect’ of housing in welfare state research (e.g. [Fahey and Norris, 2011](#)), it can also be exploited. When organized along similar ‘ideological’ lines as the welfare system, housing systems can be expected to replicate and even reinforce the outcomes of the labor market-welfare state-nexus. A typical example is Belgium, where a conservative–corporatist welfare system is combined with regressive fiscal subsidies for (mortgaged) homeownership, benefiting mainly high- and middle-income households (e.g. [Heylen, 2015](#)).⁴ Given the (too) small social housing sector, most low-income households rely on a lightly regulated private rental market. When the housing system is, however, organized along more redistributive lines, then it can attenuate the material consequences of welfare systems ([Stephens and](#)

1 In Flanders (Belgium), for instance, repeated signals from civil society (e.g. tenants’ associations, anti-poverty networks) are largely ignored. Housing unaffordability is considered to result from too low incomes by ‘housing officials’, while ‘social security officials’ consider high housing costs a housing market problem. A network of civil society organizations and academics is therefore planning to take this matter to court, as the ‘right to housing’ inscribed in the law is insufficiently guaranteed (www.woonzaak.be).

2 See, for instance, the stepwise approach to reducing generous mortgage-interest deduction arrangements in the Netherlands; arrangements that contributed to unprecedented house price inflation and a residential mortgage debt/GDP ratio above 100% (e.g. [Boelhouwer 2002](#)).

3 Welfare and housing systems are defined as the regulatory expressions of underlying welfare and housing regimes.

4 In Flanders, mortgage-interest deduction has been phased out for new owners as of 2020; in Brussels this is the case since 2017. *In lieu*, registration taxes were lowered. In Wallonia, existing arrangements are (at the moment of writing) still in place.

Fitzpatrick, 2007). This has been argued in particular for the UK—a liberal welfare state characterized by a large social housing sector and generous housing allowances. Comparing the UK and the Netherlands, Stephens and van Steen (2011) found that in both the countries the comparatively more redistributive housing system partly neutralizes income inequalities (re)produced by the welfare system. Housing policies however had a larger redistributive impact in the UK, given higher inequality produced by this liberal welfare state. Using panel data, Stephens and Leishman (2017, p. 1039) more recently even found that ‘the overwhelming majority of people who experienced chronic poverty avoided housing deprivation’. Housing policy has thus been discussed in terms of the ‘saving grace’-argument: the housing system saves the grace of an ungenerous liberal welfare system by attenuating the association between income poverty and material deprivation. Griggs and Kemp (2012) further demonstrated that (means-tested) housing allowances (mostly benefiting renters) form an important source of income support for poorer households across the ‘old’ EU15-Member States. The most redistributive housing policies refer to explicit (housing allowances) and implicit (social housing) housing cost subsidies. For the new EU-Member States, Mandic and Cirman (2012) found that housing conditions were ‘better than expected’ given lower economic affluence, suggesting a positive legacy of state-provided housing in the so-called Eastern-European Housing Model. My first research question thus asks *how—across Europe—the association between a low income (produced by labor markets and welfare systems) and living conditions-deprivation is moderated by the redistributiveness of the housing system.*

My second research question focuses on social–structural change over time. Similar to labor markets and welfare states, the social and economic regulation of housing has been subject to a growing reliance on markets, roughly since the 1980s (e.g. Forrest and Williams, 1984; Forrest and Murie, 1988; Ruonavaara, 2012; Norris, 2016; Tranøy *et al.*, 2020). Such (re-)commodification trajectories are contingent on housing arrangements historically in place. In several countries (not only UK or Ireland but also e.g. Sweden), governments scaled down social housing through Right-to-Buy schemes. Furthermore, ‘brick and mortar’-subsidies were replaced by demand (means-tested) subsidies, with private landlords housing a growing number of low-income households on housing allowances (see the edited volume by Crook and Kemp, 2014). From the early 1990s, rent controls and tenure security in the private rental market were (further) deregulated, although sometimes *in lieu* for enhanced quality regulation (e.g. O’Sullivan and De Decker, 2007; Kemp and Kofner, 2010; Weber, 2017; Kholodilin *et al.*, 2018). More recently, social rents were more closely tied to market rents, and/or fixed-term social rental contracts were introduced (e.g. Hoekstra, 2017: Netherlands; Holmqvist and Magnusson Turner, 2014: Sweden; Kennett *et al.*, 2013: UK).

Such commodification took on a new quality and pervasiveness through the so-called ‘financialization’ of mortgage, homeownership and real estate markets that originated from the deregulation of global capital and the European Monetary Union (EMU) (e.g. Stephens, 2007; Forrest and Hirayama, 2015; Byrne and Norris, 2019). While before the GFC most work on the financialization of housing focused on mortgage market deregulation and house price developments affecting young and low-income homeowners (e.g. Aalbers, 2008; Scanlon *et al.*, 2008), recent work focusses on other sectors targeted by global capital following the reregulation of housing finance, e.g. the rise of Buy-to-Let-mortgages and multi-property ownership by middle-class ‘investor households’ (e.g. Kemp, 2015; Pawson and

Martin, 2020); foreign direct investment in real estate by transnational wealth elites (e.g. Fernandez *et al.*, 2016; Rogers and Koh, 2017); or the procurement of (formerly social) rental housing by institutional investors and equity funds (e.g. Fields and Uffer, 2016; Kitzmann, 2017; Wijburg and Aalbers, 2017).

Notwithstanding variegation in forms and strategies of financialization, increased exploitation of housing assets by some has resulted in a range of housing market dynamics that—compounded with socio-spatial processes such as segregation, (super)gentrification and urban restructuring—compromise housing opportunities of others (Rolnik, 2013; UN, 2017; Haffner and Hulse, 2019). Generalizing statements linking housing market financialization to increased housing (wealth) and social inequalities tend to be inferred from in-depth case studies researching diverse mechanisms in specific (urban) localities [e.g. Desmond (2016) and Fields and Uffer (2016) on eviction carrousel by rent-seeking landlords in New York and Berlin, or Hulse and Yates (2017) on the mismatch between demand and supply of (urban) rental housing for different income groups in Australia]. Quantitative research for Western-Europe has nonetheless established an association between housing market financialization and declined affordability of housing for (low-income) owners and private renters, mainly arising through increased housing costs (Dewilde and De Decker, 2016; Dewilde, 2018). Housing unaffordability may eventually spill over to other domains, e.g. creating financial stress, indebtedness or involuntary relocation to lower-quality properties or unattractive locations. My second research question is thus: *are developments over time in the association between a low income and living conditions-deprivation explained by macro-level trends related to housing system (re-)commodification and financialization?* Phrased differently, if income poverty across Europe is persistently high, but the material consequences of a low income are (partly) attenuated by the regulation of housing, then trends towards (re)commodification and/or financialization of housing may result in a stronger association between income and living conditions in recent times, giving rise to increased hardship.

I investigate my research questions by means of multilevel analyses for 28 countries using *EU-Statistics on Income and Living Conditions (EU-SILC, 2005–2011–2017)*. As *EU-SILC* is a four-year rolling household panel, cross-sectional slices from these three time points boil down to a data structure that is similar to that of repeated cross-sectional surveys. Extensions of multilevel modeling (e.g. Fairbrother 2014) allow for a decomposition of country-level effects into cross-sectional between- and longitudinal within-effects. These models improve upon cross-sectional multilevel models as they avoid inferring conclusions regarding social-structural change within countries from cross-sectional between-country differences. They improve upon time-series cross-sectional (TSCS) models (based on country-level panel data) as compositional effects at the micro-level are accounted for. My main focus is on: (i) the impact of contextual between- and within-variables indicating housing policy/market characteristics on living conditions-deprivation; and (ii) cross-level interactions between having a low income and these contextual indicators. Regarding within-country changes, my timeframe (2005–2017) is rather short whilst institutional arrangements tend to be particularly slow-moving; it is therefore likely that significant effects mostly pertain to between-country differences. Before turning to the empirical analysis, I elaborate on the relationships between housing, poverty and welfare.

2. Poverty, housing and welfare

2.1 Housing as a dimension of poverty

The relationship between housing and poverty is evident, but complicated. Following Townsend (1979) and Sen (1992), European conceptualizations define poverty as multidimensional (pertaining to different life domains), social and relative. Poverty arises when individuals and households—due to lacking material, social and cultural resources—are denied the opportunity to fully participate, without shame, in the society in which they live. Ever since the first housing policies were established, the ‘right to housing’ has been a political marker of concern pointing out housing as an area for welfare state policy (Bengtsson, 2001; Pattillo, 2013). Housing-related deprivation can therefore be considered a dimension of poverty.

Notwithstanding positive associations between different dimensions associated with poverty, different indicators tend to identify different population groups as poor (e.g. Kangas and Ritakallio, 1998). In the European context, *EU-SILC* functions as the main source of reference informing the monitoring of living conditions. Based on these data, the overlap between relative income poverty and ‘life-style deprivation’ (consumption deficits arising from a stated lack of income) tends to be larger than between relative income poverty and housing-related deprivation (the latter questions are however not explicitly linked to a stated lack of income) (e.g. Whelan and Maître, 2007). For this reason, EUROSTAT’s material deprivation-concept refers to ‘economic strain’ and ‘enforced lack of consumption durables’, but not to housing deprivation. People are ‘at risk of poverty or social exclusion’ when they live in a household with low work intensity (leading to a lack of resources); *or* when their household falls below the 60% of median population income-threshold; *or* when they suffer from severe material deprivation (resulting from a stated lack of resources). Indicators regarding housing quality or cost figure less prominently as indicators of material deprivation, but—given recent housing market developments—have nonetheless gained in importance in the overall monitoring of poverty and social exclusion (e.g. Guio *et al.*, 2009). I thus argue for a broader concept of ‘living conditions-deprivation’ that is not so narrowly focused on income/resources, but also takes account of several trade-offs and related household strategies (e.g. co-residence, credit/debt, moving into lower-quality housing) arising from higher housing cost burdens associated with less redistributive housing policies/regulation and more intense housing market financialization (see Section 3.2 for operationalization).

2.2 Welfare systems and housing systems

The interplay between welfare systems and housing systems is since long recognized as central to welfare outcomes [see e.g. older literature on the trade-off between support for home-ownership and generosity of spending on pensions and healthcare (e.g. Kemeny, 1981; Castles, 1998; Dewilde and Raeymaeckers, 2008) and its’ modern-day translation into the debate on asset/property-based welfare for life-course risks (e.g. Malpass 2008)]. Comparative housing and welfare research however remain difficult to integrate. Starting with the latter, the concept of welfare regimes is commonly used to refer to different social policy strategies modifying the distributional outcomes of (labor) markets. Though criticized and elaborated on by many, Esping-Andersen’s (1990) *Worlds of Welfare Capitalism* continue to inform comparative understandings of economic well-being and stratification. Inequality and poverty are lowest in the Nordic social-democratic welfare regime, followed

by the Continental-European conservative-corporatist countries, and then the Anglo-Saxon liberal welfare regime. A rudimentary variant of the conservative-corporatist welfare state, the Southern-European welfare state tends to perform worse. The post-communist countries do not form a homogeneous cluster. While the Baltics have followed a liberal trajectory upon the implosion of communism, other countries combine a variegated mix of conservative-corporatist and liberal traits (Kuitto, 2016; Kovács *et al.*, 2017). Though relative income poverty and inequality are seemingly low in some post-communist countries, economic affluence is lower compared with Western-Europe and living conditions remain more disadvantaged.

Similar to welfare regimes, so-called housing regimes have been identified (Schwartz and Seabrooke, 2008; Stephens, 2016; Dewilde, 2017; Blackwell and Kohl, 2019). Likewise, such regimes historically originate from ideologically rooted and evolving organized interests defining qualitatively different arrangements between states, markets and the informal sector. The social production of ‘housing welfare’ is however hard to grasp and quantify. Complexity arises mainly from the commodity nature of housing—which in turn explains both why housing systems do not necessarily align with welfare systems, and why housing has been ‘easy’ to re-commodify. While other social services are mainly provided for by the state, the market is the basic mechanism of distribution in housing: houses are sold and bought on the property market, while rental housing is mostly allocated by means of market contracts between landlords and tenants. Housing policy in European welfare states mostly pertains to market correctives, ensuring the realization of the social right to housing as a commodity (Bengtsson, 2001, p. 259). This ‘wobbly pillar’ (Torgersen, 1987) under the welfare state is by no means small, but given the wide range of policy instruments targeted at different housing market sectors—direct, indirect fiscal and implicit (virtually unmeasurable) support—it is impossible to arrive at a conclusive estimate of public expenditure on housing (Fahey and Norris, 2011). Concepts such as homeownership, private renting and social housing furthermore have different meanings across time and space. Depending on its institutional embeddedness, a seemingly-similar policy can have a more commodifying or more de-commodifying (redistributive) impact. Forms of housing provision that are generally considered as commodified (i.e. private homeownership) can have a strong public dimension through fiscal welfare. Identical policy goals (e.g. providing decent and affordable housing for all) can thus be achieved by variegated mixes of housing and welfare policies.

Though analyses in this paper rely on macro-quantitative contextual-level indicators of housing systems and markets, when cross-classifying these indicators country groups arise which more less reflect the underlying housing regimes identified in more institutionalist research. Such groups are a useful heuristic instrument for organizing quantitative analyses involving many countries. As most readers are familiar with welfare regimes, I briefly discuss country groups reflecting housing regimes (see Figures 1–3 for country groups, also in e.g. Lersch and Dewilde, 2015; Soaita and Dewilde, 2019). I use these groups as a reference point throughout the analysis-section.

In Northern- and Western-Europe, mortgage markets are well-developed, resulting in a marketized provision of homeownership. Countries with unitary and dual rental markets are distinguished (Kemeny, 1995). In unitary countries, characterized by a social-democratic or conservative policy legacy of corporatist signature, private and not-for-profit public housing providers (e.g. housing corporations) operate in a common, more strictly regulated rental market. The ensuing competition results in good-quality housing across tenures and

income groups. In dualist countries, homeownership dominates without attractive rental alternatives. This reflects an ideological preference for owner-occupied housing, promoted by the state but allocated through the market. Private renting is more lightly regulated and associated with a weaker socio-economic position and a less favorable price/quality ratio. A small state-governed social housing sector is shielded from the market and targeted at less-advantaged households.

In Southern-Europe, mortgage markets were weakly developed until the 1990s. The driving force behind a rapid transformation from renting to (outright) owning during the post-war period was the absence of government support for renting. Gaps in housing provision were solved within extended families by older generations providing housing support to younger adults in return for assistance in old age (e.g. [Chiuri and Jappelli, 2003](#); [Allen et al., 2004](#)). Informal routes to self-provisioned homeownership were sustained by weak land use and building standard regulations until the 1980s ([Cabr  Pla and M denes Cabrerizo, 2004](#); [Poggio, 2013](#)). Although mortgage credit has become more accessible in recent decades, strong house price inflation combined with strict maximum loan-to-value ratios, necessitating the use of savings. There are few alternatives to homeownership.

In Eastern-Europe, the transition from planned to free-market economies brought extensive privatization of housing as well as the restitution of property to pre-communist owners. As the mortgage market did not develop at the same pace and the state retreated from housing provision, the family stepped in ([Stephens et al., 2015](#)). Housing shortages prevent young people from establishing independent households and entering homeownership; units are redistributed within extended families (e.g. [Zavisca and Gerber, 2017](#)). Although outright homeownership is very high (in most countries above 90%), the housing stock is of low quality, resulting in high housing-related costs ([Mandic, 2010](#)). [Soaita and Dewilde \(2019\)](#) find that housing quality is superior in the former ‘reformist’ countries of Central- and Eastern-Europe, where under communism housing shortages were solved by state-support for more privatized alternatives. In the South-East-European countries (Albania, Bulgaria and Romania)⁵ where a strong belief in centrally planned housing prevailed but the state failed to deliver, inferior housing quality remains reflective of a tradition of unsupported ‘do-it-yourself’-strategies. In the Baltics, urban overcrowding typical for Soviet-style state-provided mass housing combined with increased economic affluence and labor migration (associated with population decline and remittances) to produce currently better-than-expected housing conditions.

Housing regimes have been shown, net of economic affluence and welfare systems, to independently impact on housing conditions. More state intervention results in better outcomes overall, a higher reliance on (mortgage) markets benefits quality but compromises housing cost burdens, while a higher reliance on informal strategies compromises quality and housing-related costs ([Norris and Domanski, 2009](#); [Dewilde, 2017](#)). [Borg \(2015\)](#) found that, controlling for affluence, ‘overall’ housing deprivation is higher in countries with a dual vs. a unitary rental market. This is particularly true for renters (as they receive overall less state support in these countries, especially when social housing is limited) ([Dewilde, 2017](#)), but there may also be spill-over effects to other sectors. [Kemeny \(1981\)](#), for instance, argued that the total cost of housing in a society is higher when housing provision is more commodified. As all market actors in the chain of provision maximize profits at each stage,

5 Only Romania is included in this article.

overall housing costs, and hence higher average housing costs for individual households, are higher (Bratt *et al.*, 2013). I extend on this research by testing whether housing policy and market characteristics—through combined impacts on housing quality and housing(-related) costs and ensuing household strategies—moderate the association between a low income and living conditions-deprivation.

Varieties of trends towards housing market financialization are linked with, but also cut across, established welfare and housing regimes (also see Fernandez and Aalbers, 2016). In the Anglo-Saxon liberal homeownership societies (in Europe: UK and Ireland), deregulation of mortgage markets since the 1990s formed part of a broader trend towards so-called ‘asset-based’ welfare provision (e.g. Crouch, 2009). Financialization of homeownership however also occurred in social-democratic welfare states with a declining unitary rental market and expanding (private) homeownership in the decades before the GFC (e.g. Netherlands, Sweden, Denmark), as well as in some Southern-European countries (Spain, Portugal). In Spain and Ireland, financialization of mortgage markets was underpinned by macro-economic policies aimed at both asset price growth and economic growth in underdeveloped regions through construction of new housing (Norris and Byrne, 2015). Lennartz (2017) and more recently Tranøy *et al.* (2020) argued that in social-democratic welfare states, high post-industrial female labor market participation contributed towards increased take-up of mortgage debt and possibly a redirection of social spending toward Social Investment supporting in particular the combination of work and care. Blackwell and Kohl (2018) pointed at the impact of historically rooted housing finance systems (bond-based versus deposit-based) on tenure structure and form, which in turn influences the recent integration of housing into (global) capital markets. In particular unitary-rental market countries tended to rely on bond-based housing finance institutions producing multi-story tenement housing in urban areas. Deposit-based regimes in the dual-rental market countries of North-Western-Europe tended to promote single-family owner-occupied housing. Thus, while in the dual-rental market countries of liberal descent financialization also takes place through the enhanced profile of ‘investor’-landlords purchasing multiple properties (e.g. Kemp, 2015; Ronald *et al.*, 2015; Pawson and Martin, 2020), in unitary-rental markets formerly not-for-profit rental housing portfolio’s are procured by investors for either rental income streams or simply as security underlying other transactions (e.g. Kitzmann, 2017; Wijburg and Aalbers, 2017). In sum, both historical and current-day housing and welfare regime characteristics contribute towards understanding cross-country differences in financialization opportunities, forms and strategies across housing market sectors. What is common, however, is the deterioration of housing opportunities for those with less power and income.

2.4 Hypotheses

I evaluate the following hypotheses, starting out from an already well-established (in previous research) positive association between having a low income and experiencing living conditions-deprivation:

H1a: Across Europe, the positive association between low income and living conditions-deprivation is attenuated by redistributive housing policies and regulation ((private) rental market regulation, social housing, housing allowances) targeted at lowering housing costs and/or improving housing quality.

H1b: Such policies also attenuate living conditions-deprivation for the population at large.

H1c: Across Europe, the positive association between low income and living conditions-deprivation is reinforced by a higher reliance on (financial) markets (resulting in housing cost unaffordability).

H2: Within-country developments over time are explained by macro-level changes in housing: re-trenchment of redistributive housing policies and housing market financialization increase living conditions-deprivation overall, whilst also reinforcing the positive association between a low income and living conditions-deprivation.

3. Data, variables and method

3.1 Data

I use representative micro-level data for 28 countries from *EU-SILC* 2005, 2011 and 2017 (Table A1.1 in Supplementary Appendix 1). *EU-SILC* is a rolling household panel: each year a quarter of the sample is refreshed, hence each individual is followed for maximum four years. There is thus no overlap between households/individuals interviewed in the selected years.⁶ Pooling data from three waves leads to a clustered data structure: households nested within country-years within countries. I estimate models for owners and renters, and focus on the association between having a low income (versus a middle income) on a composite index of living conditions-deprivation. I exclude the top 30%-incomes: few high-income households have a deprivation score higher than 0, especially in Western-Europe. Accounting for missing data (7.5%), my analysis samples contains 92 126 renting and 315 890 owning households nested within 84 country-years and 28 countries. A total of 29 423 households in rent-free accommodation are included in Models 0–2, but dropped from Models 3–8 (renters and owners separately). I weigh for household size, as larger households tend to be comparatively poorer.

3.2 Household-level variables

‘Low income’ is indicated by the bottom-30% of the country-specific income distribution. This way, I avoid modelling ‘perverse’ trends in relative income poverty due to economic fluctuations around the GFC. Income pertains to equalized disposable household income (modified OECD-scale). The dependent variable consists of a composite index (0–20) referring to living conditions-deprivation, designed to capture as much variation as possible (especially given my geographic range). It includes: housing quality problems (0–4: leaking roof, damp walls/floors/foundation, rot in window frames or floor; no bath or shower; no indoor flushing toilet; dwelling too dark/not enough light), overcrowding (EUROSTAT’s definition), and life-style/material deprivation [0–15: arrears on mortgage or rental payments, utility bills, higher purchase installments or other loans; unable to afford: keeping the home adequately warm, one week’s annual holiday away from home, a meal with meat, chicken, or fish (or vegetarian equivalent) every other day, face unexpected financial expenses, a telephone, a color TV, a computer, a washing machine, a car; (very) difficult to make ends meet; total housing cost forms heavy financial burden; other loan repayments form heavy financial burden]. Control variables are: age, education and activity status of household reference person; household type; number of children < 16; urbanization, and

⁶ The number of rotational groups varies for some countries (France: nine; Norway: eight; Luxembourg: pure panel) (Iacovou et al. 2012).

tenure (outright versus mortgaged owner, social versus private renter). In Denmark and Sweden, all renters were originally coded as renting at ‘prevailing or market rate’; in these countries there is no concept of market rent because of strict rent regulation. I recoded all renters in these countries as social renters.

To account for the possibility that living conditions-deprivation is influenced by deteriorating incomes of the poor (‘the poor becoming relatively poorer’, see Section 1.1) rather than by (housing) policy and market developments influencing expenditure for basic needs—in particular, through increased unaffordability of housing—I additionally include household income, expressed as a ratio of the country-specific median.⁷ I however refrain from including housing costs (unaffordability) as independent variable or micro-level mediator explaining the association between low income and living conditions-deprivation, for different reasons. First, the commonly used housing-costs-to-income-ratio has several disadvantages and is less useful for comparisons between countries (Dewilde, 2017). In fact, including this indicator does not affect results (not reported). Second, when housing becomes more unaffordable, households (in particular housing market entrants) can respond in different ways. They can, theoretically speaking, chose to ‘pay more for the same’ and therefore spend less on non-housing consumption or rely more on credit; both can contribute to other forms of living conditions-deprivation (e.g. indebtedness). The same households could however also buy/rent smaller/lower-quality housing. Or they could co-reside, usually with (grand)parents—for both generations co-residing is an effective way to reduce ‘micro-level’ housing costs in a macro-level context of unaffordability, but at the cost of overcrowding. My dependent variable incorporates these different trade-offs. The impact of ‘housing’ on the association between low income and living conditions-deprivation—the main topic of this article—is, then, captured by means of a multi-level modelling strategy, whereby I evaluate how my association of interest is moderated by macro-level indicators capturing housing policy/regulation and market differences between countries and, within countries, over time.

3.3 Contextual-level variables

Given the complex structure and interpretation of housing policies and regulation across tenures and countries (see Section 2.2), I constructed two composite indexes. These refer to: (i) the extent of *rental market regulation* [based on two ‘underlying’ indicators: % of households in social renting; index of rental market regulation referring to (private) rent regulation and tenure security collected by Weber (2017) and updated by Kholodilin *et al.* (2018)]; and (ii) the availability and generosity of (mostly redistributive) *housing allowances*, based on a so-called benefit reciprocity approach (Otto, 2018). The latter is a way to deal with the lack of good-quality comparable macro-level housing policy indicators for all countries. Both indexes are discussed further in [Supplementary Appendix 2](#). From [Figure A1.1 \(Supplementary Appendix 1, panel A\)](#), it is clear that the North-West-European countries with a unitary rental market score higher than all other country groups, but also that from 2005 to 2017, rental market regulation has declined. In some countries (Sweden, Denmark), this is due to a liberalization of rent laws, in other countries it is caused by a shrinking social rental market (Netherlands). Similar declines in regulation are visible for Southern-European and Central-East-European countries. This is often, though not always, due to a decline of social housing (e.g. Czech Republic and Slovakia). Access to and generosity of

7 A normal probability plot indicates that there is no need for a further transformation.

housing allowances is far better in Western- than in Eastern-Europe (panel B). In Romania, no housing allowances exist. As housing allowances are mostly means-tested, there is a tendency for increased access and benefit amounts throughout the GFC (i.e. automatic spending related to income decline) in the countries of North-West-Europe. Increased access/generosity of housing allowances between 2011 and 2017 for the Central-and-East-European group is due to developments in Slovenia, Slovakia and the Czech Republic. In the latter countries, housing allowances seem to compensate for declining social housing.

Given its variegated occurrence across countries and housing market sectors, the operationalization of housing market financialization is more problematic. The main issues however arise from a so-called ‘housing-finance feedback cycle’ involving ‘an elastic supply of credit and finance flowing into an inherently scarce, fixed and irreproducible asset—land (or desirable location) – with inevitable inflationary consequences’ (Ryan-Collins, 2019, p. 18), affecting (affordability of) the costs of owning and renting. Housing affordability is usually expressed in terms of the *house-price-to-income ratio* (OECD) (Panel C, 26 countries). This ratio however tends to be much higher in less developed countries, and is therefore mostly available as an index relative to some point in time (2015); it is thus only ‘quasi-comparable’ between countries. A second indicator is *house price volatility*, which is indicated in this article by the absolute value of *annual real house price growth* (EUROSTAT) (Panel D). I use the absolute value rather than the actual value as otherwise large house price increases/falls around the GFC would be ‘neutralized’ in the computation of the between-effect, producing counter-intuitive results for this variance component. House prices changes became negative around the crisis, and picked up after. The pattern is more outspoken across Eastern-Europe (though residential mobility and the volume of transactions is much lower, so less households are affected); other countries with stronger developments are Ireland, UK, Denmark, Spain and Greece. House-price-to-income ratio’s (relative to 2015) similarly increased before the GFC and declined afterwards; in most countries, prices are trending upwards after 2015 (excluding Romania, the Baltics, Greece, Italy and Finland).

Control variables at the country-year level are *social spending* (% of GDP) (EUROSTAT) and *GDP* (US\$, prices and PPP’s of 2010) (UNECE). I also include a dummy-variable *post-communism*. Country-year descriptives are listed in [Table A1.2](#).

3.4 Statistical analyses

To test for the moderating cross-sectional (between-country) and longitudinal (within-country) influence of housing policies/market developments on the association between low income and living conditions-deprivation, I estimate hierarchical linear regression models with random intercepts for country-periods (level 2) and countries (level 3). Following [Fairbrother \(2014\)](#), contextual variables at the country-year level are decomposed by constructing a component that captures between-country differences (indicated as *_BW*) and a component that captures within-country developments (indicated as *_WI*). I include two period fixed-effects dummies in order to control for simultaneous but unrelated time trends potentially causing spurious associations. My main focus is on: 1) the impact of contextual-level indicators on living conditions-deprivation; and 2) cross-level interactions between having a low income and these contextual indicators. Random slopes for ‘low income’ are estimated at levels 2 and 3 ([Fairbrother and Schmidt-Catran 2016](#); [Heisig and Schaeffer 2019](#)). To avoid three-way interactions with tenure, I estimate separate models for owners and renters. In the post-communist countries, 82.7% of the sample lives in owner-occupied

housing (77.9% are outright owners), compared with 7.7% in rental housing (2.9% are social renters). In Western-Europe, the respective percentages are 67.3 (23.8% are outright owners) and 27.4 (12.0% are social renters)—with further differences between housing regimes along the lines indicated in section 2.2. Models are estimated on all households; results are unaffected by restricting the sample to households of working age (data not reported).

4. Results

4.1 Some preliminary figures

Figure 1 displays the average living conditions-deprivation scores in 2005, 2011 and 2017 for low-income households. In Eastern-Europe, deprivation is still clearly higher, although strong declines were achieved between 2005 and 2017 (less so in Hungary and Slovenia). In 2017, living conditions-deprivation remains highest in Romania (6.4 items). In Western-Europe, the lowest scores are found in the social-democratic welfare states. The highest scores are found in Southern-Europe, with the conservative-corporatist welfare states in between. With regard to the longitudinal component of this article—i.e. slow-moving social-structural changes regarding the (re)commodification and financialization of housing—the GFC (although caused by excess financialization) is a disruptive factor. Higher deprivation-scores in 2017 than in 2005 could either result from an underlying creeping upward trend, or could still result from a spike in deprivation around the crisis (followed by a decline) that causes a deviation from a secular trend towards slowly improving living conditions. In all post-communist countries, living conditions-deprivation is much lower in 2017 compared with 2005, and in most countries such a decline was continuous throughout the observation window. In many Western-European countries, there was a surge in deprivation-scores around 2011 that potentially had not completely levelled off by 2017. On the other hand, such a near-decade-long post-crisis effect may be unlikely, and could thus result from more slow-moving factors contributing to deteriorating living conditions. Abstracting from the drivers of this trend, we see that in about half of Western-European countries, living

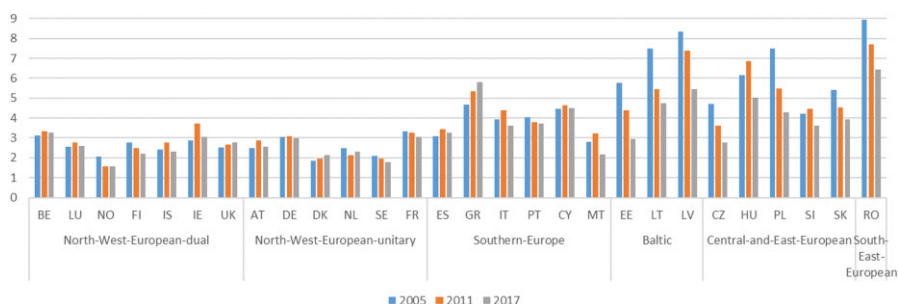


Figure 1 Average level of living conditions-deprivation for low-income households (*EU-SILC*, household level, weighted for non-response).

Note: MT, RO: 2007 instead of 2005. DE: 2010 instead of 2011, 2014 instead of 2017. IS, UK: 2016 instead of 2017.

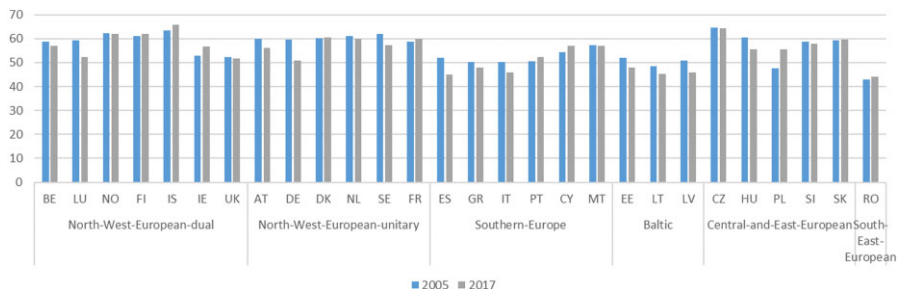


Figure 2 Income of low-income households as percentage of country-specific median (*EU-SILC*, household level, weighted for non-response).

Note: MT, RO: 2007 instead of 2005. DE: 2014 instead of 2017. IS, UK: 2016 instead of 2017.

conditions-deprivation is higher in 2017 compared with 2005. In the UK, Denmark and Greece, there was a continuous increase; in the Netherlands, deprivation increased between 2011 and 2017. *Even though increases in living conditions-deprivation in several Western-European countries are small, they are, substantively, of high significance. During the post-war period, living conditions have tended to improve, not deteriorate.*

Figure 2 looks at the household income of low-income households, expressed as a proportion of country-specific median population income (also included as control in the multivariate models). As there is no similar ‘crisis-effect’,⁸ I only show the bars for 2005 and 2017. In many Western-European countries, but also in the Baltics, the bottom three deciles lost ground compared to the median household, i.e. the poor became relatively poorer. **Figure 3**, for illustrative purposes, charts developments in the total housing cost overburden rate (EUROSTAT’s definition), again for low-income households. With some fluctuations around the crisis, between 2005 and 2017 the housing cost overburden rate has generally improved in Eastern-Europe, as well as in Cyprus and Malta. In most Western-European countries, there is an opposite trend—seemingly less related to the GFC—towards more unaffordable housing costs; exceptions are Iceland, the Netherlands and Sweden.⁹ Denmark stands out as a country where low incomes remained stable, but where housing costs increased as well as living conditions-deprivation. It is also a country where rental market regulation was liberalized, while residential mortgage debt take-up increased considerably in the run-up to the GFC.

In **Table 1**, I report on the mostly fixed household-level part of my multivariate models, including contextual-level controls. The null-model reveals that there is significant variance at all levels. 73.4% of the variance in living conditions-deprivation is explained by household-level factors, 5.0% can be attributed to differences between country-periods

- 8 There may have been absolute income declines, but then these were mostly of similar size for all deciles in the bottom half of the income distribution.
- 9 Given that in dual-rental market countries more (elderly, low-income) households are (outright) owners, housing cost overburden rates are generally lower compared with unitary-rental market countries (see, for instance, [Dewilde 2017](#) for a more elaborate discussion). This difference is however not the main focus of this article, and is controlled for in the multivariate models.

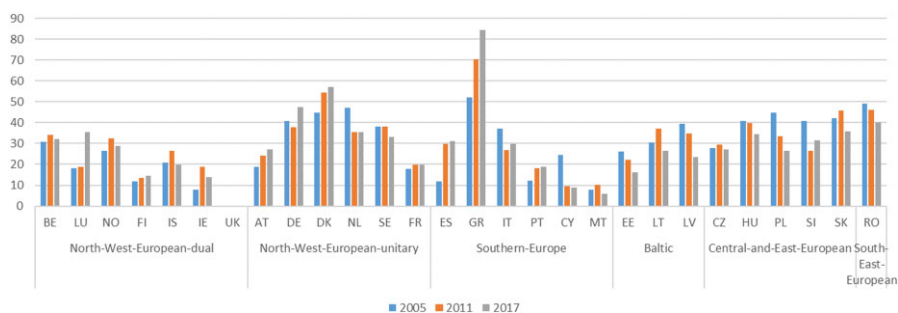


Figure 3 Development over time of 'total housing cost' overburden rate for low-income households (EU-SILC, household level, weighted for non-response, %).

Note: MT: 2007 instead of 2005. RO: 2007 instead of 2005, 2012 instead of 2011. DE: 2010 instead of 2011, 2014 instead of 2017. IS: 2016 instead of 2017. NO: 2006 instead of 2005. UK: break in data series. The housing cost overburden rate is the percentage of the population living in households where the total housing costs (including water, electricity, gas and heating) represent >40% of disposable income (own calculation).

(bearing in mind the short time frame), and 21.5% is due to country-level factors. Higher household incomes are fairly strongly associated with lower living conditions-deprivation; a doubling of income lowers the score by about 1.6 items. A low income nonetheless additionally increases deprivation (overall with about 0.4 items), more so for renters (model 3) than for owners (model 4). Living conditions-deprivation decreases with age and education of the household reference person, but increases with the number of children. Compared to couples (with)out children, all other household types report higher deprivation. The same is true for households with a reference person in unemployment or economically inactive (versus in work). Outright owners experience less living conditions-deprivation compared to mortgaged owners. Retirement seems to increase deprivation amongst owners, but to decrease deprivation amongst renters—bearing in mind, however, that this effect is controlled for age, income, education, tenure and urban–rural living. This difference might come about through housing quality, which in some countries is particularly low among elderly rural (outright) owners. Urban households experience more living conditions-deprivation compared with rural households. Compared with outright owners, all other tenures experience higher deprivation. There is no significant difference between social and private renters (model 3), bearing in mind that the meaning of social and private renting differs across housing regimes. As was clear from Figure 1, living conditions-deprivation is significantly higher in post-communist Europe (model 1). This contextual effect is however mostly mediated by economic affluence and social spending (model 2), though for owners (model 4) there is perhaps some evidence in support of a 'positive' post-communist legacy (Mandic and Cirman 2012). Between-country differences in economic affluence and social spending are negatively associated with living conditions-deprivation. The same goes for within-country economic growth and increases in social spending, though the latter effect is only borderline-significant ($P < 0,10$) for renters only (model 3). Together, the contextual-level controls capture most of the time-trend reported in model 1.

Table 1 Multilevel regression analyses of living conditions-deprivation: household-level results and contextual-level controls [EU-SILC, N = 437439 (all); number of country-years = 84; number of countries = 28]

	Model 0	Model 1	Model 2	Model 3	Model 4
	All hh	All hh	All hh	Renters	Owners
<i>Household-level variables</i>					
Low income (ref=middle income) (random)		0.400***	0.400***	0.561***	0.355**
Household income		-1.608***	-1.608***	-1.918***	-1.456***
Age household reference person		-0.003***	-0.003***	-0.005***	-0.002***
Household type (ref=couple with(out) children)					
Single		0.237***	0.237***	0.319***	0.272***
One-parent family		0.868***	0.868***	0.772***	0.854***
Other (incl, multi-generation)		0.625***	0.625***	0.798***	0.579***
Education household reference person		-0.343***	-0.343***	-0.360***	-0.317***
Household reference person in work (ref)					
Unemployed or economically inactive		1.012***	1.012***	1.128***	0.888***
Retired (early)		0.078***	0.078***	-0.279***	0.110***
Number of children < 16		0.186***	0.186***	0.233***	0.166***
Urbanization (ref=rural)					
Urban		0.133***	0.133***	0.254***	0.077***
Missing		-0.050	-0.048	0.054	-0.109*
<i>Tenure (ref=outright owner)</i>					
Mortgaged owner		0.694***	0.694***		0.690***
Private rental		1.587***	1.587***	-0.022	
Social rental		1.649***	1.649***	ref	
Rent-free		0.535***	0.536***		
<i>Contextual-level controls</i>					
Post-communist (country-level)		0.657*	-0.590 (*)	0.956 (*)	-0.681*
GDP_BW (/1000)			-0.031**	-0.040**	-0.029**
GDP_WI (/1000)			-0.150***	-0.143***	-0.152***
Social spending_BW			-0.123***	-0.104*	-0.097***
Social spending_WI			-0.080	-0.102 (*)	-0.079
<i>Time-trend (ref = 2005)</i>					
2011		-0.188	0.196	0.247	0.197
2017		-0.624***	0.218	0.057	0.248
<i>Constant</i>	2.863***	3.833***	3.825***	5.186***	3.657***
<i>Variance components</i>					
Intercept variance household-level	6.662***	5.101***	5.101***	5.960***	4.722***
Intercept variance country-year level	0.461***	0.299***	0.211***	0.347***	0.210***
Intercept variance country-level	1.951**	1.371*	0.810*	0.604**	0.974**
Slope variance low income—country-year level		0.042***	0.042*	0.104***	0.046***
Slope variance low income—country-level		0.199***	0.198***	0.099*	0.248***
<i>Log Likelihood (-2LL)</i>	5 204 723	4 911 491	4 911 449	947 235	3 627 746
<i>AIC</i>	5 204 731	4 911 545	4 911 511	947 291	3 627 802
<i>BIC</i>	5 204 779	4 911 867	4 911 880	947 578	3 628 127

Contextual-level variables centered when continuous. * $P < 0.10$; ** $P < 0.01$; *** $P < 0.001$. Covariance structure = unstructured.

4.2 Multilevel results

Tables 2 (renters) and 3 (owners) display results from subsequent models estimating, one by one, the impacts of contextual variables indicating between-country differences and within-country social change regarding housing system features indicating redistributiveness versus reliance on markets, and housing market financialization.

Starting with the index of *rental market regulation* (pertaining to both regulation of private renting and availability of social renting), more regulation results in less living conditions-deprivation for all renters (Table 2, model 5a); and even less so for low-income renters (cross-level interaction is negative and significant; model 5b). Similar between-country effects can be noted for owners and low-income owners (Table 3, model 5b), although the overall main effect is a lot smaller and not significant (model 5b). In line with H1a, I conclude that, while more rental market regulation tends to benefit all renters, higher rental market regulation additionally attenuates the positive association between a low-income and living conditions-deprivation. Bearing in mind that I control for differences and trends in social spending, economic affluence and post-communist legacy, such an effect furthermore seems to ‘spill-over’ across tenures, given that similarly significant negative estimates are noted for owners (supporting H1b). There is no empirical evidence—so far—for increased living conditions-deprivation resulting from the creeping liberalization of rental market regulation over time across housing regimes. Variation over time in this indicator is however far more limited compared with trends in social spending and economic affluence. A non-significant ‘within-effect’ may however also result from the fact that such liberalization is partly compensated for by increased access to or generosity of housing allowances (Figure A1.1, Panels A and B). As *housing allowances* are usually means-tested, they specifically attenuate the association between having a low-income and living conditions-deprivation for low-income renters (Table 2, models 6a and 6b), which again is in line with H1a. Housing allowances also seem to benefit middle-income owners, although again such an effect is particularly true for low-income owners (Table 3, model 6b). We furthermore note a significant ‘within-country’-effect for owners, in the sense that over-time increases in access to and generosity of housing allowances are associated with increasing living-conditions deprivation. Such an effect might reflect the fact that following the GFC, benefit reliance, specifically on means-tested housing allowances, ‘automatically’ increased as more households became eligible. In fact, it is near-impossible to empirically separate the impact of the sheer ‘existence’ of housing allowances as a social right from their impact on household income (as social rights are translated into benefits when incomes fall and more households become eligible). Housing allowances however mostly tend to benefit renters, not owners.¹⁰ The lack of a similarly positive longitudinal ‘within-effect’ for renters could thus indicate that for this tenure (which houses on average more lower-income households), redistributive housing allowances ‘kicked’ in and were more or less effective in cushioning the impact of the crisis. Such an effect presumably did not occur to the same extent for owners, giving rise to a somewhat counter-intuitive positive contextual ‘within-country’-effect.

Regulation and redistributive housing policies matter for living conditions-deprivation as well as for the association between low income and deprivation, but so do trends towards

10 In several countries housing benefits only pertain to renters, not owners (see [Supplementary Appendix 2](#)). Even if owners are eligible however, their incomes still tend to be higher—on average—than renters’ incomes.

Table 2. Multilevel regression analyses of living conditions-deprivation, renters: macro-level results (EU-SILC; N = 92 126; number of country-years = 84; number of countries = 28)

	Model 5a	Model 5b	Model 6a	Model 6b	Model 7a	Model 7b	Model 8a	Model 8b
<i>Household-level variables (controls not reported)</i>								
Low income (ref=middle income) (random)	0.560***	0.564***	0.560***	0.565***	0.612***	0.616***	0.552***	0.553***
<i>Contextual-level variables (controls not reported)</i>								
Index of rental market regulation_BW	-0.274*	-0.296*						
Index of rental market regulation_WI	-0.074	-0.102						
Index of housing allowances_BW			-0.088	-0.116				
Index of housing allowances_WI			0.087	0.158				
House price-to-income ratio (2015 = 100)_BW					0.065**	0.077***		
House price-to-income ratio (2015 = 100)_WI					0.012**	0.011*		
House price volatility_BW							-0.094	
House price volatility_WI							0.039**	0.046***
<i>Cross-level interactions with low income</i>								
Index of rental market regulation_BW		-0.103*						
Index of rental market regulation_WI		0.035						
Index of housing allowances_BW				-0.093**				
Index of housing allowances_WI				-0.094				
House price-to-income ratio (2015 = 100)_BW					0.011			
House price-to-income ratio (2015 = 100)_WI					0.003			
House price volatility_BW							0.020	
House price volatility_WI							-0.010	
<i>Time-trend (ref = 2005)</i>								
2011	0.228	0.229	0.213	0.215	0.358(*)	0.357(*)	0.389(*)	0.391(*)
2017	0.027	0.028	0.015	0.017	0.136	0.135	0.077	0.079
Constant	5.204***	5.209***	5.239***	5.246***	5.181***	5.184***	5.019***	5.016***

continued

Table 2. Continued

	Model 5a	Model 5b	Model 6a	Model 6b	Model 7a	Model 7b	Model 8a	Model 8b
<i>Variance components</i>								
Intercept variance household-level	5.960***	5.960***	5.960***	5.960***	5.938***	5.938***	5.955***	5.955***
Intercept variance country-year level	0.345***	0.345***	0.338***	0.336***	0.263***	0.262***	0.282***	0.281***
Intercept variance country-level	0.461**	0.458**	0.365**	0.362**	0.499*	0.490**	0.549**	0.550**
Slope variance low income—country-year level	0.104***	0.104***	0.104***	0.099***	0.107***	0.106***	0.103***	0.096***
Slope variance low income—country-level	0.098*	0.075*	0.098*	0.336*	0.101*	0.092*	0.098*	0.097**
<i>Log Likelihood (-2LL)</i>	947 233	947 230	947 234	947 222	909 264	909 262	945 906	945 903
<i>AIC</i>	947 293	947 290	947 294	947 286	909 324	909 326	945 966	945 967
<i>BIC</i>	947 600	947 597	947 601	947 614	909 630	909 652	946 273	946 294

Contextual-level variables centered when continuous. * $P < 0.10$; ** $P < 0.01$; *** $P < 0.001$. Covariance structure = unstructured.

Household-level controls: low income, household income, age, education and activity status household reference person, household type, number of children, urbanization and tenure. Contextual-level controls: post-communist, GDP (BW and WI), social spending (BW and WI).

Table 3. Multilevel analyses of living conditions-deprivation, owners: macro-level results (EU-SILC; N = 315 890; number of country-years = 84; number of countries = 28)

	Model 5a	Model 5b	Model 6a	Model 6b	Model 7a	Model 7b	Model 8a	Model 8b
<i>Household-level variables (controls not reported)</i>								
Low income (ref=middle income) (random)	0.355**	0.355***	0.355**	0.355***	0.391**	0.391***	0.372**	0.372***
<i>Contextual-level variables (controls not reported)</i>								
Index of rental market regulation_BW	-0.052	-0.406**						
Index of rental market regulation_WI	0.132	0.128						
Index of housing allowances_BW			-0.008	-0.255**				
Index of housing allowances_WI			0.239*	0.239*				
House price-to-income ratio (2015 = 100)_BW					0.024*	0.073*		
House price-to-income ratio (2015 = 100)_WI					0.011**	0.011***		
House price volatility_BW							-0.038	0.053
House price volatility_WI							0.036***	0.036***
<i>Cross-level interactions with low income</i>								
Index of rental market regulation_BW		-0.213***						
Index of rental market regulation_WI		-0.053						
Index of housing allowances_BW				-0.140				
Index of housing allowances_WI				0.004***				
House price-to-income ratio (2015 = 100)_BW					0.030**			
House price-to-income ratio (2015 = 100)_WI					0.002			
House price volatility_BW								0.056
House price volatility_WI								-0.002*
<i>Time-trend (ref = 2005)</i>								
2011	0.224	0.224	0.131	0.131	0.333(*)	0.333(*)	0.384*	0.384*
2017	0.297	0.297	0.152	0.153	0.354	0.354	0.305	0.305
Constant	3.613***	3.613***	3.712***	3.712***	3.440***	3.440***	3.477***	3.477***

continued

Table 3. Continued

	Model 5a	Model 5b	Model 6a	Model 6b	Model 7a	Model 7b	Model 8a	Model 8b
<i>Variance components</i>								
Intercept variance household-level	4.722***	4.722***	4.722***	4.722***	4.620***	4.620***	4.637***	4.637***
Intercept variance country-year level	0.209***	0.209***	0.191***	0.191***	0.165***	0.165***	0.154***	0.154***
Intercept variance country-level	0.859*	0.563*	0.963*	0.658**	0.817*	0.556**	0.812*	0.716*
Slope variance low income—country-year level	0.046***	0.045***	0.046***	0.046***	0.049***	0.048***	0.045***	0.045***
Slope variance low income—country-level	0.248***	0.141**	0.248***	0.151***	0.261**	0.165**	0.238***	0.202**
<i>Log Likelihood (-2LL)</i>	3 627 730	3 627 730	3 627 740	3 627 727	3 368 088	3 368 076	3 555 255	3 555 251
<i>AIC</i>	3 627 794	3 627 794	3 627 800	3 627 791	3 368 148	3 368 140	3 555 315	3 555 315
<i>BIC</i>	3 628 166	3 628 166	3 628 149	3 628 163	3 368 494	3 368 510	3 555 664	3 555 686

Contextual-level variables centered when continuous, * $P < 0.10$, ** $P < 0.01$, *** $P < 0.001$, Covariance structure = unstructured, Household-level controls: low income, household income, age, education and activity status household reference person, household type, number of children, urbanization and tenure.

Contextual-level controls: post-socialist, GDP (BW and WI), social spending (BW and WI).

marketization/financialization. Looking at ‘average’ differences between countries, I find that a higher *price-to-income ratio* (relative to 2015-levels, models 7a and 7b), indicating less affordability of housing, is associated positively with higher living conditions-deprivation for both owners and renters. For owners, but not for renters, this association is also significantly stronger for low-income households. There is, moreover, a significant within-country effect indicating that increasing price-to-income ratios are associated with increasing deprivation, again both for owners and renters. These findings are largely in line with H1c and H2. Results for *house price volatility* (models 8a and 8b) are somewhat less strong, but follow the same pattern. In particular, low-income owners experience more living conditions-deprivation in countries where ‘average’ house price volatility was higher. Within countries over time, both for owners and renters, higher volatility is associated with more living conditions-deprivation.

5. Conclusion and discussion

Starting point of this article was the argument that in order to explain a potential trend towards higher living conditions-deprivation across several (West-)European countries—signaled in popular and policy accounts pointing at e.g. indebtedness, hunger, fuel poverty or homelessness—it makes sense to investigate domains of socio-economic regulation that impact on *expenditures* of the poor rather than *incomes*. I focused specifically on differences and trends regarding the social and economic regulation of housing, in particular how (changes in) this domain impact(s) on the association between low income and a broader measure of living conditions-deprivation incorporating outcomes of, as well as household strategies dealing with, housing cost unaffordability. As housing and welfare systems are not always organized along the same ‘ideological’ lines, I elaborated on previous research that has, mostly in the context of the UK, put forward the so-called ‘*saving grace*’-argument: comparatively more redistributive housing policies can soften deprivation following from higher income poverty created by a liberal labor market and reproduced by a liberal welfare system. In this article, I contribute to this research by evaluating this moderating impact more systematically across European countries, and by broadening this perspective by including a longer-term view taking account of a general trend towards the commodification of housing policies and of housing markets more generally—i.e. the so-called financialization of housing. I argue that such changes may have contributed to signaled ‘housing affordability crises’ in several countries, in turn leading to deteriorating living conditions.

I investigated this by means of multilevel analyses of household-level data for 28 countries from *EU-SILC*. Pooling three waves (2005–2011–2017) resulted in a clustered data structure: households nested within country-years within countries. Contextual variables can thus be decomposed into a component capturing cross-sectional between-country differences and one capturing within-country social change. I found convincing evidence supporting the relevance and moderating role of housing system and market features regarding living conditions-deprivation. In line with the ‘*saving grace*’-argument, across countries, redistributive housing policies mostly targeted at lower-income groups (rental market regulation and housing allowances) manage to weaken the link between a low income and higher living conditions-deprivation. Deprivation is also generally lower when state intervention in housing provision is stronger and/or more redistributive. Put differently, these effects pertain to broader population groups (i.e. middle-incomes, owners), supporting the argument that higher levels of state intervention restrict profit-seeking in the chain of housing provision and thus result in better

‘overall’ housing quality at lower cost (e.g. [Kemeny, 1981](#); [Bratt et al., 2013](#)). Better access to decent and affordable housing may also arise from competition between housing sectors. In particular, more readily accessible and attractive social housing encourages providers in other housing market segments to upgrade their offer (i.e. in unitary rental markets) (e.g. [Hoekstra, 2010](#); [Borg, 2015](#))—giving rise to a contextual effect indicating improved living conditions for the population at large. While economists tend to label more strict rent regulation as inefficient when it comes to profitability for landlords (e.g. [Weber, 2017](#)), stricter regulation is clearly efficient in terms of improving access to decent and affordable housing.

Higher house prices and price volatility, indicating housing market financialization, are associated with increased living conditions-deprivation for both renters and (in particular) low-income owners, both cross-sectionally between countries and longitudinally within countries over time. These findings are in line with research reporting similar effects of transitioning into housing payment arrears on self-reported health, with ‘renters faring worse in countries where house prices were escalating’ ([Clair et al., 2016](#), p. 312). Though the complex and variegated impact of housing market financialization on affordability problems for (low-income) private renters and owners has been explained elsewhere (e.g. [Dewilde and De Decker, 2016](#); [Dewilde, 2018](#)), in this article, I show how such a trend also impacts on living conditions.

During the limited and recent time period under consideration (a general limitation of this study), social housing provision tended to decline in many countries while some countries relaxed (private) rental market regulation. Overall, these indicators are however rather slow-moving, limiting the potential for significant within-country-effects. The fact that the GFC cuts through my observation period also posed some challenges with regard to the interpretation of descriptive and multivariate findings, as it is difficult to separate crisis-effects from the impacts of more long-term structural housing market developments. An ‘indirect’ clue indicating the relevance of redistributive housing allowances was revealed by the fact that increased access and generosity around the GFC seem to have cushioned living-conditions deprivation amongst renters—though only indirectly visible through a positive within-effect for owners and a ‘non-effect’ for renters. A potential explanation for the latter may be that access to and benefit amounts of housing allowances increase more or less automatically in response to need, which is usually more pressing for renters than owners. For the time period and countries under study however, I cannot conclude that the commodification of housing policies over time has resulted in higher living conditions-deprivation. In some countries, stronger declines in social housing were clearly compensated for by increased access to/generosity of housing allowances, the latter having similar beneficial effects on living conditions. Much however depends on actual housing policies and market situations in specific countries (e.g. on Ireland: [Byrne and Norris, 2019](#); [Threshold, 2019](#))—this is however beyond the scope of this article.

Finally, a conclusion for policy makers is that deprivation does not only arise from macro-level factors influencing households’ disposable incomes, but also from macro-level influences related to other domains. ‘Anti-poverty policies’ should thus take a broader and more integral perspective than is currently the case, and take better account of housing provision, but also of provision of other basic needs (e.g. health care, energy, transport).

Supplementary material

[Supplementary material](#) is available at *SOCECO* online

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