Housing stratification in Romania: Mapping a decade of change

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ARTICLE

Housing stratification in Romania: mapping a decade of change

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Abstract
Given increasing economic affluence, improvement in housing conditions and population decline in the last three decades, Romanians should be more likely to experience better housing than ever before, particularly in terms of the availability and affordability of space. But substantial improvement alongside numerous people *still* suffering poor conditions begs the important question of who has benefited and who has been excluded. Engaging the theoretical framework of diverse economies and drawing on 2007 and 2018 Eurostat-SILC micro-data, we examine the realignment between housing and income stratification across a proposed housing typology that reflects historically enduring arrangements of housing provisions and economic hierarchies. We find that residents' socioeconomic profiles differ significantly by type of housing (e.g. showing surprising economic prosperity in urban flats and extreme poverty in some rural houses), which positions our typology as an expression of housing stratification. Furthermore, multivariate analyses highlight the increasingly stronger relationship between income and housing consumption over the decade. Of concern, a large share of the population (the bottom 40% of the income distribution) has fallen further into housing disadvantage after controlling for overall improvements in housing conditions. Conversely, the relative distance between middle- and higher-income households has decreased; given the dominance of small dwellings in the housing stock, higher-income groups seem unable to transfer their financial gains into space in their main residence except a minority engaged in the self-provision of 'villas'. These patterns of housing stratification indicate a move towards a 40%/60% 'hour-glass' society if housing continues to remain outside the political agenda.

Keywords Diverse economies · House and flat · Housing inequality · Housing types · Housing stratification · Post-communism · Romania · Socioeconomic stratification

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1 Introduction

Three decades have passed since the fall of communism, most Eastern Bloc's countries being now full members of the European Union (EU). Their residents have experienced outstanding economic growth and obtained freedom of movement unimaginable before. For todays' youth, communism is no longer an experience but a narrative. Overall, people and places have undergone tremendous transformations (Sykora and Bouzarovski 2012). While some scholars (Tuvikene 2016) claim that we can abandon the notion of 'post-communism', with others (Stenning 2005), we argue that it is still relevant today, particularly in relation to peoples' housing experiences.

Romania stands apart among the EU post-communist states by its 'super' 98% homeownership rate and poor housing conditions, not least the prominence of overcrowding, undersized dwellings and lack of basic infrastructure (Buckley and Mathema 2018; Soaita and Dewilde 2019). Yet, with households' and governments' grown affluence, population decline and new additions to the stock, conditions as those mentioned above have improved after 2000. While there is some understanding on how different socioeconomic groups have benefitted or remained excluded—e.g. suburban self-builders (Soaita 2013) and the Roma population (Teodorescu 2019), respectively—a comprehensive examination of the changing structure of housing stratification in Romania is lacking.

Inspired by the theoretical framework of diverse economies (Gibson-Graham and Dombroski 2020), we examine the realignment between socioeconomic and housing stratification over the last decade. As stratification refers to the unequal distribution of socially valued resources, we conceive of housing stratification along two dimensions: certain historically-specific housing forms, and space consumption (and its affordability). We ask: Do residents' profiles differ across specific housing forms in a way reflecting income stratification? To what extent and in what ways do the availability and affordability of space vary with households' income and by housing form? Has the link between income and housing stratification increased over time across housing forms? Our analyses draw on 2007 and 2018 micro-data from the EU-Statistics on Income and Living Conditions (EU-SILC) for Romania.

The relevance of this paper is two-fold. First, post-communist societies have traversed unique transformations, which had massive implications for socioeconomic and housing stratification (Harvey 2005). However, the realignment between these two terms has not yet been tested in a comprehensive and systematic way, except by a few studies, e.g. focusing on the more equal Czech Republic (Lux et al. 2011), the Romanian capital of Bucharest (Gentile and Marcinczak 2014), and cross-country comparisons (Soaita and Dewilde 2019). We wish to contribute more in-depth insights from Romania, which is one of the most unequal EU Member States.

Second, our focus on housing form brings theoretical and empirical novelty grounded in the novel framework of diverse economies, which seems to have so far eluded housing studies. With others (Dwyer 2009), we show that stratification research can benefit from engaging with housing form and space beyond the common emphasis on tenure while a diverse economy perspective can illuminate the articulation between such diverse household practices as the financialization of 'home' (or resistance to it) and the sharing of care, money or space.

The paper proceeds as follows. Drawing on the framework of diverse economies, Sect. 2 presents our operationalization of housing stratification along the dimension of a proposed housing typology, and that of space consumption. After presenting the research design

(Sect. 3), Sect. 4 discusses descriptive findings and Sect. 6 our multivariate results. Section 6 concludes the paper. We demonstrate that, while historic non-capitalist forms of housing provisions and households' occupancy-practices had historically ensured a roof over one's head and perhaps weakened income inequalities (Berescu 2019), over the last decade lower-income households have *consistently* benefited less from improvements in housing conditions, being increasingly unable to access decent or any housing at all. This is not only true for the poorest and most excluded in Romanian society, but extends to the bottom 40% of the income distribution.

2 Housing stratification in Romania

Over 30 years ago, Kemeny (1981) signalled the link between ideology, institutions and the housing forms of houses and flats, his argument being recently applied to the post-communist space (Kalyukin and Kohl 2019). These housing forms encapsulate nonetheless very different economic practices in the post-communist societies than those of advanced capitalism.

2.1 Diverse economic practices

The framework of diverse economic practices (Cameron and Gibson-Graham 2003) is particularly promising to understand post-communist housing. Smith and Stenning (2006, p. 190) defined the diverse economy as "*a host of economic practices articulated with one another in dynamic and complex ways and in multiple sites and places*", linking markets, grey and black economies with households' and states' welfare and economic practices.

Using the metaphor of the 'layered cake', Cameron and Gibson-Graham (2003) argued that the formal top-layer of the *capitalist,* profit-making economy of the private sector/firm hides a range of diverse economic practices, which merit recognition for their ethical ethos of care besides their important economic contributions. Relating to housing, the capitalist economies of speculative development, mortgaged homeownership or housing financialization hide a less visible layer of *alternative-capitalist* economies. Alternative-capitalist economies includes the state/third sector economies such as those encapsulated by social housing and housing cooperatives, which use the private market in a non-profit manner; as well as households' self-provision, that may involve grey/black economies that are legal, but not fully compliant with socially-unaccepted, complex or hard to enforce regulations.

Deeper down, the most invisible layers consists of *non-capitalist* economies of 'benevolence' and 'malevolence' (Soaita 2019), the former being embedded in non-market spaces of self, family and community care, labour, gifts, sharing; and the latter in illegal/criminal activities such as theft or modern slavery. To these, Soaita (2019 p. 34) suggested the addition of the *anti-capitalist* economy of the communist regime, '*which remains undoubtedly distinctive from the public sector of capitalist societies*'.

However, despite its clear potential to illuminate everyday life in post-communist societies (Smith and Rochovska 2007), this framework has eluded housing analyses. While 'diverse economies' research became established in the last decade (Gibson-Graham and Dombroski 2020), well-founded criticism remains valid (Samers 2005), particularly the perceived limitation of scaling up and the multiple exclusions and inequalities created. We take forward these lines of criticism, by showing in the next subsection that

Table 1 Romania's diverse economies of housing provision

Before 1945	*Self-provision* (*non-capitalist*): The 1864, 1921 and 1945 land reforms distributed 8.5 million hectares of land (about 36% of Romania) from the Church, the gentry and the Crown to un impoverished peasantry, creating thus a nation of smallholders (Cartwright 1999). By 1948, 77% of the population lived in villages, inhabiting self-built, owned homes (Golopentia and Georgescu 1948)
The early communist 1945–9	*Nationalization of land and housing* (*anti-capitalist*): Agricultural land was almost fully nationalised but most houses and their plots remained in personal ownership, with the exception of some larger houses, mostly in cities (Chelcea 2003; Ronnas 1984; Verdery 2003)
The communist 1950 s–60 s	*Self-provision (non-capitalist)*: 88% of new housing in the 1950 s, and 64% in the 1960 s was self-built, mostly in villages (Soaita and Dewilde 2019). Given shortages of construction materials, much self-built housing was of poor quality: of all houses built in this period and still in use by 2011 (NIS 2020a), 46% and 32% were of wattle-and-daub in rural and urban areas, respectively
The communist 1970 s–80 s	*State provision (anti-capitalist)*: 80% of new housing in the 1970s, and 93% in the 1980 s were flats built by the state, mostly in cities (Soaita and Dewilde 2019). Self-building was banned during the 1980 s full sway of the 'systematisation programme' (of all houses built over this period and still in use by 2011, a quarter was of wattle-and-daub, NIS 2020a)
December 1989	The fall of the communist regime
The 1990 s' recession	*(Re)privatization (alternative-capitalist):* about 14 million land parcels were restituted to prior-owners, which reproduced the fragmented pre-1945 land ownership, which open the way for suburbanisation; about 2.2 million state flats were privatized to sitting tenants (i.e. 27% of the housing stock) making a still appreciated living environment today (Marin and Chelcea 2018); and about 200,000 claims for housing restitution were recognized for in-kind transfer or financial compensation (Soaita 2017) *Self-provision (both non- and alternative-capitalist)*: this accounted for 65% of all new housing, the rest referring to state completions of unfinished communist flats (NIS 2020b). Self-provision became increasingly two-tiered between self-building of poor-quality homes (e.g. of all houses built during this period, 31% in rural areas and 15% in cities still being built in wattle-and-daub, NIS 2020a) and self-developing of 'villas' (Soaita 2013)
2000–2018	*Self-provision* (*mostly alternative-capitalist*), increasingly formalised, accounting for 89% of all new-built (NIS 2020b). Romania's EU accession (2004) enabled large migration (population declined by 16% during 1990–2014), remittances helping improve the housing conditions of those left behind (Soaita 2017). Supported by state-guaranteed mortgages after 2009, for-profit/(capitalist) housing development increased but remained marginal.

such non-capitalist economic practices have always been the norm of housing provision in Romania; and by examining their stratification effects in housing consumption throughout our analyses.

2.2 Romanian diverse economies of housing provision

Table 1 offers a historical account of key (dis)continuities in housing provision in Romania. Except for the last two decades of communism, housing has been produced within

economies of household self-provision, which can be conceived of a continuum (Clapham et al 1993) ranging from self-building (*non-capitalist*) to self-developing (*alternative-capitalist*). The former uses significant family and community sweet-equity, even self-produced construction materials (e.g. wattle-and-daub), being the route for many disadvantaged households to house themselves. In the latter, the owner takes control of the process using (in)formal economies of labour, materials and services to enjoy better houses. Economies of housing self-provision have been facilitated by the state through land policies (historic land reforms; incomplete nationalization during communism; post-communist in-kind restitution) and tolerance of economic and regulatory informality.

While the first two decades of communism saw uninterrupted self-provision, the 1970 s—80 s witnessed a paradigmatic shift: self-provision was severely discouraged, with the state's *anti-capitalist* economy of urban flats becoming dominant (Ronnas 1984, Sillince 1990). In the communist's shortage economy and controlled urbanisation, rural houses stood for lack of utility provision and multiple exclusions whereas urban flats signified modern utilities and political-industrial inclusion. Access to one or the other was less a matter of choice and eligibility, but one of status and privilege (e.g. labour position and political connection), acting as an axis of economic and symbolic stratification (Kornai 1992).

Given that the 2011 Census (NIS 2020a) recorded 75% of the housing stock as being built during communism—with 12% and 14% before and after, respectively—we expect that the key legacies of small dwellings, whether self- or state-provided, and lack of basic infrastructure in villages still influence the housing experiences of many people today. Obviously, alterations of old housing and new additions will progressively water down the former while local budgets may gradually address the latter.

The post-communism transformation of housing proceeded under the neoliberal blueprint of privatisation and commodification (Clapham et al. 1996) It could be argued that Romanians have embraced the former but resisted the latter since households have again become key agents of housing provision, preferring to pool family resources rather than engage in mortgaged homeownership. For instance, of all new housing built during 1990–2018, families financed 81%, speculative developers 3% and the state the remaining 16%; given the diverse economies involved in self-provision, including the 'currency' of one's own time, construction has actually intensified since 2008 (NIS 2020b). Likewise, the housing market in Romania has remained the least mobile and financialised within the EU; only 1.8% of the population changed residence between 2007 and 2012, which is the lowest figure in the EU[1]; and outright homewnership accounts for 97% of the population, less than 1% being mortgagors (Soaita and Dewilde 2019).

Nonetheless, given increasing economic affluence of households and government, housing conditions have improved. For instance, during 2007–2018 (Eurostat 2019): the share of households paying more than 40% of their income for housing fell from 19.5 to 10.3%; that of the population having no inside bathroom/shower/toilet decreased from 41.8 to 26%; and that of people living in overcrowded homes decreased from 55.9 to 46.3%.

On the one hand, such partial improvements raise questions on the links between inequalities in housing consumptions and those of income, which are mediated by household consumption agency. Romania displays a high Gini coefficient for household income, which averaged 35 over the period of 2007–2018 (Eurostat 2019). On the other hand, our

[1] Other EU post-communist states showed residential mobility rates of between 3.2% (Bulgaria) and 15.6% (Estonia), with Sweden showing the highest figure (40.2%).

historical account helps us ground an analytical housing typology as a proxy for the diverse economies of housing provision—past and present; state policies, family strategies and market outcomes—that has shaped peoples' housing experiences in Romania.

2.3 Operationalizing housing stratification

In what follows, we propose to operationalize housing stratification in the context of Romania along two key dimensions. We draw light inspiration from Rex and Moore's (1967), Kemeny's (1981) and Bourdieu's (2005) seminal contributions to the sociology of housing. Broadly and from different perspectives—the geography of one city, two nations or the market of the single-family house—each argued that the ecological characteristics of housing (e.g. form, location, style, size) are not just physical attributes but expressions of the governing institutions and ideologies of housing as well as markers of the socioeconomic positions of their inhabitants. They are hence expressions of housing stratification.

The first dimension draws on our historical account of the diverse economies of housing provision and proposes a housing typology developed along three axes. The first axis refers to the ecology of housing form. With others (Lux et al. 2011), we see specific associations between socioeconomic and housing stratification across houses and flats. During communism, houses tended to be homes of disadvantaged households whereas flats accommodated those in more advantageous social/labour positions. This line of division has somewhat weakened by the post-communist emergence of self-developing of large houses by affluent households alongside self-building. Nevertheless, the *ecological* distinction—*house and flat*—remains relevant for our analysis, given that Census 2011 showed that 74% of all housing was built during communism (NIS 2020a).

The second axis aims to connect housing to economies of place. We contend that the unbalanced distribution of economic growth across cities, towns and villages has historically privileged cities—historic hierarchies being broadly maintained (Kalyukin and Kohl 2019; Kornai 1992). With reference to Romania, Popescu (2019) proposed a similar distinction between economically successful cities vs. stagnant small town and villages, suggesting that (sub)urban residents were more likely to benefit from economic growth. Moreover, certain groups were double-privileged: urban professionals were better situated to obtain higher income from labour markets (and other gray economies of tax-evasion and bribery, see e.g. Manea 2014) that may be earmarked for housing consumption. Conversely, rural residents had fewer and less rewarding options to enter/improve their labour-market positions, such as self-provision of food and seasonal employment beyond strategies of temporal migration (Neef 2002). Consequently, the *environmental* distinction—*rural* and *urban*, albeit not straightforward to operationalize in EU-SILC—facilitates a better understanding of social life, including the links between socioeconomic and housing stratification.

The third axis expands the second, aiming to add further nuance by differentiating between zones of economic success or neglect. Data on the geographical distribution of GDP would be ideal but is unavailable. Availability of infrastructure is an alternative, albeit crude way to proxy economic connectivity and synergy between public and private economies, which is of interest to our diverse economies perspective. Specific to Romania, the communist legacy of underdeveloped water/sewage provision marks spatially and economically disadvantaged places (Popescu 2019). While rural housing disadvantage is a legacy of the past, it is reproduced through new construction: about 63% of all rural houses built during 1994–2018 had no sewage access at their completion (NIS 2020b; 16%

in cities). Hence, the *connectivity* distinction—utility-*connected* and utility-*disconnected* places—can shed additional light on patterns of housing stratification in Romania.

Combining these three axes, we propose an analytical housing typology to guide our analyses: urban houses; rural houses with and without inside water installations (henceforth just 'inside-water'); and urban and rural flats. Through these five housing types we operationalize *one* specific dimension of housing stratification that has historical endurance, structuring people experiences today.

However in order to examine the realignment between income and housing stratification over the last decade, we need an additional dimension that should be more sensitive to short-term changes while capturing some of most socially-valued characteristics of housing. In an almost universal outright homeownership society as Romania, tenure loses its stratification power (Rex and Moore 1967) while aspects of housing conditions and standards of living, such as the availability and affordability of space, become more revealing. For instance, Dwyer (2009) made a compelling case for the inclusion of space consumption in stratification research while Soaita (2014) showed the importance of space for well-being in the context of Romanian small dwellings, which are by far the smallest in the EU.

Of course, households can trade-off between our two dimensions of housing stratification through a host of diverse economic practices. For instance, they can trade-off space consumption and housing costs (but also other welfare aims or consumption preferences)—both within and across housing types—by opting for overcrowding and/or co-residence to reduce housing costs; or the opposite, opting for frugal consumption to enjoy under-occupancy. We expect that higher-income households will translate their income gains into forms of housing advantage, for instance larger homes or moving from flats to houses (Soaita 2013). Likewise, we expect that lower-income households will try to reduce disadvantage, for instance by accepting overcrowding to reduce housing costs or moving from urban to rural areas (Popescu 2019).

But broader mechanisms can also be at play. As economic growth is more likely to be appropriated by higher rather than lower-income households, and by urban rather than rural places, it follows that higher-income households and urban residents are less likely to experience housing disadvantage (and more likely to experience housing advantage) compared with middle- and especially lower-income households and rural residents. This intersection between income and urban/rural locations may have become stronger over time were it not for the structural constraints of the housing stock (small dwellings, particularly in cities) and immobile markets. Furthermore, given the narrowing of traditional routes to de-commodified housing (self-building and state allocation), we expect poor households to fall further into housing disadvantage.

3 The research

3.1 Data

We use data from the Romanian leg of EU-SILC for the years 2007 and 2018. EU-SILC is the main reference for the EU-indicators on income, living conditions and social exclusion, samples being representative of the population in each year. As larger households tend to be poorer than smaller ones, our analytical focus is on the individual within the context of her/his household; this ensures that the welfare of each individual 'counts equally' (Atkinson et al., 2002). As less than 3% live in rented accommodation, we limit our analyses to

individuals forming part of households living in an owner-occupied home, which include owners and non-owning extended-family members (19,451 in 2007 and 16,881 in 2018). After excluding missing values, the total 2007 and 2018 pooled sample amounts to 35,599 respondents. While the timeframe is one of convenience, marking the first and the most recently available year of Romania's participation in EU-SILC, it offers a decade in monitoring change.

3.2 Variables

We operationalize socioeconomic stratification primarily through income (quintiles, tertiles), with income pertaining to equivalized disposable household income (modified OECD-scale). Housing stratification is operationalized through the dimension of housing types (already discussed)[2] and that of (dis)advantage in housing consumption (several indicators that relate housing costs to space consumption). Following EUROSTAT, total housing costs (including utility costs, net of housing allowances) are related to household income, but we introduced a progressive threshold, which is better suited to Romanian low income levels, henceforth HC-burden (quintile 1: $\geq 25\%$; quintile 2: $\geq 30\%$; quintiles 3-4-5: $\geq 40\%$).

Minimal space consumption, or housing of the 'right' size, relates the number of rooms to household members as follows: one living-room for the household and a separate bedroom for each couple, each single person aged 18 or more, and each pair of children under 12 (or until 17 if of the same gender otherwise a separate bedroom is needed). We speak of overcrowding and under-occupancy when households have at least one room below or above the minimal standard, respectively.

Only a minority of individuals (20.1% in 2007 and 25.9% in 2018) lives in 'affordable housing of the right size'. Given this, and in order to avoid numerous hard-to-interpret 'double' relative comparisons across different categories of our (in)dependent variables, we refrain from estimating a multinomial logit model with different forms of housing (dis) advantage as mutually exclusive categories of a 'composite' dependent variable. Instead, we estimate separate logistic regression models across four indicators. Housing advantage is indicated by living in 'affordable underoccupancy' (vs. all other situations). Housing disadvantage is indicated by three separate indicators (again vs. all other situations): HC-burden; overcrowding; and 'double disadvantage' as the combined occurrence of overcrowding and HC-burden.

Our multivariate logit models furthermore control for the confounding influence on the associations between income, housing typology and housing (dis)advantage of the 'usual suspects': age, age squared, gender, household size, number of children below 16, coresidence, education (coded 1 (ISCED0-2) to 4 (ISCED5-8)) and socioeconomic position (SES) of the household reference person, and whether the household moved to its current residence after 1989.

[2] The degree of urbanization in EU-SILC is based on the number of inhabitants per km² (DEGURBA-classification), but its operationalization was amended in 2012. Therefore, we have to consider 'densely populated areas' as urban, while 'intermediate' and 'thinly populated areas' are considered as 'rural'.

3.3 Method

As our dependent variables are dichotomous, we use logistic regression. This model accounts for their binomial nature by using Maximum Likelihood Estimation to predict, from a set of independent variables, the log odds that individuals will be in each of two categories. Logistic regression coefficients can be positive or negative (with '0' indicating 'no effect'). A positive/negative coefficient indicates that a particular predictor (or category of a predictor when it is categorical) increases/decreases the likelihood of a particular form of housing (dis)advantage. We pool data for 2007 and 2018; interaction terms between income and time (surveywave) are then added (model 2) in order to evaluate whether and how the association between income and housing (dis)advantage has changed over time. If the impact of income on housing (dis)advantage is stronger (i.e. more positive/negative, depending on whether we look at housing (dis)advantage), we observe increasing housing inequality (at the top or at the bottom; if both, we referred to this as polarization). In model 3 we explore whether the diverse economies of housing provision have contributed to trends in housing stratification, by adding the interaction between our housing typology and time. We now proceed discussing key descriptive results in Sect. 4 and those of our logistic regression models in Sect. 5.

4 Descriptive results

Table 2 describes patterns of socioeconomic stratification (based on income quintiles) and of different forms of housing (dis)advantage across our five housing types. Remarkably, urban (but also rural) flats show extreme socioeconomic advantage whereas rural houses without inside-water testify of extreme disadvantage: in 2018 84.2% of people living in urban flats—and 77.8% in rural flats—belonged to the top three quintiles. Urban flats have therefore maintained their inherited privileged socioeconomic profile. Conversely, 79.8% of people in rural houses without inside-water belong to the bottom two quintiles in 2018, showing persistent and even increased disadvantage in this housing type. In terms of 2007/2018 change, we see a slight downward trend in the socioeconomic advantage in urban flats and rural houses with inside-water, a slight upward trend in rural flats, and increasing concentration of disadvantage (i.e. residualization) in rural houses without inside-water. Although we expected these patterns, their strength is surprising, demonstrating the utility of our housing typology and contributing novel insights to the study of housing conditions.

The remaining two types of houses also show interesting patterns in the socioeconomic profile of their residents. Between 2007 and 2018, urban houses became a site of socioeconomic and housing advantage. Of those living in urban houses in 2018, 39.1% belongs to the highest income quintile (vs. only 20.6% in 2007). This pattern reflects increasing inequality at the top, a trend recognised in the housing literature through the development of affluent suburbs (Fehervary 2011; Hirt 2008; Soaita 2013) and localised gentrification (Gorczynska 2016). Finally, rural houses with inside-water display the most balanced socioeconomic profile.

These trends seem to reflect path-dependency in the sorting of people by housing types and in the economic hierarchy of place. One way to evidence path-dependency is by looking at the extent of residential (im)mobility in terms of length of residence at the current

Table 2 Descriptive results

% (weighted results), individuals as unit of analysis	Houses						Flats				Total	
	Urban		Rural with inside-water		Rural without inside-water		Urban		Rural			
	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018	2007	2018
% of total population in each housing type	*8.1*	*5.9*	*14.3*	*36.4*	*39.6*	*25.2*	*28.7*	*22.4*	*9.3*	*10.1*	*100.0*	*100.0*
Housing (dis)advantage												
'Affordable' housing with sufficient number of rooms	18.9	21.1	26.7	24.3	15.5	16.7	23.1	36.5	21.6	34.1	20.1	25.9
HC-burden	32.2	8.4	23.9	16.7	36.3	31.2	17.9	8.6	22.9	10.3	27.8	17.4
Underoccupancy	23.5	36.6	29.7	34.5	17.6	21.9	7.6	8.6	5.2	6.9	15.8	22.8
'Affordable' underoccupancy (advantaged)	17.0	32.6	21.8	28.7	10.6	13.3	6.2	7.9	3.8	5.1	10.8	18.0
Overcrowding	46.4	39.2	35.8	37.3	55.7	52.2	63.1	50.8	67.5	56.2	55.4	46.1
'Affordable' overcrowding	31.9	38.0	27.7	31.3	37.6	38.9	52.7	47.1	51.7	50.5	41.4	38.7
'Unaffordable' overcrowding (double disadvantaged)	14.5	1.3	8.0	7.0	18.2	13.3	10.3	3.6	15.7	5.7	14.1	7.3
Year moved in												
Before 1990	71.4	58.0	68.4	53.5	74.0	64.5	58.4	42.7	55.2	37.4	66.6	52.5
In/after 1990	28.6	42.1	31.6	46.5	26.1	35.5	41.6	57.4	44.9	62.6	33.4	47.5
Equivalent disposable household income* (%; and €/per annum in the 'total' columns)												
Quintile 1 (bottom)	14.8	6.3	10.8	14.7	39.9	51.7	3.5	3.4	6.8	5.9	€558	€1189
Quintile 2	13.8	15.5	21.0	21.0	29.5	28.1	9.6	12.4	17.0	16.3	€1072	€2295
Quintile 3	22.0	15.2	25.2	24.4	16.3	14.3	20.6	18.7	25.1	25.6	€1602	€3284
Quintile 4	28.8	23.9	23.3	23.8	10.6	4.5	25.3	27.1	27.1	26.1	€2214	€4653
Quintile 5 (top)	20.6	39.1	19.6	16.0	3.8	1.5	41.0	38.5	23.9	26.1	€3552	€6934

*The actual values in the 'total' columns are not adjusted for inflation, however, the annualized rate of inflation over the period was 3.5% per annum (or 51% cumulative), see https://insse.ro/cms/ro/content/ipc%E2%80%93serie-de-date-anuala; EU-SILC, sample of individuals living in an owned home

address. Residential mobility is remarkably low, with 52.5% of Romanians living at the same address since the fall of communism. The highest share (64.5%) can be found in rural houses without inside-water, and the smallest and second smallest (37.4% and 42.7%) in rural and urban flats, respectively. Data thus show path-dependency of (inter-generationally transmitted) access to housing. However, some change can be observed by looking at the relative size of these housing types: the share of rural houses without inside-water has shrunk given grid expansion, explaining some of the increase in the lowest two quartiles in rural houses with inside-water; and new house construction explains the decreasing share of urban flats in the total housing stock.

Table 2 further displays the distribution of housing advantage (affordable under-occupancy) and disadvantage (overcrowding, HC-burden and double disadvantage) by housing type. We see improvements between 2007 and 2018 in all outcomes—decreasing share of disadvantageous and increasing share of advantageous occupancy (except a slight increase in overcrowding in rural houses with inside-water). The residualized socioeconomic profile of residents in rural houses without inside-water is associated with the highest probability of suffering unaffordability (31.2% being affected in 2018) and second in terms of overcrowding (52.2%). However, residents in urban and rural flats suffer almost similar levels of overcrowding despite their socioeconomic advantage; this is less surprising giving that the 2011 Census recorded 47% and 33% of all dwellings being of one/two and three rooms, respectively (NIS 2020a; a slight improvement from the 56% and 31% in the 1992 Census). Conversely, residents in urban houses and rural houses with inside-water have the smallest chance to suffer overcrowding (still 39.2% and 37.3% in 2018, respectively!) and the highest probability to enjoy affordable under-occupancy. Interestingly, many rural house residents cannot afford their housing costs; since homes are overwhelmingly *outright-owned*, this refer strictly to utility costs, making testimony of insufficient income intertwined with the thermal inefficiency of much of the housing stock, with only 23% of all dwellings having been thermally rehabilitated by 2011 (NIS 2020a), 34% and 10% in urban and rural areas, respectively.

In relation to our first research question, we can thus conclude that descriptive analyses indeed position our housing typology as one dimension of social stratification associated with both income stratification and housing (dis)advantage in specific ways. It also evidences that residents in all housing types are more likely to experience housing advantage (and less likely to experience forms of housing disadvantage) in 2018 than 2007. However, we still do not know whether everyone has equally benefited; our multivariate regression modelling links income stratification to housing (dis)advantage, giving some important insights into this question.

5 Regression results

5.1 The 'overall' picture

Table 3 shows regression results across all housing types (and the Online Annex by each type). Separate models are estimated for each indicator of housing (dis)advantage (vs. all other situations). Model 1 contains main effects across the pooled 2007 and 2018 samples while model 2 includes an interaction between income quintiles and time in order to evaluate whether the association between income and housing (dis)advantage has intensified. Model 3 includes an interaction between housing typology and time, in order to

Table 3 Logistic regression results across all housing types for different forms of housing (dis)advantage

	Housing advantage						Different forms of housing disadvantage																	
	'Affordable' underoccupancy (n = 6537)						HC-burden (n = 8215)						Overcrowding (n = 14,677)						Doubly disadvantage (n = 2977)					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign
Intercept	− 3.75		− 3.78		− 3.65		− 0.27		− 0.16		− 0.15		− 0.66		− 0.62		− 0.57		− 2.15		− 1.92		− 2.05	
Age	0.03	***	0.03	***	0.03	***	0.01	**	0.01	**	0.01	**	0.00		0.00		0.00		0.01	*	0.01	*	0.01	*
Age squared	0.00	***	0.00	***	0.00	***	0.00	**	0.00	**	0.00	**	0.00	***	0.00	***	0.00	***	0.00	***	0.00	***	0.00	***
Gender (ref = female)	0.06	*	0.06	*	0.06	*	− 0.03		− 0.03		− 0.03		− 0.08	**	− 0.08	**	− 0.08	**	− 0.01		− 0.01		− 0.02	
Household size	− 0.29	***	− 0.29	***	− 0.29	***	− 0.54	***	− 0.55	***	− 0.56	***	0.87	***	0.87	***	0.86	***	0.12	***	0.10	***	0.11	***
Number of children < 16	− 0.26	***	− 0.26	***	− 0.26	***	0.20	***	0.23	***	0.23	***	− 0.11	***	− 0.11	***	− 0.10	***	− 0.04		− 0.02		− 0.02	
Coresidence	− 0.66	***	− 0.65	***	− 0.67	***	− 0.07		− 0.06		− 0.05		0.25	***	0.24	***	0.25	***	0.10		0.13	(*)	0.14	*
Education household reference person	0.29	***	0.29	***	0.29	***	0.14	***	0.15	***	0.14	***	− 0.34	***	− 0.34	***	− 0.34	***	− 0.19	***	− 0.18	***	− 0.18	***
SES household reference person																								
Self-employed	0.37	***	0.36	***	0.37	***	0.48	***	0.47	***	0.48	***	− 0.47	***	− 0.47	***	− 0.48	***	0.17	*	0.16	*	0.14	*
Employee (ref)																								
Family worker	0.09		0.11		0.10		0.82	**	0.92	***	0.93	***	− 0.48	*	− 0.46	*	− 0.46	*	0.61	*	0.65	**	0.68	**
Unemployed or economically inactive	− 0.58	***	− 0.59	***	− 0.57	***	0.52	***	0.50	***	0.52	***	0.02		0.01		0.02		0.34	***	0.31	******	0.32	***
(Early) retired	0.43	***	0.43	***	0.43	***	0.20	***	0.21	***	0.22	***	− 0.62	***	− 0.62	***	− 0.61	***	− 0.21	**	− 0.21	**	− 0.21	**
Moved in/after 1990	− 0.04		− 0.04		− 0.04		0.01		0.01		0.03		0.20	***	0.20	***	0.20	***	0.22	***	0.24	***	0.24	***
Most recent wave (ref = 2007)	0.40	***	0.42	***	0.19	*	− 1.36	***	− 2.13	***	− 1.93	***	− 0.15	***	− 0.24	***	− 0.36	***	− 0.96	***	− 3.36	***	− 1.65	***
Income quintile (Q)																								
Q1 (bottom)	− 2.33	***	− 2.64	***	− 2.34	***	4.28	***	3.80	***	4.30	***	0.54	***	0.47	***	0.53	***	3.49	***	3.08	***	3.59	***

Table 3 (continued)

	Housing advantage						Different forms of housing disadvantage											
	'Affordable' underoccupancy (n = 6537)						HC-burden (n = 8215)						Overcrowding (n = 14,677)					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign
Q2	− 0.68	***	− 0.72	***	− 0.68	***	1.97	***	1.81	***	2.06	***	0.21	***	0.12	***	0.21	***
Q3 (ref)																		
Q4	0.22	***	0.27	***	0.23	***	− 1.07	***	− 1.06	***	− 1.09	***	− 0.14	***	− 0.09		− 0.14	***
Q5 (top)	0.86	***	0.96	***	0.85	***	− 2.63	***	− 2.64	***	− 2.70	***	− 0.54	***	− 0.62	***	− 0.54	***
Income quintile (Q) * *most recent wave* (mrw)																		
Q1 (bottom) * mrw			0.48	**					1.34	***					0.15	(*)		
Q2 * mrw			0.07						0.75	***					0.20	*		
Q3 (ref) * mrw																		
Q4 * most recent wave			− 0.09						− 0.17						− 0.10			
Q5 (top) * mrw			− 0.17	(*)					− 1.11	(*)					0.19	*		
Housing typology																		
Urban houses	1.81	***	1.82	***	1.60	***	0.26	**	0.26	**	0.28	**	− 1.51	***	− 1.52	***	− 1.53	***
Rural houses with inside-water	2.54	***	2.54	***	2.41	***	− 0.51	***	− 0.49	***	− 0.62	***	− 2.15	***	− 2.15	***	− 2.43	***
Rural houses without inside-water	2.24	***	2.25	***	2.11	***	− 1.52	***	− 1.48	***	− 1.87	***	− 1.37	***	− 1.38	***	− 1.47	***
Urban flats (ref)																		
Rural flats	− 0.17	*	− 0.16	*	− 0.12		− 0.38	***	− 0.36	***	− 0.33	***	− 0.08	(*)	− 0.08		− 0.15	*
Housing typology * *most recent wave* (mrw)																		
Urban houses * mrw					0.43	**					− 0.11						0.03	

	Doubly disadvantage (n = 2977)					
	Model 1		Model 2		Model 3	
	B	Sign	B	Sign	B	Sign
Q2	1.84	***	1.77	***	1.93	***
Q3 (ref)						
Q4	− 1.19	***	− 1.20	***	− 1.19	***
Q5 (top)	− 2.85	***	− 2.85	***	− 2.87	***
Income quintile (Q) * *most recent wave* (mrw)						
Q1 (bottom) * mrw			2.84	***		
Q2 * mrw			1.72	***		
Q3 (ref) * mrw						
Q4 * most recent wave			0.69			
Q5 (top) * mrw			− 9.35			
Housing typology						
Urban houses	− 1.04	***	− 1.03	***	− 1.00	***
Rural houses with inside-water	− 1.67	***	− 1.67	***	− 1.92	***
Rural houses without inside-water	− 1.91	***	− 1.88	***	− 2.23	***
Urban flats (ref)						
Rural flats	− 0.37	***	− 0.34	***	− 0.23	*
Housing typology * *most recent wave* (mrw)						
Urban houses * mrw					− 0.76	*

Table 3 (continued)

	Housing advantage						Different forms of housing disadvantage											
	'Affordable' underoccupancy (n = 6537)						HC-burden (n = 8215)						Overcrowding (n = 14,677)					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign	B	Sign
Rural houses with inside-water * mrw					0.24	*					0.44	***					0.50	***
Rural houses without inside-water * mrw					0.27	**					1.02	***					0.24	***
Urban flats * mrw (ref)																		
Rural flats * mrw					− 0.05						− 0.09						0.17	(*)
Nagelkerke R^2	*0.33*		*0.33*		*0.33*		*0.57*		*0.57*		*0.57*		*0.46*		*0.46*		*0.46*	
Likelihood ratio test	*8145.15*		*22.15*		*16.49*		*16,647.87*		*174.90*		*152.81*		*14,814.59*		*19.90*		*41.74*	
Sign	***		***		**		***		***		***		***		***		***	

	Different forms of housing disadvantage					
	Doubly disadvantage (n = 2977)					
	Model 1		Model 2		Model 3	
	B	Sign	B	Sign	B	Sign
Rural houses with inside-water * mrw					0.77	***
Rural houses without inside-water * mrw					1.09	***
Urban flats * mrw (ref)						
Rural flats * mrw					-0.42	(*)
Nagelkerke R^2	*0.41*		*0.42*		*0.42*	
Likelihood ratio test	*7127.68*		*126.76*		*115.16*	
Sign	***		***		***	

Reference category all dependent variables: all other individuals/situations

EU-SILC, pooled 2007/2018 sample of individuals living in an owned home. * $p<0.10$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$

Likelihood ratio test: compared to null model (model 1) or to model 1 (models 2 and 3). Effects for age squared are negative, but very small (ranging from − 0.0004 to − 0.0001)

evaluate whether patterns of improved housing conditions between 2007 and 2018 differ significantly across housing types, our other dimension of housing stratification. Income effects are estimated whilst keeping housing-typology effects constant, and vice versa. We furthermore checked for interaction between both variables, but as it turns out, the main effects for 'income' and 'housing typology' remain more or less unaffected (available upon request). We do however address potential differences in the strength of the main income stratification patterns by re-estimating model 2 separately for each housing type (see the Online Annex), though because of smaller sample sizes we use income tertiles rather than quintiles.

As estimates are generally in the expected direction, we only briefly discuss some associations between our socio-demographic control variables and housing (dis)advantage. Larger households (controlling for coresidence) are less likely to experience both housing advantage and HC-burden, but more likely to suffer from overcrowding and 'double disadvantage'. A larger number of children (again controlling for coresidence) is associated with a lower likelihood of experiencing both housing advantage and overcrowding, but increases the odds of suffering HC-burden. Coresidence (controlling for household size and number of children) decreases the likelihood of experiencing housing advantage and increases the likelihood of overcrowding, suggesting that it is a housing practice of constraint and not a trade-off strategy. Effects of education are in the expected direction, bar the negative effect on HC-burden (which is surprising and perhaps linked to the slowly-growing mortgaged-homeownership rate, including through the 140,000 state-guaranteed mortgages offered since 2009).[3]

We next look at the socioeconomic position of the household-reference person. Compared with 'employee-households', self-employment increases both the odds of housing advantage and of HC-burden and double disadvantage, whilst it lowers the odds of overcrowding. Thus, compared with 'employee-households', polarization of housing (dis) advantage is larger for 'self-employed households'; they are both richer and poorer, reflective of the larger underlying variation (e.g. business owners vs. rural farmers). Unemployed/inactive households are less likely to live in advantaged housing, and more likely to experience HC-burden and double disadvantage. For retired respondents, the pattern is opposite (although they also experience a higher likelihood of HC-burden). Residential mobility after 1989 is associated with higher risks of overcrowding and double disadvantage, which presumably is associated with rural-to-urban migration and downsizing.

We now turn attention to our first association of interest, the alignment between household income (operationalized by income quintiles) and housing (dis)advantage. Judging by the sign and size of the estimates (relative to the middle quintile), a higher income is associated with housing advantage in a linear fashion, whilst a lower income is likewise associated with higher risks of suffering all forms of housing disadvantage. We find that over this decade, housing conditions have improved: Romanians have higher chances of being in advantaged homeownership and lower odds of experiencing all forms of disadvantaged homeownership in 2018 than 2007. Judging from the size of the estimates, it seems that gains in the affordability of space were higher than those in the availability of space. We do however also find empirical support—with some nuances—for the idea that housing stratification has become more intensified overall. We investigate this by evaluating interactions between income quintile and survey-year (model 2). For all models, adding these

[3] Government press release, 27 May 2020, https://www.gov.ro/ro/guvernul/sedinte-guvern/noi-reglementari-in-aplicarea-programului-prima-casa. Accessed 15 July 2020.

interaction terms results in significant improvements of model fit, and hence also in significant effects for the individual interaction terms.

With regard to housing advantage, rather than polarization, we actually note decreasing housing stratification. Whilst in 2007 respondents in the lowest income quintile (compared to those in quintile 3) are significantly less likely to be in 'affordable underoccupancy' ($\beta = -2.64$), in 2018 they are significantly more likely than in 2007 to experience housing advantage ($\beta = (-2.64) + 0.48 = -2.16$). Their prospects have thus improved. At the other end of the income spectrum, a similar 'equalization' is happening: in 2018, individuals in the top quintile are somewhat less likely to experience housing advantage (compared to the middle income quintile, $\beta = 0.96 + (-0.17) = 0.79$) than in 2007 ($\beta = 0.96$), though this interaction term is only significant at the 0.10 level. On the one hand, this indicates that lower- and middle-income households have managed to improve their housing conditions over this decade. On the other hand, it suggests that higher-income households were unable to fully transfer their financial advantage into relative housing gains, most likely due to the existing constraints of many undersized dwellings. For instance, gaining additional floor space may require engaging in self-provision or joining two adjacent flats, an opportunity that rarely comes by in the market, being also technically difficult.

Regarding housing disadvantage, we mostly see increased inequality for the bottom 40% of the income distribution. The odds that lower-income (vs. middle-income) households experience HC-burden, overcrowding and double disadvantage is in 2018 even higher than in 2007 (controlling for the overall improvement of housing conditions!). The odds that households in the top income quintile (vs. middle-income) households experience 'unaffordable' HC-burden is in 2018 even lower than in 2007 ($p < 0.10$) (though this effect is in fact limited to those in rural houses with inside-water, see Table 4 in Online Annex).

Taken together, this empirical evidence largely supports our expectations: the association between income and housing disadvantage has become stronger over time, particularly with regard to the odds of experiencing different forms of housing disadvantage for households throughout the bottom 40% of the income distribution. At the same time, the experience of housing advantage has become somewhat more equalized over time. This indicates some sort of bifurcation at the lower end of the income distribution, as some lower-income households are faring better (we could assume a link with low-skill temporal migration here as a strategy for house improvement, see Teodorescu 2019), whilst others are doing worse over time. Those doing worse over time are however not just the poorest, but the lower 40% of the income distribution.

Next, we turn to our second association of interest, i.e. between our housing typology and various forms of housing (dis)advantage. Compared with respondents in urban flats (the reference category), all respondents in houses are significantly more likely to experience advantage ('affordable underoccupancy'), whilst those living in rural flats are comparatively worse off (vs urban flats). Furthermore, for all those living in houses (urban *and* rural), the odds of experiencing housing advantage have increased between 2007 and 2018 (all interaction terms are positive and significant, see model 3).

Compared with respondents in urban flats, those in urban houses are significantly more likely to experience HC-burden, while those in rural houses and flats are less likely to do so. For respondents in rural houses however, these 'beneficial' effects have diminished (i.e. more unaffordable, though still affordable compared to urban flats) over time, which suggests that rural living has become more expensive with the expansion of utility networks towards economically disadvantaged people and places. We note that the difference with urban flats has become rather smaller (e.g. from − 0.62 in 2007 for those in rural housing with inside-water to $(-0.62) + 0.44 = -0.18$ in 2018).

Regarding overcrowding, compared with those in urban flats, respondents in all other housing types are significantly less likely to suffer this form of housing disadvantage. Again however, in particular for those in rural houses, these 'beneficial' effects have somewhat diminished over time (but comparatively less so than HC-burden). Finally, with regard to 'double disadvantage', a similar pattern of results can be observed: over time, living in a rural house has become less strongly associated with the avoidance of 'double disadvantage'. Additionally, respondents living in urban houses are even better off (compared to those in urban flats) in 2018 than in 2007.

All in all, we could conclude that regarding our housing typology as a specific dimension of housing stratification, we again find signs of both more intense stratification (with regard to the odds of experiencing housing advantage and double disadvantage for those in urban houses) and less intense stratification (with regard to experiencing different forms of housing disadvantage for those in rural houses) over time. We suggest the more intense stratification in urban houses is explained by the increasing formalization of self-provision and the commodification of land, which allows for affluent self-developing and precludes self-building (even for house extension), lower-income families having no other option but overcrowding in their existing homes. Conversely, rural informality and self-building still allows transferring growing incomes (and sweat equity) into space consumption but to a lesser extent in 2018 than in 2007. Overall, in terms of the affordability and availability of space, the relative position of urban and rural flats has improved faster over time, although they still show overcrowding levels similar to those in the most residualised form of housing, rural houses without inside-water (see Table 2).

5.2 Income-effects by housing type

As noted before, we did not find much evidence for a meaningful interaction between household income and our housing typology. Nevertheless, we also re-estimated model 2 (excluding the housing typology-variable) for each separate housing type (see the Online Annex). Because of the smaller sample sizes in some housing types, we use income tertiles rather than quintiles. Regarding housing advantage, the 'equalizing' trend at the high end of the income distribution is visible in most, but not all, housing types. Higher-income respondents in rural housing with inside-water are in 2018 as likely as in 2007 to experience housing advantage; they hence 'maintain' their comparatively advantaged position. Those in rural flats, who in 2007 were not significantly different from the middle income tertile, are in 2018 significantly *more* likely to experience 'affordable underoccupancy'.

The above noted increased income stratification over time at the lower end of the income distribution regarding HC-burden holds for each housing type separately, expect for those in urban flats (who may have enjoyed the largest income increases over time). Findings regarding the odds of overcrowding are a bit more mixed when estimated for each housing type separately. Increased income stratification over time for lower-income households seems limited to those in rural houses with inside-water (presumably because of connection to grid of poor households, who are so "moved" from houses without to houses with inside-water). For higher-income groups, we see some equalization in rural houses without inside-water and urban flats, as in 2018, individuals in higher-income households are (compared with the middle-income tertile) significantly more likely to experience overcrowding than in 2007 (though overall the effect of having a high income on overcrowding remains negative; it however becomes less negative over time). High-income groups in urban houses however, pull away from the middle-income group during the time period under

consideration. With regard to the experience of 'double disadvantage', the main results for the overall sample are replicated across each housing type, bar 'urban houses' (the latter category however contains few households with low incomes experiencing 'double disadvantage' to start with).

Overall, apart from the results for overcrowding, which mainly relate to the worsened situation of those in rural housing with inside-water (perhaps reflecting the inclusion of disadvantaged places and poorer households into the expanding utility grid), it indeed seems as if the main pattern of more intense income stratification over time holds across the different housing types.

6 Concluding discussion

This paper explored the realignment between socioeconomic and housing stratification. We looked at socioeconomic stratification particularly by income quintiles and at housing stratification by two dimensions: our housing typology, reflecting historically enduring arrangements of housing provisions and economic hierarchies; and the availability and affordability of space. Each dimension and their trade-offs were grounded in the theoretical framework of diverse economies. While so far the novel framework of diverse economies seems to have eluded housing studies, our analysis shows that this perspective can be useful to illuminate the articulations between the financialization of 'home' or the resistance to it through household sharing of labour, care, money or space.

Regarding our first research question, we found that residents' socioeconomic profiles differ significantly by type of housing, e.g. showing surprising economic prosperity in urban but also rural flats and extreme poverty in rural houses without inside-water. The strength of this pattern was surprising and it alone makes a robust contribution to post-communist housing studies. The analysis also evidenced increasing income inequality at the top in the small sector of urban houses but an increasingly more balanced profile in rural houses with inside-water. The former indicates the addition of 'villas' self-developed by the affluent (Soaita 2013), the latter a route of increasing the availability and affordability of space by middle-income households moving 'back to the village' (Popescu 2019) combined with the inclusion in this housing type of the poorest via utility grid expansion. Taken together, these findings position our housing typology as an enduring but slowly changing expression of housing stratification in Romania. We see merit in further stratification research that includes housing form and space, ideally more finely-grounded at the spatial and economic scale of 'place' than our data allowed.

In relation to our second and third research questions, we found that patterns of housing (dis)advantage improved over time across all housing types. Unaffordability of housing costs and overcrowding decreased in all housing types, the former most significantly in urban houses and the latter in (urban and rural) flats. However, we also found polarized outcomes across many of our categories, whether *between* housing types (flats and rural houses without inside-water, the latter a site of even more intense disadvantage); *within* housing types (urban houses as a site of more intense advantage); and within socioeconomic groups ('self-employed households' and the poorest 20% of the income distribution being both more likely to be in advantaged and disadvantaged housing). This demonstrates that not everyone has equally benefited from overall improvement in housing conditions while indirectly suggesting that households' diverse economic practices—whether of supply through self-building or occupancy through coresidence—are increasingly unlikely to

generate housing advantage or address housing disadvantage for the lower 40% of income distribution (though low-skilled temporarily migration seems able to significantly improve the living conditions of some of the poorest). Nonetheless rural living and houses do offer people opportunities to improve their situation in terms of the availability and/or affordability of space. Even though overall the situation has improved faster in (urban and rural) flats, they still display some of the highest overcrowding levels, similar to those in the most residualised form of housing (rural houses without inside-water).

Overall, we found empirical evidence broadly consistent with the expectation that the positive association between income and housing consumption has become stronger over time. Simply put, over the last decade and in comparison to middle-income households, lower-income households were at even higher risks to suffer disadvantage in 2018 compared with 2007 (particularly HC-burden and double disadvantage; a pattern somewhat less strong in cities). The unaffordability of housing costs in a sector of *outright* homeownership directs the attention to the high costs of even basic utility, and particularly to the phenomenon of energy precarity, which in Romania has both an income and rural dimension. A dominant research focus on urban energy-poverty may therefore silence many disadvantaged voices (Petrova et al. 2013); its ethnic (Roma) dimension may also be largely obscured through self-declaration of ethnicity (Creţan and Powell 2018).

However, in terms of *gaining* housing advantage, the pattern is more mixed. Over the last decade and in comparison with middle-income households, lowest-income households had somewhat better chances to enjoy affordable under-occupancy (but in fact, this was limited to rural housing without inside-water, which raises important issues of economic exclusion through place) whilst higher-income households seemed unable to fully transfer their financial gains into space consumption in their main residence (particularly in cities). We explained the latter by the existing constraints of a housing stock composed of many undersized dwellings; space is at a premium and higher-income households have little options but to engage in self-provision or joining adjacent flats, an opportunity that rarely comes on the market, being also technically difficult. While some of these higher-income households may already be engaged in the years-long process of self-developing spacious homes or compensated via second-home ownership (which has increased significantly in Romania), we could infer there still remains an unmet effective demand for larger dwellings. Whether unmet demand is likely to shift families' current economic practices of pooling cash and/or space for family welfare (Druta and Ronald 2018) towards mortgaged homeownership is another question for future research. Future stratification research that considers practices of second-home ownership is also welcomed.

Our study clearly demonstrates that the perceived limitation of scaling up the diverse, non-/alternative capitalist economies does not withstand the Romanian case of housing provision and occupancy. But in terms of inequalities produced by such practices, our analysis draws attention to important path-dependency effects of which middle-income households have, relative to the lower-income groups, disproportionately benefited, whether we speak of the anti-capitalist economy of state allocation of flats during communism, the alternative economies of (re)privatization of housing and land, and the formalization of self-provision.

As income inequalities have remained high but unchanged over the last decade while housing stratification has intensified overall, we suggest—as a starting hypothesis for future research—that the increasing inequalities between the bottom 40% and the remaining 60% of the income distribution should be accounted primarily by the increased commodification of land and housing, followed by the cumulative effects of income inequality on the economic exclusion of lower-income households. As we showed that households economic practices cannot alone achieve decent housing for lower-income households—despite their

creativity and energy as documented by qualitative research worldwide—we close our paper with a general plea for *for-poor* housing and more generous and *wider-reaching* welfare policies—as unlikely as this is to happen anytime soon.

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