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Housing market dualization: linking insider–outsider divides in employment and housing outcomes

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ABSTRACT

Past decades of economic growth, relatively widespread employment security and expanding mortgage markets promoted growing homeownership. Recent years have witnessed this growth undercut across advanced economies, evidenced by a rise in other tenures and increasing housing precarity. Studies have shown that these housing outcomes follow more fundamental changes in labour markets. By adapting the established concept of labour market dualization to housing, this paper examines how employment and housing positions are intertwined under late capitalism, and how their relationship has changed through the Global Financial Crisis. Examining the salient case of the Netherlands through household-level data from the LISS panel, we demonstrate that being a labour market 'outsider' vastly increases the likelihood of being an 'outsider' across housing market dimensions, in terms of housing equity, affordability and prospective asset accumulation. Comparing housing and labour dualization over 2008 and 2016, we further show that the share of multiply disadvantaged households has grown substantially, both among labour market insiders and outsiders.

Introduction

Key research in the social sciences has identified a long-term increase in labour market inequalities across OECD countries, already before but particularly since the Global Financial Crisis (GFC) (e.g. Kalleberg, 2018; Nolan et al., 2014). Implementing the concept of *dualization of the labour market,* a growing literature has brought particular attention to increasing disparities between securely employed market-insiders and expanding proportions of market-outsiders with more precarious employment positions (see Häusermann & Schwander; 2012; Oesch, 2006; Rueda, 2005; Schwander, 2019; Emmeneger et al., 2012).

Similar trends have been witnessed in housing markets across most advanced economies. Where the expansion of mortgage credit and the implementation of

homeownership-centred policies once promoted a model of widespread owner-occupied housing, it appears that large sectors of the population have been increasingly shut out from '*stepping onto and moving up the housing ladder.*' Simultaneously, the strengthening of market logics in the provision and management of rental housing has pushed younger generations of renters from social housing to more expensive and often less secure private renting alternatives (e.g. Arundel & Doling, 2017; Doling & Ford, 2007; Malpass, 2008; Ronald, 2008).

Arguing that these trends in housing also reflect many interconnected insider–outsider dualisms – homeowners versus renters, stable versus precarious rental contracts, affordable versus unaffordable housing, highly-indebted versus less-indebted households – the aim of this paper is to uncover the growing divides between insiders (individuals with favourable positions) and outsiders (individuals with unfavourable positions) on housing and labour markets, as well as the crucial links between them.

For this, we turn to the salient case of the Netherlands, a country context in which the labour market has undergone a substantial shift from commonly secure, standard employment towards growing shares of part-time, temporary and self-employed contracts over the past 20 years (Hartog & Salverda, 2018; Sarfati & Bonoli, 2017). In the same period, the housing market has moved from a strong universal model of social housing together with a financialized model of homeownership for a broad stratum of the Dutch population towards more constricted access for both. Taken together, this has pushed many younger adults into the less regulated private rental sector (Arundel & Hochstenbach, 2018; Boelhouwer & Priemus, 2014; Dol & Boumeester, 2018).

Using data from the LISS panel survey and applying logistic regression analysis, our results reveal that weak income positions as well higher job and employment insecurity are directly linked to more unaffordable housing, lower levels of housing equity accumulation and also weaker potential asset gains through exclusion from high-growth urban housing markets. Interestingly, however, labour market positions overall have become a weaker predictor of one's housing market position after the crisis. This follows from our findings that outsiders across housing dimensions have also grown strongly among certain categories of labour market insiders, as well as potentially indicating a rise in the importance of further determinative factors in access to housing such as parental wealth.

Labour and housing market transformations in advanced economies

Labour market dualization

Labour market transformations have been gradual yet considerable across advanced economies. A growing sector of the population has seen a critical longer-term shift towards declining security and diminished financial rewards of employment (Kalleberg, 2018; Sarfati & Bonoli, 2017). Although these trends had largely preceded the GFC, they were greatly exacerbated by its consequences. At the root of labour market changes, have been processes of economic restructuring over the longer-term, undermining elements of economic certainty that characterized the preceding Fordist-era (Beck, 1992; Giddens, 1999). Firstly, technological developments and mechanization have seen the displacement of employment, mostly in the lower- and

middle-income distribution (Brown et al., 2011; OECD, 2011). Secondly, globalization and deregulation policies further promoted an increasing mobility of capital and labour allowing companies to cut costs through relocation, thereby also reducing union bargaining power (Baccaro et al., 2010; Eichhorst & Marx, 2011). Furthermore, broader forces of financialization have seen investment deregulation, the empowering of shareholders and aligning of management interests to short-term profits, with an increasing concentration of economic returns among capital holders over wage earners (see Wood, 2016). This has additionally been associated with a growing highly-divided service sector among advanced economies (Oesch, 2006).

Taken together, these drivers have promoted an increasing '*dualization*' between more securely employed insiders and insecurely employed or unemployed outsiders in contemporary labour markets. Dualization theory has its roots in understanding persistent divides between employed and unemployed households (see Lindbeck & Snower, 1988). However, scholars have moved towards a more complex model of dualization, arguing for the fundamental importance of looking at multiple dimensions such as contract security, career advancement and unemployment risks (Rueda, 2005, 2007). This growing focus on non-standard or 'atypical' contracts coincided with a continued workforce flexibilization in advanced economies that saw – even where employment rates rose – increasing temporary, part-time and self-employed since the late 1980s (Arundel & Doling, 2017; Oesch, 2006).

Beyond this, the dualization literature has also examined consequences of labour market exclusion, focusing particularly on access to social benefits as well as political representation. Häusermann & Schwander (2012), for example, reveal significant divides based on labour market dualization in social protection access and political integration across a variety of European countries. The authors make the case 'that it is crucial to look not only at labour market segmentation and policies, but also at outcomes, if we want to assess the political relevance of the insider–outsider divide' (Häusermann & Schwander, 2012, p. 2). Others have pointed to ways in which labour market outsiders may be structurally excluded from political representation in terms of a lack of unionized influence, marginal numbers or an absence of political parties working in their defence (see Rueda, 2005, 2007; Saint-Paul et al., 1996).

Insider–outsider divides in contemporary housing markets

With housing policies facilitating renting to owning transitions at a relatively young age (Kendig et al., 1987; Ronald, 2008), most advanced economies saw remarkable growth in homeownership and housing wealth accumulation since the 1980s (Wind et al., 2017). The aim of these policies was to support not only the broad middle class but, depending on the country, often included many lower-middle-income households as well (Forrest & Hirayama 2015). Over an extended period, these policies were also flanked by relatively stable economic growth and high employment rates (Ronald, 2008).

Since the 1990s, the financialization of housing markets and changing nature of housing finance played a particularly central role to the growth of homeownership (Aalbers, 2016). A 'defining characteristic of financialization' was the transformation of property into the main collateral for expanding debt (ibid., 2016) alongside an

associated global rise of (cheap) credit and financialized mortgage markets that allowed growing access to property loans. In the pre-crisis decades, the ongoing relaxation of mortgage lending norms appeared to partly mask growing divides on the labour market as loans increasingly extended to more precarious households – however, often a 'hollow' homeownership involving high degrees of debt and financial risk. Marginal borrowers further represented those most likely to be affected by deteriorating labour market conditions, including many younger people at the start of their work and housing careers (Arundel & Doling 2017; Hoolachan et al., 2017).

The essential outcome of expanding credit was to promote a major inflation of the value of collateral assets, thereby pushing up property values (Stiglitz, 2012). House price inflation over the long-term became an essential driver of growing disparities, promoting wealth accumulation for those who were able to buy property, while worsening affordability barriers for those without sufficient economic capacity (Allegré & Timbeau, 2015). Increasingly complex global interdependencies underpinning finance and credit markets drove volatility and new cleavages between those relatively advantaged and disadvantaged by timing or ability to 'sit out' fluctuations (Arundel, 2017a, 2017b; Forrest & Hirayama, 2009). Added to this, flows of housing capital became more spatially uneven, concentrating into specific sub-markets (Fernandez et al., 2016) and shaping growing divides between high-gain 'hotspot' markets and more peripheral, 'cooler', markets with limited asset growth (Arundel & Hochstenbach, 2018).

However, the fragility of the 'financialized housing model' became starkly apparent with the onset of the GFC. Changes in mortgage lending criteria have implied a reorientation towards more secure lenders, while strong house price growth has put additional cost pressure on first-time buyers (Ronald et al., 2017). As other investments saw lower returns, flows into property increased for those with available capital, limiting any clear 'correction' in property values in many countries and particularly in specific prime markets (Whitehead & Williams 2011). As a result, particularly aspiring younger house-buyers have often faced an impossible trade-off in the past five years: either accept high sales prices and therefore high debt positions and mortgage risks[1] or, alternatively, opt for extended stays in the (private) rental sector, where high housing costs also undermine saving for eventual purchase (Arundel & Lennartz, 2017; Filandri & Bertolini, 2016; Forrest & Hirayama, 2015; Lennartz et al., 2016).

Linking housing divides with labour market dualization

We would argue that these emerging housing and labour market divides have similar origins. Financialization and a neoliberal reform agenda of both conservative parties as well as 'Third Way' proponents have instigated and mandated a mantra of flexibilization in nearly all market and policy domains since the 1980s (Peck et al., 2012). As a result, emerging divides in both markets tend to run along similar demographic and socio-economic categories: generally, outsiders are more likely to be younger, lower-educated, from less-wealthy parental backgrounds, and from more disadvantaged groups such as ethnic minorities. In short, changing labour, housing and state contexts cannot be considered in separation. Moving onto and up the housing ladder – albeit moderated by the availability of kinship wealth (Lennartz & Helbrecht, 2018;

Ronald & Lennartz, 2018) – is contingent on one's income generated through the labour market and, increasingly, the security and prospects of one's employment position (see Arundel & Doling, 2017; Forrest & Yip, 2012).

Notwithstanding consideration of various links between housing and labour markets in the housing literature over several decades, very few studies and only recently, have sought to disentangle the direct link between employment security and housing market positions. One notable exception is the paper of Lersch and Dewilde (2015), who show that secure employment is indeed one of the key drivers of first entry to homeownership in most European countries. This is particularly the case in Northern and Western Europe, that is, countries in which first-time buyers traditionally rely more heavily on mortgage credit rather than family wealth. In a similar vein, Dotti Sani & Acciai (2018) demonstrate for various EU countries that secure employment in two-earner households is one crucial condition for mortgage access, with income being a moderating factor in this equation. Furthermore, examining the Australian situation, Beer et al. (2016) show that precarious employment positions are closely intertwined with precarious housing positions, meaning that specific groups, in particular lone parents, are more often exposed to labour and housing market risks simultaneously. Looking at the Netherlands, Dol & Boumeester (2018) recently showed a strong association between precarious positions on the labour market and aspirations for homeownership, where those on flexible contracts have the strongest aversion towards property purchase, albeit this was not the case for a growing class of self-employed workers.

Building on this literature, this paper seeks to move the current debates forward by specifying the relationship between elements of employment insecurity and certain housing market outcomes and how this relation has changed following the Global Financial Crisis. As stated above, the dualization literature has demonstrated convincingly that favourable labour market positions do not only hinge on secure employment and stable (and sufficient) labour market income but also employment prospects. Central to this notion is a definition of labour market divides across three core dimensions: income, employment contract security and future 'career advancement prospects' (Rueda, 2005, 2007). The key argument then is that emerging housing inequality can be understood along similar divides. Accordingly, we propose looking at three key dimensions of what we label 'housing market dualization'.

First, income positions and inequality find their corresponding dimension on the housing market in the accumulation and distribution of housing wealth. More specifically, the concept of precarious work has highlighted the unfavourable positions not only of unemployed and inactive individuals (i.e. those who do not generate income on the labour market) but also emphasizes the hardships of a growing class of 'working poor', most often to be found among low-educated individuals in the service sector (Kalleberg, 2018). The distribution of housing wealth can be understood along the same lines with a divide between those who have housing equity and those who have not (yet) been able to accumulate any, be it because they are renters or because they are highly indebted on their mortgage. It is important to emphasize that we focus here on insider–outsider divides within the scope of the particular dimension of housing equity. The intention is not to argue, for example, that all renters should be considered overall 'housing market outsiders'. Many households make a conscious

decision to not buy residential property, whether because they consider it too risky or because it does not fit their current lifecycle phase (Coulter et al., 2016). We argue, however, that it remains important to consider how tenure and indebtedness impact specifically on housing equity divides. This is of further relevance given that private asset accumulation, most often achieved through housing wealth, has become a defining criterium of welfare security (see Lennartz & Ronald, 2017; Ronald et al., 2017) whereas not having any property wealth may have negative consequences along the life course and particularly so at a later stage in life.

Second, security of tenure may be seen as a corresponding category to employment security. Labour market positions are increasingly differentiated by contract types that determine the likelihood of becoming unemployed after a temporary contract expires or being forced to switch jobs involuntarily. Similarly, in the (private) rental market, short-term tenancies have come to replace, in many contexts, previously common longer-term contracts. More importantly, however, security of tenure on the housing market is clearly a matter of being able to afford housing, either in the rental or owner-occupied sectors (Haffner et al., 2008). Here, unaffordable housing does not only translate directly into accessibility issues but may lead to higher risks of rent arrears and defaulting on mortgage payments, in turn, increasing the risk of an involuntary residential move.

Thirdly, while 'career advancement prospect' is not easily translatable to housing market dualization, we would argue that similarities arise in the context of growing cleavages between regional housing markets. Already preceding, but particularly since, the Global Financial crisis, investment into housing property has become increasingly concentrated in prime cities and urban locations more generally. In part, this is the consequence of (global) private capital flowing disproportionately towards these locations (Aalbers, 2016). In addition, (expected) demographic pressures play a specific role here as well. In almost all advanced economies there are growing divides in terms of areas of ageing and booming populations. Given the strong link between these demographic dynamics and regional economic prospects and thus local housing markets, owning and buying residential property in the 'right' location – that is, urban housing markets with a younger age profile – has important ramifications for wealth accumulation in the long run (see Arundel & Hochstenbach, 2018). Arguably, this conceptualization is not without its exceptions. The lowest-income earners and most-deprived neighbourhoods are often to be found in highly urbanized areas as well. However, in considering location alongside entry to homeownership, there is sufficient evidence that, particularly for the Netherlands, highly urbanized areas are most strongly correlated with higher accumulation rates in the housing market (Arundel & Hochstenbach, 2018; Hochstenbach & Arundel, 2019).

In conclusion, where the established concept of labour market dualization has largely been defined by its key dimensions *labour market income, employment security* and *career advancement prospects,* insider–outsider divides in the housing market may be distinguished along similar and, in part, conceptually analogous categories: *housing equity, security of tenure* and *asset accumulation prospects*. We reiterate that our three insider–outsider dimensions should be seen as just that: particular dimensions across which household can have a relatively advantaged or disadvantaged position. In other words, being an outsider in a particular dimension does not imply

being a housing market 'outsider' *per se* given that households can remain in a position of advantage in terms of other housing market measures. Relatedly, we acknowledge here that we focus particularly on financial welfare dimensions of housing that echo most clearly similar categories applied in assessing labour market dualization. While additional characteristics, such as housing quality measures, size, overcrowding, energy efficiency or locational qualities, could play a role in further considerations of relative disadvantage or advantage of housing position, these are beyond the scope of the current research. Our intention here is an initial integration of dualization dynamics in understanding housing markets while we encourage further research on complimentary dimensions that may characterize housing insider–outsider divides.

In the empirical part of this study, we will turn to survey data from the Netherlands to explore how these three dimensions of housing market dualization are linked to labour market divides and which demographic and socio-economic factors might influence these relationships.

Methods and empirical strategy

Housing and labour market change in the Netherlands

In line with other economies in the Western hemisphere, the Dutch labour market has seen substantial transformations in the past two decades in terms of employment participation and income inequality. A stagnation in real wages, both over periods of high and low unemployment, alongside a growing divide between employment-based income and returns from capital and dividends have been key features in this process (Sarfati & Bonoli, 2017; Wolbers, 2016). What makes the Netherlands a particularly interesting, and most likely also a more extreme case, is the sharp growth in the shares of flexible, temporary and self-employed individuals in the past twenty years (IMF, 2018; OECD, 2018) (see Table 1).

More specifically, temporary employment and self-employment are among the highest in Western Europe. The Netherlands also exhibits an unparalleled share of part-time workers, which is particularly driven by higher rates among women (SCP, 2017). While the Dutch labour market has often been compared to Denmark in relation to a model of 'flexicurity', Bekker & Mailand (2019) argue that the Netherlands has seen flexibilization take increasing primacy. In recent years, the country has seen both growing shares in atypical contracts as well as this group, in comparison to its Scandinavian counterpart, experiencing much greater disadvantage in security and remuneration (Bekker & Mailand, 2019). In comparison with Denmark, for example, the Netherlands displays lower net replacement rates in unemployment benefits among lower income households[2] (Table 1).

In terms of the housing system, the Netherlands is marked by both the largest share of social housing in Europe – just under 30% of all dwellings in 2017 (Statistics Netherlands, 2018) – and a highly financialized homeownership market, exhibiting the highest European mortgage-debt-to-GDP rates at 95% (EMF, 2018). Developments in recent decades have, however, seen a gradual decrease in the social housing share (see Table 2) with reduced supply and privatization of existing stock on the one hand, and the introduction of an income limit for prospective social tenants on the other (Boelhouwer & Priemus, 2014). Conversely, the free-market rental

Table 1. Labour market statistics in selected European countries, 2000–2017.

	Self-employment rate (%)		Share of temporary employment (%)		Share of part-time employment (%)		Share of employees at risk of in-work poverty (%)		Net replacement rates after 2 months of unemployment[a]
	2007	2017	2007	2017	2007	2017	2007	2017	2017
Denmark	9.0	8.2	9.1	12.9	17.6	20.9	4.2	5.4	86
France	11.0	11.6	15.1	16.9	14.0	14.4	6.4	7.4	68
Germany	12.0	10.2	14.6	12.9	22.3	22.4	7.4	9.0	59
Ireland	16.2	15.4	8.5	9.2	20.9	23.0	5.5	5.2	63
Italy	26.1	23.2	13.2	15.4	16.5	19.9	9.4	12.3	76
Netherlands	13.2	16.7	18.1	21.8	36.7	38.7	4.5	6.1	71
Norway	8.0	6.5	9.5	8.4	20.8	19.6	5.9	6.0	68
Poland	23.46	20.41	28.2	26.2	8.6	5.4	11.7	9.9	66
Portugal	24.8	16.98	22.3	22.0	5.2	6.6	9.3	10.7	75
Spain	17.51	16.48	31.6	26.7	10.8	14.7	10.2	13.1	54
Sweden	10.6	9.86	17.5	16.9	13.9	13.2	6.5	6.9	63
UK	13.39	15.36	5.8	5.7	22.7	22.7	7.9	9.0	49

Sources: OECD (2019), Eurostat (2019).
[a]For single-person household without children earning 67% average wage. including housing benefits.

sector has experienced some resurgence from a historically marginal role, to about 13% of the total housing stock as of 2018 (Statistics Netherlands, 2018).

In the owner-occupied market, easily accessible mortgage credit, generous mortgage tax deductibility and loan guarantees led to a strong push towards homeownership since the 1980s. However, the implementation of stricter lending conditions together with strong house price inflation in the past five years, particularly in urban centres, have made homeownership less accessible for a growing number of households (Hochstenbach, 2017; Tu et al., 2018). Table 2 reveals the gradual decline of younger buyers *vis-à-vis* the older generation in the pre- to post-crisis period. In that regard, the Netherlands is very similar to other European and non-European cases, where signs of a rising 'generation rent' as well as 'generation landlord' have been key markers of systemic change in the housing sector (see Ronald & Kadi, 2018).

Operationalization of insider/outsider dualization

The operationalization of the six dimensions of labour and housing market dualization are outlined in the following paragraphs – see Table 3 for an overview.

Income position is based on the net household value, equivalized to control for household size.[3] Income 'outsiders' are classified as those with an equivalized household income below 60% of the median income. Conversely, those with an income above that threshold are defined as 'insiders'. Clearly, a binary division in income can be problematic but remains useful in the descriptive analyses as a parsimonious means of capturing housing outcomes for income 'outsiders' who display significantly lower income levels. Nonetheless, the subsequent regression analyses treat the income measure as a continuous variable.

Employment security is operationalized as follows: 'insiders' include those who are employed with full-time and permanent contracts. Those who are employed part-time but in permanent contracts and report not wanting to work more hours are also considered insiders. On the other hand, 'outsiders' include those not employed (unemployed or inactive), those with temporary or fixed-term contracts, and those employed in part-time involuntarily (reporting wanting to work more hours).

Career advancement prospects is measured based on responses to two relevant survey questions. In addition to those not in any employment, 'outsiders' are those reporting poor 'prospects of career advancement/promotion' in their job, as well as reporting uncertainty that their current job 'will continue to exist'. Conversely, 'insiders' are those employed who also report an expectation that their job will continue to exist and/or prospects for career advancement/promotion.

Finally, a *multiple labour market dualization* position is based on all three categories (income, employment contract and career advancement prospects) with labour market 'multiple outsiders' falling into an outsider category across all three dimensions, 'multiple insiders' being insiders across all three and 'partial outsiders' having a combination.

Housing equity position reflects the housing wealth a household holds where 'equity' is defined as the reported value of all owned properties[4] minus all their outstanding housing debts. Housing equity 'insiders' are property owners holding equity in them. Conversely, housing equity 'outsiders' are all non-homeowners as well as

Table 2. Housing market characteristics in the Netherlands, 2009–2018.

	House price index (2015 = 100)	Tenure shares (% of total dwelling stock)			Housing costs as share of disposable household income (%)			Share of house purchases by buyer's age (%)		
		Owner-occupied	Private rent	Social rent	Owner	Private tenant	Social tenant	<35 years	35–54 years	>54 years
2009	115.6	56	12	31	30.4	39.4	32.7	59.9	31.7	8.4
2012	103.1	56.6	11.5	30.7	32.5	40.8	34.9	56.3	33.1	10.6
2015	100	56.2	12.4	30.4	29.4	42.2	37.3	49.4	35.8	14.8
2018	123.2	56.7	13.0	29.3	29	42.6	36.3	44.3	39.0	16.7

Sources: Statistical Bureau Netherlands (CBS). Land Registry Netherlands.
For tenure shares: Private rent = owned by private landlord/social rent = owned by housing association/data for 2009 tenure shares is indicative as there is some discrepancy in measurement method before 2012.

Table 3. Operationalization of labour market & housing market dualization.

	Labour market dualization		
	Income	*Employment contract*	*Career advancement prospects*	*Combined labour market dualization*
Outsiders	Household net equivalized income below 60 percent of median income	Not employed, or employed in non-permanent contract, or 'involuntary' part-time employment contract	Reported 'poor prospects for promotion' + reported 'unlikely that job will continue to exist'	*Income + Employment contract + Career advancement 'multiple outsider'*
Insiders	Household net equivalized income above 60 percent of median income	Employed in full-time, permanent contract, or 'voluntary' part-time permanent contract	Reported positive prospects for promotion or positive that job will continue to exist	*Partial outsider* *Income + Employment contract + Career advancement 'multiple insider'*

	Housing market dualization		
	Equity	*Tenure security*	*Asset accumulation prospects*	*Combined housing market dualization*
Outsiders	Non-homeowner, or homeowner with negligible/negative equity	Tenant with high housing cost burden, or sub-tenant	Non-homeowner, or homeowner located in area of low to moderate urban density	*Equity + Tenure security + Asset accumulation 'multiple outsider'*
Insiders	Homeowner with equity	Homeowner or tenant with low housing cost burden,	Homeowner in area of high urban density	*Partial outsider* *Equity + Tenure security + Asset accumulation 'multiple insider'*

those with negative or negligible equity, defined as an outstanding mortgage debt to house value ratio of 99% or more.

Tenure security position reflects the degree of future risk for loss of residence. Here, the specifics of the Dutch housing system are of importance as strong security of tenure exists across all standard contracts both in the regulated and the free-market rental sector. The only exception tends to be the small share of households with subletting arrangements because these often do not fall under official tenancy protection schemes. Property rights in the Netherlands are generally strongly protected, while the risk of default mortgages are mitigated through various mortgage guarantee schemes and generous mortgage tax deductibility (Boelhouwer & Priemus, 2014). With little variation within these contractual obligations, the primary defining criterium for tenure security becomes affordability as measured by the cost-burden of housing. We follow the 30% housing cost threshold (net rent cost excluding utilities) used by Eurostat to define an overburdened household. 'Tenant security outsiders' thus include all tenants and owners with a high housing cost burden as well as sub-tenants.

The last housing dualization dimension, *asset accumulation prospects* is operationalized based on the location of owned housing assets. Given limitations of our dataset (discussed below), a proxy is used to determine the likelihood of being in a higher-gain or lower-gain housing market location. This is based on an available measure of 'urban density'. Given that the highest property gains have been concentrated in core urban areas of the country (Arundel & Hochstenbach 2018), asset accumulation prospect 'insiders' are defined as homeowners residing in areas of 'very' to 'extremely' urban character (densities of 1500–2500 dwellings/km^2). Conversely, 'outsiders' include all non-homeowners and homeowners in areas ranging from non-urban to moderately urban (<1500 dwellings/km^2).

The *multiple housing market dualization* position follows the same principles as the combined labour market dualization category with housing market 'multiple outsiders', 'multiple insiders' and 'partial outsiders'.

Dataset and empirical strategy

The analysis is conducted using the LISS panel dataset (Longitudinal Internet Studies for the Social Sciences) consisting of a 'true probability sample' derived from the Statistics Netherlands full population register (LISS Panel, 2017a). To maintain the representativeness of the data, refreshment samples are drawn at regular intervals. Furthermore, a stratified sample approach is used to correct representativeness for difficult to reach groups (LISS Panel, 2017b). The LISS study is repeated longitudinally every year.

We limit our sample to households headed by working age individuals (18–65 years old) and excluding students. We combine data across relevant questionnaire modules for two years, 2008 and 2016, which yields roughly 2000 households for each year. As some cases had to be dropped because of missing values, somewhat lower sample numbers were available depending on the examined variables (as noted by the *N* values in result tables). Regression analyses using the 2016 data reflect some sample loss due to missing values across the combination of variables, however, *n*-values remain amply sufficient for statistical models.

The analysis consists of two parts. Firstly, dualization dynamics are examined descriptively, examining housing outcomes across labour market positions as well

as changes between the two years. Subsequently, associations between different dimensions of housing and labour market dualization are estimated through logistic regression models. The four dimensions of housing market dualization (housing equity, tenure security, wealth accumulation prospect, housing market multiple outsider) are used as the dependent variable in four different models. For each of these models, separate sub-models are run including (a) contract position in addition to the controls and income measure, (b) career prospect position in addition to controls and income measure, (c) the measure of labour market multiple outsider[5] in addition to controls and (d) looking at interaction effects of labour market multiple outsider and year to evaluate any change in effect over 2008 and 2016. Labour market income is an independent variable in all of these models.

Control variables included age, gender, whether dependent children are present in the household, whether the household is composed of two earners, whether the head of household is a single parent, the education level of the head of household,[6] as well as a year dummy. All models are run using blockwise entry. Robust standard errors are clustered at the household level, accounting for the fact that some households are part of the sample in both years.[7]

Results

Descriptive statistics

Table 4 shows the share of housing and labour market outsiders across all dimensions for both years. We can see that the share of housing market multiple outsiders has grown substantially from roughly 26% in 2008 to 38% in 2016. Seemingly, this was

Table 4. Sample characteristics.

	2008	2016
Housing market dualization		
Housing equity: outsider	54.3%	68.2%
Tenure security: outsider	40.9%	43.4%
Asset accumulation: outsider	74.5%	74.2%
Housing market 'multiple outsider'	25.6%	38.3%
Labour market dualization		
Income: outsider	28.9%	26.9%
Employment contract: outsider	35.1%	34.8%
Career advancement prospects: outsider	33.3%	40.2%
Labour market 'multiple outsider'	11.4%	15.2%
Control variables		
Median equivalized net household income (in 2016 euros)	€22,344	€21,960
Age (average)	47.0	48.2
Female	28.6%	36.5%
Dual-earner household	52.2%	43.8%
Children in household	41.9%	37.7%
Single parent	6.8%	8.6%
Education:		
Intermediate secondary or below	33.6%	24.6%
Higher secondary or intermediate vocational	37.2%	44.2%
Higher vocational or university	29.1%	31.2%
Additional housing characteristics		
Share of owners	69.9%	66.3%
Share of tenants	28.8%	31.4%
Share of subtenants	0.5%	1.0%

Note: All individual variables based on head of household.

largely driven by a sharp growth in the share of households with (close to) no or negative equity (from 54% to 68%), which exceeded shifts in our sample in home-ownership (Table 4) and thus also reflects increasing indebtedness among homeowners. We further see a small growth in the number of households with high housing cost burdens (from 41% to 43.5%).[8] It seems that the temporal decline in prices during the double dip recession between 2009 and 2013 had no positive impact on the accessibility to affordable housing and homeownership in general. This likely reflects both more restricted credit access in the post-crisis period (Lennartz et al., 2016), as well as strong house price recovery in more recent years (see Table 2). Furthermore, we can see that changes in the composition of labour market insiders and outsiders were comparably small over this period. The share and growth of labour market multiple outsiders is substantially smaller, where the driving force seems to be perceived negative career prospects (from 33% to 40% between 2008 and 2016), rather than lower incomes or more insecure employment contracts.

Figure 1 looks at the bivariate relationships between labour and housing market dualization dimensions. For sake of clarity, we limit the visualization of the descriptive results to the outcome of multiple outsider status on the housing market, however, relationships across the full set of separate housing dimensions are presented in Appendix 1.

Starting with the income position of a household, Figure 1 reveals that households with net equivalized income below 60% of median income (i.e. income outsider) correspond strongly with being a 'multiple outsider' across our three housing market dimensions. Where in 2008 more than 55% of 'income outsiders' were housing market multiple outsiders, this share had grown to more than 70% in 2016. At the same time, the share of 'income insiders' that were recorded as multiple outsiders on the housing dimensions had grown from around 12% to more than a quarter in 2016. Seemingly, this implies that even a higher income position has become less decisive for achieving favourable housing outcomes in the post-crisis period.
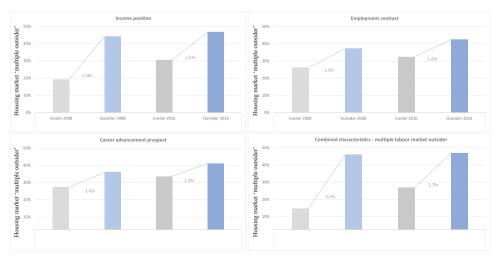

Figure 1. Bivariate relation between labour market positions and multiple outsider status on the housing market 2008/2016.

Similar pictures evolve for the 'employment contract' and 'career advancement prospect' categories. Being an outsider in either of these categories corresponds much more strongly with the status of being a multiple outsider across housing dimensions than being an employment security and career advancement insider. In contrast to the income to housing market linkage, we can, however, see that the gap between insiders and outsiders has become even bigger in 2016. While outsiders in both categories were 1.7 times more likely than insiders to be housing market multiple outsiders in 2008, this ratio increased to just under or just over 2.0 times for both in 2016. It seems that at least in terms of (future) employment security, holding a favourable position on the labour market seems to have stronger implications for housing market outcomes in 2016 as compared to the pre-crisis period.

Considering the combined labour market status, we see strong increases among both insiders and outsiders. We can then see that income appears to be the dominant factor in this picture: the share of labour market multiple *insiders* who also have a housing market multiple outsider status has considerably outpaced the labour market outsider to housing market outsider linkage, as indicated by a decrease in the outsider/insider ratio from 3.5 to 2.5 (Figure 1). This reflects the stronger deterioration in housing outcomes in 2016 among income insiders.

Regression results

As a second step of the empirical analysis, we run a series of logistic regressions to test whether the bivariate findings hold after controlling for various demographic and socio-economic characteristics of our sample population. We run separate models with employment contract, career advancement prospects, being a labour market multiple outsider and an interaction term between being multiple outsider and the 2016-year dummy as our independent variables of interest across all four housing dualization outcomes. In contrast to the descriptive analysis labour market income is measured as a continuous variable, using the log of equivalized net household income. It is applied as a separate control in models (a) and (b), but dropped in (c) and (d) since it is part of the labour market multiple outsider status. Results are reported as odds ratios, including standard errors and statistical significance.

The logistic regressions confirm the findings of the descriptive statistics, revealing a strong association between labour and housing market dualization. Modelling separate dimensions of housing dualization outcomes (Table 5) reveals a substantial and significant ($p < .01$) effect of employment security as measured by types of contracts and working hours towards the likelihood of being an insider for each outcomes of housing equity, tenure security, asset accumulation potential and being a housing market multiple outsider (models 1a, 2a, 3a, 4a). The results indicate that, *ceteris paribus*, the odds of an employment contract outsider also being a housing equity outsider are about one-and-a-half times higher than those of employment contract insiders. Similar associations of employment security are found with tenure security (odds ratio = 1.23) and asset accumulation prospect (odds ratio = 1.49).

Secondly, all else being equal, reported career advancement prospects also show a strong and significant positive correlation ($p < .01$) with housing equity, tenure

Table 5. Regression results for each dimension of housing market dualization.

	(1) Outcome: housing equity outsider								(2) Outcome: tenure security outsider							
	Model (1a)		Model (1b)		Model (1c)		Model (1d)		Model (2a)		Model (2b)		Model (2c)		Model (2d)	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
Employment contract: outsider	1.443**	0.17							1.238**	0.12						
Career advancement prospects: outsider			1.647**	0.20							1.302**	0.13				
Log equivalized net household income (thousands)	0.383**	0.07	0.386**	0.07					0.204**	0.03	0.191**	0.03				
Labour market 'multiple outsider'					4.372**	0.76	5.451**	1.16					5.347**	0.77	5.088**	0.95
Labour market 'multiple outsider'* Year 2016							0.572	0.17							1.114	0.29
Age	0.941**	0.00	0.937**	0.01	0.938**	0.00	0.938**	0.00	1.000**	0.00	0.997**	0.00	0.990**	0.00	0.990**	0.00
Female	1.609**	0.20	1.623**	0.21	1.642**	0.21	1.643**	0.21	0.965**	0.10	0.955**	0.10	0.990**	0.10	0.991**	0.10
Dual-earner household	0.724**	0.08	0.712**	0.08	0.701**	0.08	0.696**	0.08	1.023**	0.10	1.012**	0.10	0.974**	0.09	0.974**	0.09
Children in household	0.375**	0.05	0.384**	0.05	0.463**	0.06	0.464**	0.06	1.029**	0.11	1.040**	0.12	1.447**	0.15	1.446**	0.15
Single parent	2.290**	0.51	2.350**	0.54	2.714**	0.59	2.706**	0.59	2.244**	0.41	2.299**	0.44	3.102**	0.58	3.105**	0.58
Education (ref = intermediate secondary or below)																
Higher secondary or intermediate vocational	0.711*	0.09	0.668**	0.09	0.679**	0.09	0.682**	0.09	1.017*	0.11	1.010**	0.11	0.956**	0.10	0.955**	0.10
Higher vocational or university	0.571**	0.09	0.568**	0.09	0.495**	0.07	0.494**	0.07	1.469**	0.18	1.453**	0.18	1.033**	0.12	1.033**	0.12
Year 2016	2.204**	0.21	2.198**	0.22	2.047**	0.20	2.174**	0.22	1.307**	0.11	1.281**	0.11	1.110**	0.09	1.097**	0.09
Constant	572.1**	339.5	651.4**	388	37.241**	11.05	36.869**	10.97	58.592**	24.71	78.838**	34.10	0.751**	0.17	0.754**	0.17
N	2317		2214		2233		2233		2797		2670		2681		2681	
Pseudo R^2	0.177		0.183		0.177		0.178		0.096		0.102		0.076		0.076	

(continued)

	(3) Outcome: asset accumulation outsider								(4) Outcome: housing market multiple outsider							
	Model (3a)		Model (3b)		Model (3c)		Model (3d)		Model (4a)		Model (4b)		Model (4c)		Model (4d)	
	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE	Odds ratio	SE
Employment contract: outsider	1.492**	0.16							1.337**	0.17						
Career advancement prospects: outsider			1.256**	0.13							1.849**	0.25				
Log equivalized net household income (thousands)	0.574**	0.07	0.559**	0.07					0.062**	0.01	0.067**	0.01				
Labour market 'multiple outsider'					2.745**	0.50	4.206**	1.16					7.660**	1.21	8.461**	1.69
Labour market 'multiple outsider'* Year 2016							0.463	0.15							0.784	0.23
Age	0.997**	0.00	0.999**	0.00	0.997**	0.00	0.997**	0.00	0.981**	0.01	0.975**	0.01	0.970**	0.01	0.970**	0.01
Female	1.080**	0.12	1.082**	0.13	1.079**	0.13	1.079**	0.13	1.635**	0.22	1.657**	0.23	1.870**	0.25	1.872**	0.25
Dual-earner household	0.897**	0.09	0.891**	0.09	0.903**	0.09	0.901**	0.09	1.146**	0.15	1.126**	0.15	0.966**	0.12	0.964**	0.12
Children in household	0.988**	0.11	0.955**	0.11	1.066**	0.12	1.069**	0.12	0.626**	0.10	0.681**	0.11	1.154**	0.17	1.157**	0.17
Single parent	1.092**	0.23	1.129**	0.25	1.291**	0.28	1.289**	0.28	1.919**	0.44	1.923**	0.45	2.810**	0.61	2.800**	0.61
Education (ref = intermediate secondary or below)																
Higher secondary or intermediate vocational	0.751*	0.10	0.730**	0.09	0.743**	0.09	0.745**	0.09	0.776*	0.11	0.770**	0.11	0.678**	0.09	0.680**	0.09
Higher vocational or university	0.490**	0.07	0.488**	0.07	0.462**	0.06	0.461**	0.06	0.852**	0.14	0.824**	0.14	0.445**	0.07	0.444**	0.07
Year 2016	1.050**	0.08	1.005**	0.08	0.968**	0.07	1.021**	0.08	2.529**	0.28	2.409**	0.28	1.884**	0.20	1.964**	0.23
Constant	24.980**	10.07	26.885**	11.06	4.746**	1.16	4.647**	1.13	2104.3**	1359	2021.9**	1295	1.075**	0.31	1.055**	0.30
N	3288		3130		3159		3159		2139		2047		2052		2052	
Pseudo R^2	0.041		0.038		0.035		0.037		0.249		0.259		0.179		0.179	

*$p < .05$; **$p < .001$

security, asset accumulation positions and being a housing market multiple outsider (models 1b, 2b, 3b, 4b). The odds ratios for these relationships are very similar to those of contract position.

Looking at the state of outsiders across all labour market dimensions (models 1c, 2c, 3c, 4c), the empirical model reveals a very strong positive and significant association with being a housing equity outsider (odds ratio = 4.3), employment contract (5.3), asset accumulation prospect (2.7) and particularly so with the status of being a housing market multiple outsider (7.7). In other words, labour market multiple outsiders are more than seven times more likely to be housing market multiple outsiders compared with those being partial labour market outsiders or labour market multiple insiders.

The included control variables suggest some relevant findings as well. Firstly, women as well as single-parents in the Netherlands are more likely than men and family households to hold a housing outsider status. This finding is consistent across all models, with the exception of the prospective asset accumulation category – where the odds ratios for both groups are relatively small, indicating they are only marginally less likely to live in high-growth urban housing markets. To get a better grasp of how these groups might be disadvantaged along various housing and labour market dimensions we ran a separate analysis, where we used merged multiple labour and multiple housing market outsider status as the dependent variable and ran these models for all control variables used in Table 5 (presented in Appendix 2). The analysis confirms that for these groups – that is, women and single-parents, as well as lower-educated individuals – a multiple outsider status is most common.

Secondly, the dummy variable for 2016 supports the finding of the descriptive analysis that being a housing market outsider has become more likely across all dimensions in the period following the crisis. This association appears to be much stronger for the housing equity dimensions than for tenure security and asset accumulation prospect. Importantly, however, the interaction term between survey year and the labour market multiple outsider status are statistically insignificant across all models (1d, 2d, 3d, 4d). This indicates that the relative impact of labour market position on becoming an outsider on the housing market appears not to have (significantly) deteriorated over the period. This likely reflects, on the one hand, the growing share of housing market outsiders among labour market insiders, especially among income insiders. On the other hand, this may suggest additional reasons driving the share of housing market outsiders beyond labour market position, one of which may be a growing role of parental wealth in shaping preferable housing outcomes (see also Coulter, 2018; Hochstenbach & Boterman, 2017; Ronald & Lennartz, 2018).

Discussion and conclusion

This paper aimed to further uncover the links between growing employment insecurity on the labour market and emerging intra- and intergenerational divides across contemporary housing markets in advanced societies. The starting point of the paper was the assertion that these growing divides are not necessarily the product of the Global Financial Crisis but have developed over the longer-term given a gradual

restructuring of capitalist economies and the weakening of labour market institutions since the 1980s. To get a better understanding of the housing/labour market linkages and the role of employment security in shaping housing market outcomes, we applied the established concept of 'labour market dualization' to a corresponding 'housing market dualization' typology across three key dimensions of relative housing advantage or disadvantage in terms of a household's financial welfare: housing equity holdings, tenure security in relation to housing affordability and housing accumulation prospects related to specific regional housing markets. To test these linkages empirically we then applied descriptive statistics and logistic regression with micro-level household data from the LISS panel study in the Netherlands, a country which has seen a substantial overhaul of its labour and housing market institutions in the past 20 years or so.

Our findings reveal a crucial translation of labour market divides to housing outcomes. Lower income levels, employment insecurity or unemployment and negative prospects for career advancement are all associated with lower levels of housing equity, security of tenure and spatial disadvantages in further housing wealth accumulation. Labour market multiple outsiders – that is, households who experience an outsider status across all three labour market dimensions – are a full 7.7 times more likely than other households of being a multiple outsider across all three housing dimensions. Beyond an expected translation of disadvantage between labour and housing markets, our analysis further suggests that, in terms of the Dutch case, the number of households experiencing multiple disadvantage has grown substantially over the past decade. While research has stressed longer-term labour restructuring and rising insecurity (Arundel & Doling, 2017; Beck, 1992; Giddens, 1999), this asserts that the years since the GFC have further catalyzed inequalities across both labour and housing markets.

On the one hand, our study exposes the undeniable link between employment security and housing market outcomes. We further see that deteriorating housing positions are particularly apparent for younger populations, as well as less resilient groups such as single-parents and lower-educated households. On the other hand, we do not find evidence that labour market position has become increasingly a predictor of housing outcomes, reflecting the fact that worsening housing outcomes were apparent across both labour market insiders and outsiders over the studied period. At least in the Dutch case, the growing share of households who are shut out from accessing affordable housing and accumulating housing wealth has become an increasing a problem beyond labour market conditions, meaning that a strong position on the labour market increasingly cannot also guarantee successful property ownership. A question that is not addressed here and needs further attention is whether this relationship holds when taking a more dynamic approach to studying the employment-housing nexus over the life course. Ultimately, there is a valid question of whether insecure employment only delays rather than denies access to homeownership and more stable housing career paths. In a similar vein, our study cannot address how future housing finance practices may adapt to new labour market realities, such as the impacts of mortgages becoming more easily accessible for non-standard workers and self-employed households.

Irrespective of the pre-to-post crisis developments, our overarching finding of such a clear and strong link between labour and housing market positions has major implications for socio-economic inequalities and life-chances more broadly. Ample research has demonstrated how vital employment and housing careers are for the attainment of economic independence, wellbeing and wealth accumulation. Beyond this, housing is entangled in further individual decisions such as marriage and child-bearing. Our results point to housing inequalities that are significantly amplified by labour market positions and *vice versa*, with a growing group of households disadvantaged along multiple dimensions. The link between career advancement opportunities and housing asset accumulation prospects further implies dynamics that are likely to perpetuate, or even intensify, over the life-course.

Our final assertion is that understanding housing divides through multiple dimensions of insider–outsider dualization is both valuable conceptually and with regards to further empirical research. In proposing an operational definition of *housing dualization*, we entreat its application and adaptation across diverse contexts. This includes contexts that never developed the same standards of welfare protection and housing security as in the Netherlands, or that have seen even more drastic retrenchment and austerity policies in recent years. This also can include expanded investigations of housing dualization that may incorporate further dimensions that were beyond the scope of this research. Housing market divides clearly go beyond financial welfare and touch on many aspects of individual and household-level well-being. A dualization approach argues for an understanding across multiple of dimensions of relative advantage and disadvantage and the crucial interrelations between these divides. The existing dualization literature brought attention to entrenched divides in labour markets and argued for a broader understanding of how these reflect onto other dimensions of inequality. While dualization research has lacked direct engagement with housing studies, we argue for a valuable integration of the fields. Housing is clearly a central dimension of insider–outsider divides with fundamental consequences towards socio-economic wellbeing both at the individual level as well as in its role in structuring, or amplifying, societal inequalities.

Notes

1. Obviously, for many households accepting these growing risks were not a potential option in the first place, particularly in those contexts where lending norms have been tightened considerably during and after the crisis.
2. Net replacements rates are higher in Denmark when considering lower-income households or households with children at different income levels, while in the case of single-person households without children having average wages, higher rates are seen in the Netherlands (OECD, 2019).
3. Head of household is selected as main income-earner in household (or in some cases equal earner). Equivalization was based on the standard OECD square-root scale.
4. This includes their primary property of residence where they are owner occupiers as well as all reported secondary properties of the household.
5. For labour market multiple outsider, a binary instead of continuous income variable is used as it is included within the multiple outsider classification.
6. Control variables are based on the head of household. Ethnicity could not be included as it is absent in the 2008 data. Nonetheless, robustness tests with only 2016 data including

ethnicity revealed similar results across all key variables, as well as ethnicity being strongly correlated with included income and education controls.

7. Stata code for the whole procedure is available upon request. We also performed two robustness checks on our results. First, we split the 'housing equity' variable into three categories: Households with positive equity, households with negative or negligible equity and non-homeowners. Secondly, rather than running the models with log equivalized household income, we performed the logit models with income quintiles instead. Both of these two robustness checks did not lead to different results than the models reported in this paper.

8. Separating housing cost burden by tenure, we see this increase is explained particularly in rising housing cost burden among renters rather than homeowners.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix 1

Bivariate relations between different dimensions of housing and labour market dualization

			Housing equity outsider	Tenure security outsider	Asset accumulation outsider	Multiple housing market outsider
Income position	2008	Insider	44.5%	33.2%	33.2%	12.7%
		Outsider	72.3%	65.0%	65.0%	55.7%
	2016	Insider	60.3%	37.5%	37.5%	25.6%
		Outsider	83.7%	68.4%	68.4%	71.9%
Employment contract	2008	Insider	49.8%	39.6%	39.6%	20.2%
		Outsider	61.8%	43.4%	43.4%	34.8%
	2016	Insider	61.8%	36.8%	36.8%	27.4%
		Outsider	77.6%	56.2%	56.2%	56.1%
Career advancement	2008	Insider	51.1%	39.2%	39.2%	20.4%
		Outsider	59.4%	44.6%	44.6%	35.2%
	2016	Insider	63.8%	36.9%	36.9%	27.5%
		Outsider	75.0%	52.3%	52.3%	53.9%
Multiple labour market dualization	2008	Multiple insider	48.0%	38.4%	38.4%	19.4%
		Multiple outsider	84.0%	72.4%	72.4%	68.3%
	2016	Multiple insider	63.1%	39.6%	39.6%	31.0%
		Multiple outsider	87.2%	76.2%	76.2%	76.6%

Appendix 2

Logistic regression for combined labour and housing market multiple outsiders

	Odds ratio	Robust $p > \|z\|$	SE	95% CI		
Age	1.017*	0.02	0.01	1.00	–	1.03
Female	2.333**	0.00	0.38	1.70	–	3.21
Dual-earner household	0.535**	0.00	0.09	0.39	–	0.74
Children in household	0.341**	0.00	0.09	0.20	–	0.58
Single parent	4.094**	0.00	1.36	2.14	–	7.85
Education (ref = intermediate secondary or below)						
Higher secondary or intermediate vocational	0.407**	0.00	0.07	0.28	–	0.58
Higher vocational or university	0.197**	0.00	0.04	0.13	–	0.30
Year 2016	1.220	0.15	0.17	0.93	–	1.60
Constant	0.068**	0.00	0.03	0.03	–	0.16

Outcome: Combined housing and labour market multiple outsider

$N = 3055$ // Pseudo $R^2 = 0.145$. *$p < .05$ **$p < .001$