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The Home as Workplace

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The Home as Workplace

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Abstract

This paper explores the resurgence in western countries of the use of the home as a place of work. Using data from the European Working Conditions Survey it shows that by 2015 about 1 in 6 EU workers worked at home at least some of the time, this proportion being much higher in northern and western states and increasingly among men in non-manual occupations in those contexts. It argues that this trend supports an extension of traditional analyses of housing as both a consumption and an investment good to its use as a capital good akin to factories and offices. Faced with a more complex trade-off, households are adapting the decisions they make about their housing; in particular, freed, completely or in part, from the need to commute to work, their locational decisions. The paper concludes that the use of the home as a workplace leads to many important areas of investigation for housing studies researchers.

Keywords: work; technological developments; capital goods; housing location; prices

Introduction

Over recent decades, there appears to have been a growth in the use of homes as locations for income-generating activities across many advanced economies. In other words, the home becoming not just somewhere to live, eat, sleep, relax and so on but also providing a physical base in which people earn a living (CIPD 2019; Crosbie and Moore 2014; Felstead and Henseke 2017; Mulcahy 2017). This is quite distinct from the use of the home itself as a source of income, such as through an increase in its capital value that can, at least in theory, be realised as an income (Arundel 2017; Allegré and Timbeau 2015), or, through renting out (all or part of) the dwelling either on a long-term basis, or a short-term basis, as with Airbnb (Ronald and Kadi 2017; Fields & Rogers 2019). Rather, the ‘home as workplace’ refers to any number of income-generating activities within the home by the householder, whether storing goods which are sold on-line, the artist home studio, the dog-minder using their home as a kennel, the trader researching and investing in stocks from their home, or the software designer working from home. The focus here, then, is on the dual use of the building to meet the needs of residents as somewhere both to live and to work.

The occurrence of this specific trend begs a number of questions, relating to the trend itself and to its implications for the study of housing. The essential query is understanding what is happening and why. To what extent do we see an increase in home working and can these trends be substantiated by reliable international data? Are such trends occurring across different country contexts and to the same extent? And, how is the prevalence of home working differentiated by characteristics such as age, occupation and gender? More broadly, what is it about the present era that may promote a greater incidence of income generating activities conducted from home as opposed to the warehouse, office, factory, shop or other place provided by an employer?

These foci lead to another set of questions in trying to untangle what the trend means for the study of housing. One aspect concerns terminology. In English the terms ‘home’ or ‘dwelling’ have been used to describe buildings that people live in, and the term ‘workplace’ to refer to offices, factories, shops and other places – not always buildings – where people work (Holliss 2015). Would a new descriptor be helpful: work-dwelling, work-housing, live/work houses? Beyond matters of terminology, is the challenge of understanding the real-world outcomes. At the level of the individual, this includes how and to what extent the decision to work at home is affected by the characteristics of their housing – including the physical form, tenure or location – and, conversely, does the decision to use the home as work place affect decisions that householders make about their housing. In these respects, can we distinguish systematic differences between those who work at home and those who work elsewhere? At the aggregate level, what do those decisions mean for our understanding of how housing systems work? Are housing markets, for example, changing as a consequence of increased working at home?

There are a number of sources and literatures addressing aspects of these and related questions. In the main, these literatures are based in areas such as business studies, labour market studies, the sociology of work, and architecture. There has been little work on the topic in housing studies literatures; somewhat ironically given that many housing studies researchers – possibly a majority – have long carried out some of their research, reading and writing from their home.

The overarching aim of the present paper is to redress this orientation, bringing the use of the home as workplace more firmly into the vision of housing researchers, and establishing the groundwork for a new literature. We do so by following the general framework identified above. Drawing especially on developments in European countries, we firstly examine the trends toward working at home. We make use of cross-country statistical sources portraying the speed of growth of working at home and revealing present levels that comprise a significant proportion of the total labour force in many countries. In addition, we look at characteristics of those working at home

in terms of gender, income, occupation class, and the degree of urbanisation of their place of residence. The paper considers how developments in home working can, historically, be related to changes in the prevalent economic model and emphasises the importance, though not exclusively so, of the growing rise of technologies that have enabled working remotely.

Secondly, the paper considers the use of the home as a workplace from a housing studies perspective. How does the home affect the decision about where to work, and once the decision has been taken how may this affect the home? In recent decades researchers have conceptualised housing decisions as based on a two-element trade-off between housing as consumption and housing as investment. Using the home as a workplace, however, introduces a third element. In this more complex trade-off, households may make different decisions about the physical characteristics of the home, and, given a decoupling from required daily travel to employer work premises, the location of their home. While there is little statistical data that enables systematic study of such housing decisions, we explore this question relying on secondary academic and non-academic studies.

Finally, we identify key aspects of the practice of using the home as workplace on decisions about housing from the point of view of an agenda for research. The paper concludes with consideration of relevant areas of investigation that would contribute to the extension of housing studies to incorporate the growth of the home as workplace.

The fall and rise of the home as the workplace

The changing economic model: needs and possibilities

The dual use of buildings as both home and workplace is certainly not confined to the present. Historically, the relative incidence of the work-home has reflected changing economic models which in some eras have required the two functions of living and working to be physically separated and in some to be brought together. In the pre-industrial eras of western countries, the economic model frequently favoured families working together as an economic and social unit, with children being born into a means of making a living, effectively carrying on the family tradition. For merchants, furniture makers, clock makers, weavers and many others, the home was in practice a multi-purpose space which provided living accommodation with some combination of storage space for raw materials and finished products, workshops in which goods were made, and shops from which goods could be sold or exchanged (Holliss 2015). The long progression toward industrialised economies brought about a gradual, though never complete, replacement of the home-work model with a spatial separation of living and working activities and consequent

significant impacts on urban structure (Vance 1971). In a number of ways, this separation was functional to the new economic model. The means of producing cheaper goods required capital investments in the form of factories, machinery and the like that surpassed the means of individual families. Workers could be recruited on the basis of their availability and suitability rather than through parentage, thus enabling more rapid responses to the expansion and decline of specific industries (Edgell 2012; Schnore 1954). Nevertheless, in the countries that industrialised the earliest, the complete spatial separation of home and workplace was often limited; their urban areas being characterised by homes surrounding and literally intermingled with industrial sites.

By the late 19th century, social thinkers concerned about the detrimental impacts of the combination of high densities and the juxtaposition of homes and noisy, noxious industries developed new ideas on city structure (More 2014). The introduction of town planning principles, such as those proposed by Ebenezer Howard in the UK, prioritized a separation of housing and workplaces into different zones. The new town planning practices that underlay the development of the twentieth-century, ‘fordist,’ city generated needs for transport systems designed around the requirement of transporting large numbers of people, concentrated during rush hours, from their homes to their workplaces (Schnore 1954). This did not produce a complete break between work and living places. To different extents in different countries, there were some population groups, principally the self-employed, whose house was the site for income-generating activities: the woman who took in washing, the book keeper who worked at their home office, the call-out plumber who took bookings on a landline, the doctor who had a consulting room in their house. Nonetheless, it was the norm in all advanced economies that most workers lived in one place and worked in another, generally the premises of their employer. For most people there was a clear distinction between the private space of the home and the public space of the workplace.

Even at the height of this model, change was foreseen in a prescient thesis that technological developments would bring about a new model in which the old, pre-industrial home-work cottage would be transmuted into a ‘post-industrial electronic cottage’ (Toffler 1980). While home working has had some presence for many decades, the recent increases in those doing so are founded in a number of developments. One of the main enablers of flexible working generally has indeed been developments in technology. Messenger and Gschwind (2016) identify three stages. In the first, landline telephones and personal computers were able to replace commuting between home and office, for the first time enabling the role of the home as an office. In the second, mobile telephones and laptops along with the internet, enabled the beginning of the mobile office. Finally, in the third phase, the further increase in mobile technology and the spread of wi-fi have enabled

the connection, virtually, of workers, whether employees or self-employed, to the office or client from (almost) anywhere at any time (Kurland and Bailey 1999). At the present therefore, applications on computers, smartphones or other mobile devices allow workers, located away from their employer's workplace, to remain connected to other employees, to customers as well as to company files and desktops. Working from home – or elsewhere – is no longer a barrier to interaction with colleagues in the firm and this includes forms of supervision and accountability. Such technologies also provide many opportunities for home-based self-employment.

These technological developments have supported the emergence of economic systems that have placed more emphasis on intangible assets, such as ideas and software, rather than physical products, in turn reducing the imperative for fixed, centralised workplaces. This has enabled the development of new business models, in which firms seek, in response to changing production demands, to rapidly adjust workforces in numbers, skills and locations. Furthermore, reducing the numbers of workers operating from a central location has enabled cuts in production costs (Felstead and Henseke 2017; Mulcahy 2017). These business models may, in turn, feed into changing societal norms, responding to employee's domestic and personal circumstances that prioritize more flexible work conditions, eliminating commuting, and adapting working time to needs (CIPD 2019; Crosbie and Moore 2014; Eurofound 2016).

Enabled by technological developments, then, the rise of remote working has offered many more opportunities – for both employers and workers. While they may have increased the ability of traditional self-employed workers to use their home as a base for their businesses, they have also resulted in growing numbers of people, both self-employed and employees, who do not spend (all of) their working time at an employer's premises. Some of these remote workers may operate from co-work spaces, from a café or from the train, however, many use their home as a workplace. While the vision of the 'electronic cottage' may have not become the norm, in many advanced economies it is no longer uncommon. Among other things, this means that, increasingly, housing is no longer just somewhere to live or a source of investment, but can also be a location supporting paid work.

The statistical evidence

Interpreting measures of the use of the home as a workplace crucially depends on what exactly is meant. The term 'remote' working, referring to the practice of working away from – that is in a different location to – work-specific buildings appears to have become widespread. But this does not necessarily involve working in the home, since it may involve working on the train, at the airport, in a coffee shop, or even a temporarily-leased office space. Using the home as a workplace

may also differ between doing so occasionally, even if regularly, and doing so routinely, such as every working day. The former would imply a continued locational link between home and employer's workplace, the latter would not. There might also be a distinction between the terms 'working from home' which implies that an employee works away from the premises of an employer, and 'working at home' which might imply self-employment or a small business carried out from the home. Finally, there will be cases of mixed practice. Within a household, one partner may work at an employer's premises while another uses the home as a workplace. A householder may also have a first job that necessitates working at the employer's premises, and a second job, or part-time business, that they pursue from the home. The practical problem, then, is that different national statistical offices and surveys may use varying definitions, leading to quite different conclusions about scale.

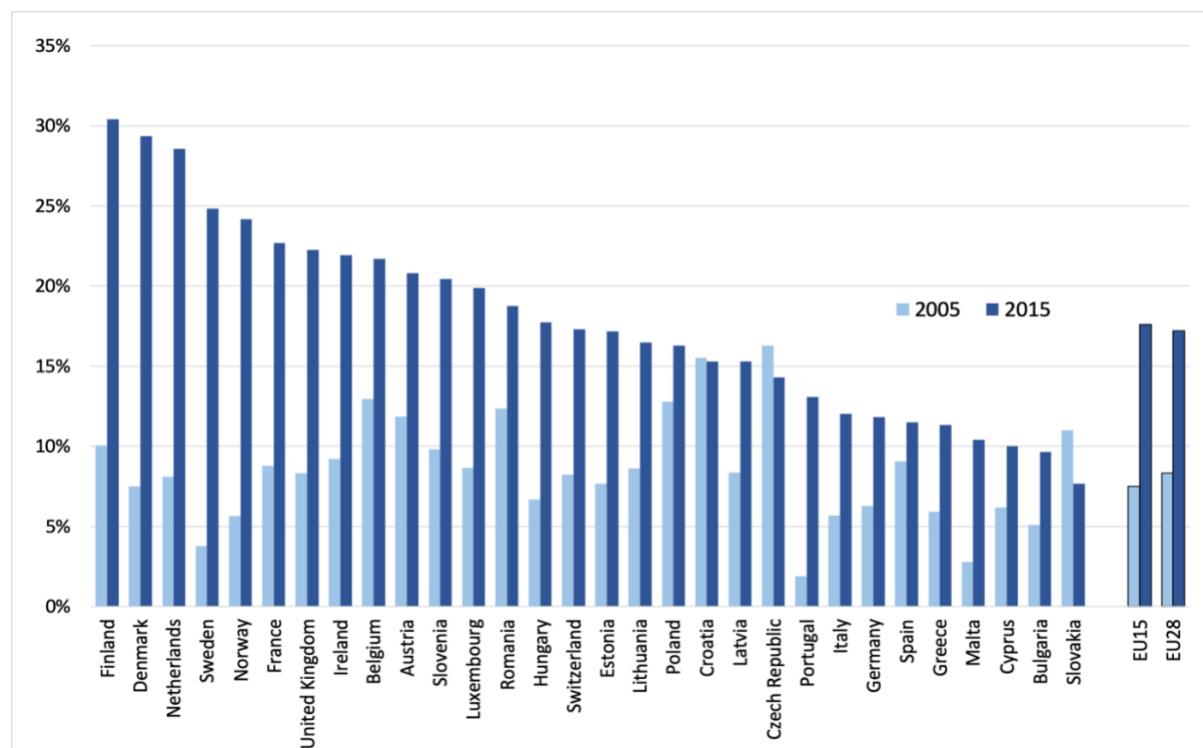
The measure applied by Eurostat is the percentage of employed persons aged 15 to 64 who usually work from home (Eurostat, 2019). Across the EU as a whole in 2017 this stood at 5.0% varying from the highest shares in the Netherlands (13.7%), followed by Luxembourg (12.7%) and Finland (12.3%), to the lowest in Bulgaria (0.3%) and Romania (0.4%). In contrast, the OECD uses a measure of whether an employed person has worked at home at least once in the previous 12 months (OECD, 2016). This records a similar geographic distribution across European countries to that recorded by Eurostat but with much higher rates, in some cases nearing half of the working population.

Here, we turn to a more detailed look at the 2005 and 2015 waves of the European Working Conditions Survey (EWCS) conducted by Eurofound. This survey is selected as it provides a greater number of relevant correlates and allows generating a cross-country harmonized measure of whether workers report usually working at home. However, set against this, a limitation is that the two waves ask slightly different questions. A worker is considered as usually working from home in 2005 if they respond doing so 'around half the time' or more, while in 2015, this is coded as 'several times a week' or more.¹ Despite this caveat, given the lack of harmonized international data over time, the data serves as a useful measure for looking at variation over time and provides the possibility of disentangling home working rates across several other crucial characteristics. The ECWS measure reveals estimates somewhere between those from Eurostat and OECD.

¹ It was possible to create a variable capturing whether a respondent's job involved working 'usually' at home, based on several relevant variables from ECWS. In 2005, this includes responding either 'All of the time,' 'Almost all of the time,' 'Around 3/4 of the time,' or 'Around half of the time' to working at home. In 2015, this was based on answering either 'Several times a week' or 'Daily' on having worked at home.

As with the Eurostat and OECD sources, EWCS confirms the considerable variability across member states with those in northern and western Europe (with the exception of Germany) having rates of home working some two or three times the rates in many southern and eastern states (Figure 1). In most countries the rates are significant in size, averaging about 17 %, across both the EU15 and EU28 countries, thus roughly equating to 1 in 6 workers. Moreover, over the period from 2005 to 2015, the rates have increased rapidly, at least doubling for both sets of countries. While not perfectly comparable, these rates are consistently confirmed by surveys in a range of individual countries (for example, Felstead and Henseke 2017; CIPD 2019). Looking at the change in the distribution of rates, it appears that increases in home working have been particularly strong in north-western European countries. On the other end of the spectrum are most southern European countries – albeit these have still seen some substantial relative increases – with eastern member states clustering in the middle ranges. Overall, these data clearly reveal that using the home as a workplace involves significant shares of the workforce, with all but two countries seeing more than 1 in 10 workers usually working from home, and cannot be considered a minority feature of labour or housing markets.

Figure 1: Share of workers usually working from home

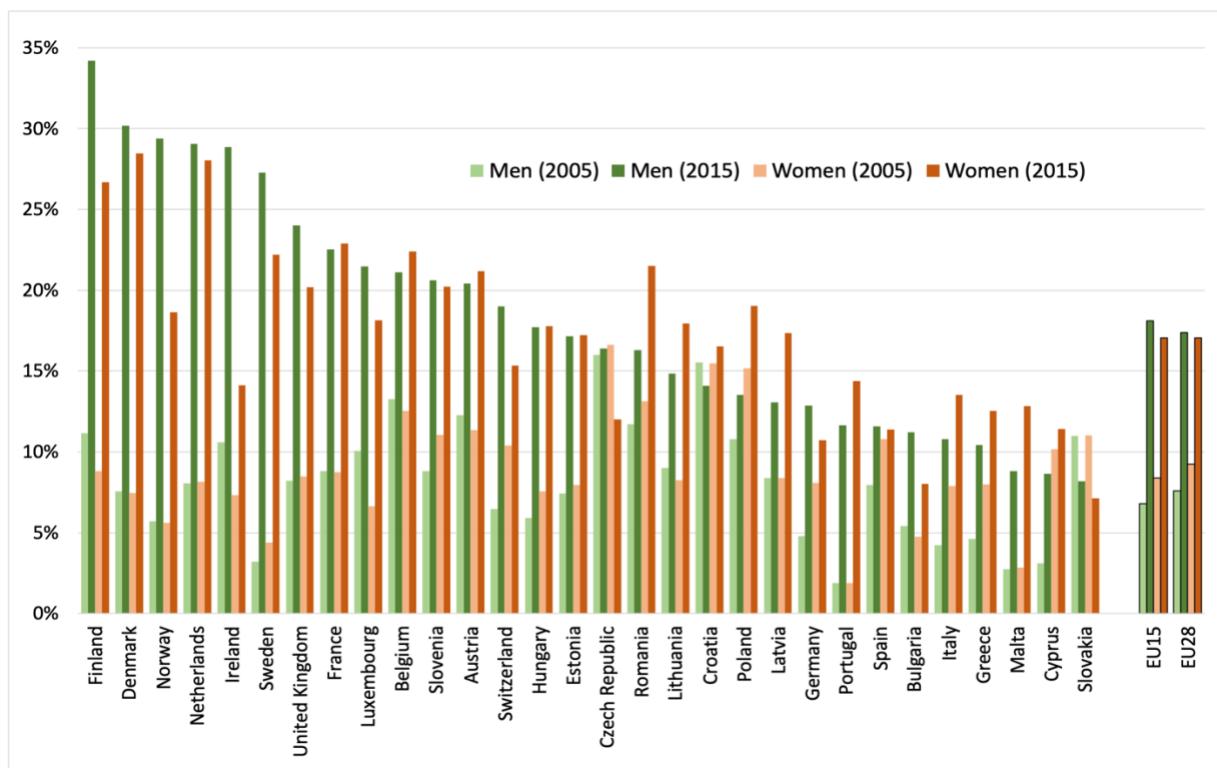


Data source: European Working Conditions Survey (2005; 2015)

Statistics about home working trends based on gender, indicate some significant variation and developments (Figure 2). In 2005, slightly more women than men worked at home across the

EU15 and EU28. However, by 2015, there was a large increase, relative to women, in the rate among men, such that the percentage of men working from home has become higher than that of women. This pattern however is strongly differentiated across Europe. It is western and northern Europe that show a clear shift towards homeworking being disproportionately male and have carried the overall trend while, interestingly, in southern Europe, the reverse gender dynamic appears to be dominant. Nonetheless, the increasingly more male-dominated nature of homeworking across western and northern Europe appears to mark a change from both traditional 20th century gender norms, where women stayed at home and men went to work outside the home, and later, with the rise of two-income households where increasingly both men and women worked outside the home. It would appear that in several European countries, at least among those in employment, it is men who are now disproportionately more likely to work from home and women more likely to leave home for work.

Figure 2: Workers usually working from home by gender

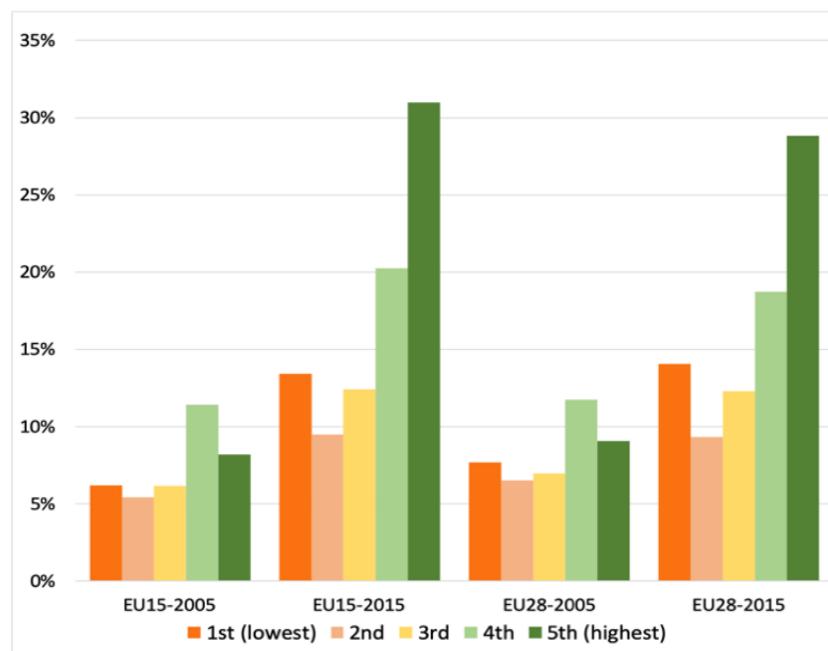


Data source: European Working Conditions Survey (2005; 2015)

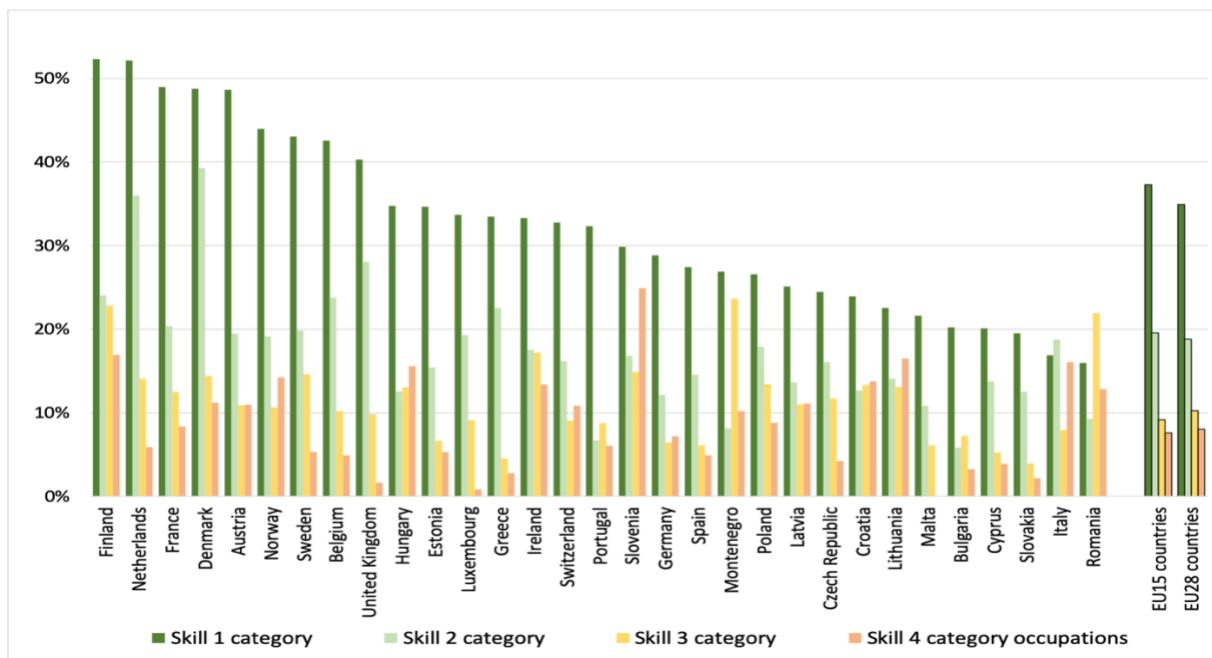
This increasing rate among men has further coincided with a move up the income and skill distributions. Between 2005 and 2015 working at home particularly increased among those in the top two income quintiles (Figure 3) and among workers in managerial and professional occupations (Figure 4). By 2015, whereas 1 in 6 of all workers usually worked at home, the rate

was about 1 in 3 among those with high incomes and in managerial and professional occupations. While on the basis of EWCS data alone it is not possible to identify individual work circumstances, the growing prevalence of these groups of workers is at least consistent with the opportunities provided by the technological developments outlined in the previous section. Furthermore, beyond the type of employment, these higher income groups are also more likely to have choices in consumption and investment opportunities in housing that may facilitate their ability to work from home.

Figure 3: Workers usually working from home by income quintile



Data source: European Working Conditions Survey (2005; 2015)

Figure 4: Workers usually working from home by ISCO occupation classes in 2015

ISCO skill 1 category = Managers, Professionals

ISCO skill 2 category = Technicians and associate professionals

ISCO skill 3 category = Clerical support, Service and sales, Skilled agricultural, Forestry and fisheries, Craft and related trades, Plant and machine operators, and assembly

ISCO skill 4 category = Elementary occupations

Data source: European Working Conditions Survey (2005; 2015)

The influence of and on the home

While the previous section took the perspective of developments in labour markets, focussing on the workplace, here we turn to the perspective of the home itself, drawing on literature that addresses three general questions. Does the nature of the home act as a constraint on the possibility of its use as a workplace? How does the prospect of using the home as a workplace impact on household decision about their housing? How does the use of the home as a workplace impact on how people relate to their home?

The home as a constraint

It is possible that the particular characteristics of those who use their home as a workplace is skewed by the nature of housing stocks and the extent to which they facilitate working at home. Here, tenure may be a factor in that there may be country-specific constraints that prevent the use of a home as a place of work. In the case of the UK, the general position of social housing tenants is that their tenancy agreements specifically exclude them from using their home to undertake work activities (Dwelly 2002). Insofar as such tenants receive public subsidies that enable them to

consume more housing than their incomes would otherwise allow, the authorities may pursue a principle this is provided specifically to enable housing consumption, with responsibility for labour market support located elsewhere. Private rental leases may also include stipulations that forbid certain activities relating to working at home, particularly in contexts with weaker tenancy rights (Hulse 2008). Independently of tenure, there may be other country-specific regulations. In the Netherlands, for example, running a business from your home is subject to control by the municipal authority (Kamer van Koophandel, 2020). Regulations related to tenure or local zoning context may therefore impact the ability to work from home. While restrictions are less likely to apply to minor work activities carried out from home, such as the freelancer working from a desk, these may indeed impact opportunities for more extensive operations, such as receiving clients, or stocking and selling goods online.

Housing form

In making decisions about the form of buildings for factories, warehouses or offices, businesses will consider matters such as size, configuration of space, and equipment appropriate to the planned output of goods and services. The necessities for the home worker are in principle much the same: what must the home have in order to function as a place in which the paid work of the residents can be carried out? The answer relates partly to the nature of that work, but also to such matters as the resources of the individual and the possibilities of the physical structure. Many white-collar workers attempt to replicate aspects of the sort of office with which they will be familiar (Wapshott and Mallett 2015; Tietze and Musson 20015). This may involve very little: a work station that could be no more than the kitchen table, somewhere to sit and operate a laptop, make phone calls and send emails. Wi-fi will generally be an essential prerequisite, but the physical form of Toffler's 'electronic cottage' may differ very little from the 'pre-electronic cottage' and it does not necessarily follow that the extension of housing to a place to work means its adaptation to a different physical form.

Pre-existing housing arrangements, however, will not necessarily be the most functional to the needs of the work activity, and may result in inappropriate spaces (Holliss 2015). In some cases, the work task may ideally require more extensive facilities that actually do change the physical form of the home. This may include designated office space or meeting facilities physically separate from living space. Where the work involves physical products that need to be stored or assembled, then dedicated space may also be desirable, which might also involve extensions to the existing property

including freestanding buildings in its curtilage.² In sum, home working may substantially influence the choice of or changes to housing form, but conversely, limitations of housing form may clearly constrain home working possibilities.

House location

What might the trend toward working at home mean for where people choose to live? As with decisions about housing form, the answer here also depends on the nature of the work being pursued. For many running small businesses from their homes, for example, the locational decision may be driven by access to their clients. Insofar as clients are clustered where populations in general cluster, namely urban areas, most may locate there.

The more interesting question arises with respect to the growing numbers of remote workers, whose jobs, before present technological capabilities, would in former decades have required working at the premises of their employers. Traditionally, the working week involved commuting from their home to workplace, implying either that the initial search for a job was limited to employers within an acceptable commuting distance, or that a job led to a house search within acceptable commuting distance from a place of work (i.e. Anderstig and Mattson 1991; Wilhelmsson 2002). Home work can thus sever the geographical link between house and workplace location, wherein commuting distance, time and cost no longer need structure the decision about where to seek work or where to live.

The idea of the declining influence of location on labour markets is not new. Towards the end of the 20th century, some of the predictions of technological change transforming our daily lives tended towards hyperbole. Claims gained traction that predicted the telecommunications revolution begetting the ‘death of distance’ (Cairncross 1995) or relatedly the ‘death of the city’ (see Hall 2003) envisioning a world where telecommuting would allow anyone to locate anywhere and make agglomerations in space themselves unnecessary (Harvey 1990). These more extreme visions, however, did not materialize. In many ways, quite the opposite seemed to occur in the decades since with ongoing rapid urbanization and, an increasingly interconnected global economy seeming to favour, at the macro-scale, a concentration of many economic activities in select major urban centres (Sassen 1991, 2018; United Nations 2018).

While people continued to cluster in cities, more people working (partly) at home has, however, impacted on traditional commuting patterns. Over the period that saw working at home increasing, there is evidence from some countries of an associated fall in the number of commuting journeys.

² Supporting such needs, for example, are companies offering pre-fabricated buildings to be situated in the gardens of existing dwellings and used as a workshop or for office work, meetings and consultations.

In England, for example, while the number of employees grew by about 18% between 1995/7 and 2013/4, the total number of annual commuting journeys fell from 8.5 to 7.9 billion (Le Vine et al. 2017), partly attributable to fewer workers with fixed usual workplaces and more working at least part-time from home.³ In the Netherlands, ICT and remote working may similarly have facilitated more polycentric city structures (Priemus 2006).

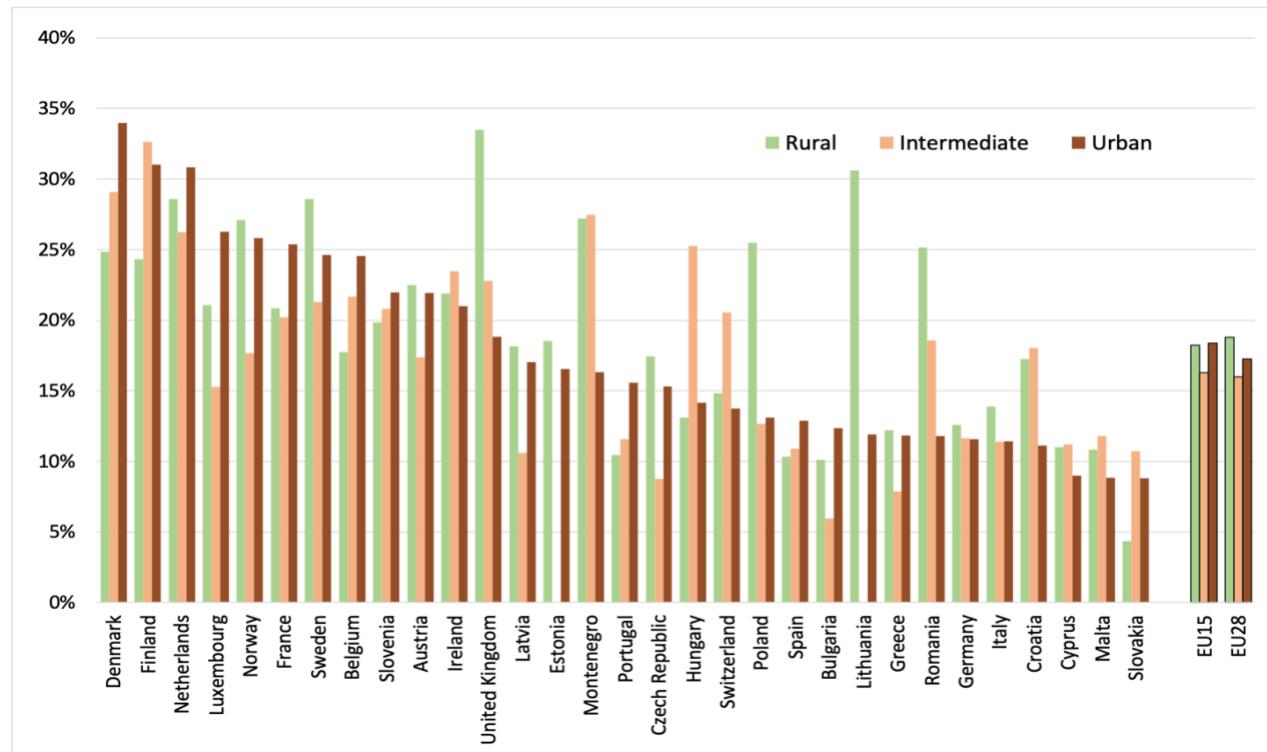
In considering the nexus between home working and home location choices, it is possible to identify three general household strategies: stay-putters, lifestyle migrants, and nomads. The first group, stay-putters, represents those households that choose to stay in the same dwelling even as they transition from working outside the home to (increasingly) working from home. There are many reasons for staying put: social and kinship ties to a particular location, the existing location may actually provide the ideal life-style, access to an existing network of customers, or only one of several workers in the household is location-independent. It may well be that many who use the home as a workplace therefore do not move house, but stay-put and perhaps undertake minor or major adaptations to the physical form of the home towards meeting new home working necessities.

The second group, lifestyle migrants, reflect those who, free from commuting restrictions, choose to relocate for lifestyle aspirations. The behaviour of retired people, who, by definition, no longer need to consider work location in deciding where to live is enlightening. In some western countries, as far back as the 19th century, retired people, generally the better-off, moved out of the industrial cities to seek new lives by the sea (Karn 1977). From the end of the 20th century onwards, the scale of movement has increased markedly, often across national boundaries, with for example large numbers of retired people from northern Europe re-locating to the Mediterranean countries (King et al. 1998). No longer tied to the workplace, many have taken the opportunity to boost their consumption aspirations to search for a better lifestyle, the achievement of ‘the good life’ (Repetti et al 2018). In line with this, the rise of remote working allows increasing numbers of pre-retired people, no longer tied to an external workplace, to behave like retired people. On a smaller scale, transport modelling studies have proposed that the more frequently households work from home the greater the likelihood of moving from cities to suburban and rural locations (Moeckel 2017). This is supported by anecdotal evidence from some countries indicating that some do move away from cities to smaller towns and villages or even more remotely in search of either lifestyle or financial benefits:

³ In the UK there has been the adoption of the acronym “TWATS” to describe those who work at the office only on Tuesdays, Wednesdays and Thursdays.

“Motivated by the prospect of a better work-life balance, easy access to the great outdoors and cheaper living costs, more people are taking advantage of the flexible work practices afforded by technology and moving out of urban centres.....Swapping city living for a rural idyll was once associated with the golden age of retirement, but a growing number of younger workers are exchanging urban postcodes for a place in the country” (Bupa Global 2019).

Finally, there has been growing attention to a third group even more disconnected from residential location: nomads. There is empirical evidence that a significant group of workers are taking locational freedom and lifestyle prioritization to the point of having no permanent home at all, representing so-called ‘digital nomads’ who embrace a location-independent, technology-enabled lifestyle that allows them to travel and work remotely (Kannisto, 2017). In practice, digital nomads have pursued a range of options including living in motor homes (i.e. so-called ‘van lifers’) to globetrotting, spending a few months in one city before moving to another, all the while undertaking remote work. There are industries built around supporting them (e.g. nomadlist.com and digitalnomadsnation.org whose websites rank locations throughout the world according to their internet speeds, entertainment and cost of living, and provide guidance about opportunities for co-living and co-working spaces). One estimate is that among US citizens alone ‘nomad’ workers number 4.8 million (MBO 2018).

Figure 5: Percent of workers usually working from home by degree of urbanisation in 2015

Degree of Urbanisation based on Eurostat's harmonized DEGURBA classification

Data source: European Working Conditions Survey (2005; 2015)

The ECWS provides some insight – albeit limited – into the relation between home working and residential location (Figure 5). The data allow differentiation of home working prevalence across EU countries based on the degree of urbanization of their residential location, classed into rural, intermediate or urban based on Eurostat's DEGURBA definition (Eurostat, 2020). Looking at averages across the EU15 or EU28, we see higher rates of home working in both rural and urban locales with lower rates at intermediate urbanization levels. Although the differences are not very pronounced at the EU level, this provides some support to the idea of varying motivations driving the desire of home workers to locate (or stay-put) in either more urban or more rural areas. Unfortunately, it is impossible to separate out specific motives with the data. Urban areas could be associated with either better access to potential clients, economic agglomeration advantages, or in relation to the (work) needs of additional household members. On the other hand, both rural and urban locations may be associated with different types of lifestyle benefits. Finally, rural (and to a lesser extent intermediate) locations provide benefits for cheaper housing costs, as long as other technological/ICT needs can be met.

Looking at variation across countries, the data further reveal strong variation in the prevalence of home working by degree of urbanisation. While the pattern is less clear than for overall home working rates, broadly-speaking, western and northern European countries tend to display a dominance of urban-based home working, while many eastern European contexts tend to reveal a higher propensity among intermediate or rural areas. Finally, southern European countries appear more varied or with less pronounced differences between the urbanisation levels. While beyond the focus of this article, this merits further research particularly in revealing how such dynamics may be related to key differences across housing and labour market systems (see Lennartz et al. 2016; Arundel & Ronald, 2016).

Reassessing the meaning of home

With increasing numbers of people using their homes as somewhere both to live and work, and this being influenced by and impacting on housing tenure, form and location, how might we reassess our understanding of household decisions about housing? There has been a long-standing representation of housing as having two dimensions, one as a consumption good, the other as an investment good. This fundamental conceptualization has been extraordinarily fruitful as the basis for a range of developments. It has contributed to our understanding of why housing proved to be the ‘wobbly pillar of the welfare state’ (Torgersen 1987), or why social housing has declined and home ownership grown to the majority tenure in almost all advanced economies (Arundel and Doling 2017; Kurz and Blossfeld 2004; Forrest and Hirayama 2009). In recent years, it has helped our understanding of the increase, in some countries, in landlordism, as well the AirBnB phenomenon. It informs our collective pre-occupation with house price trajectories, and the emergence of housing as the basis of privatised Keynesianism, and of equity-based welfare (Doling and Ronald 2010).

The home as a workplace requires an extension of the framework to a third leg, housing as a capital good, meaning that housing may have a value, in addition to the consumption of a flow of services and its investment potential, by virtue of its use as an input to production, contributing to the ability of the household to obtain an income from work. The physical structure of the house therefore provides not only somewhere to live but also somewhere to work. It thus has the characteristics of ‘capital goods’ such as offices, factories, and machines that are used by business organisations, not themselves directly creating revenue, but contributing to productivity in creating goods and services. The extension to a capital good can also be seen as creating a sort of virtuous circle: the home being an input of the work process, through which income is generated, which in

turn supports the ability of the household to pay for, whether through purchase or rent, the home in which the household lives. The home is thus literally somewhere to live and somewhere that contributes to its acquisition.

From this, our understanding of housing systems needs to move beyond analyses of how actors make decisions based on purely its consumption and investment characteristics, to embrace a further dimension as a capital good. In traditional characterisations of housing choice – throughout the twentieth century – household decisions were seen as based on their consumption and investment aspirations, albeit constrained by their budget and location requirements for access to the place of work that was provided by their employer. In the ‘new’ world of home working, the addition of the capital good dimension impacts on the decision of what to live in, affected by the requirement of the work activities of the household, with the decision of where, no longer necessarily constrained by the employer’s workplace.

Concluding comments

The available empirical evidence indicates that using the home as a workplace has become a substantial feature of labour markets in western economies and that this has increased significantly in recent years. By 2015, around 1 in 6 workers in the European Union worked from home for at least some of their working days. As our analysis of ECWS data has shown, home working appears disproportionately common among those in professional and managerial occupations and those with higher incomes. This bias is at least consistent with the role of technological developments in enabling the loosening of the division between home and workplace in certain employment sectors, better access to this technology among higher income groups, as well as potential availability of housing forms that best facilitate work activities. Other trends, point to an increasing share among workers of men participating in working from home as well as an over-representation in both more urban and more rural contexts. While displaying substantial variation across different country contexts, broadly-speaking, the combination of scale and apparent drivers would support a view that working at home is likely to continue to be a significant feature of European labour markets.

These developments, however, beg the question of how significant a feature home working may become? Will trends tend to simply lead to an evening out of the current wide disparities across national contexts, with levels in southern and eastern member states rising to match those in northern and western states? Alternatively, as technologies continue to develop, are further substantial increases in all member states most likely. While there remain many occupations that

cannot be (fully) carried out remotely, could home working become in the not-too-distant future a majority practice, rather than the current substantial minority position it holds?

At the time of writing this, the world is experiencing an unprecedented experiment in home working. Millions of people around the globe are working at home due to the coronavirus outbreak. Among the many longer-lasting economic impacts of the crisis, the situation is – out of necessity – seeing millions of people become accustomed to technologies and arrangements that enable working and collaborating remotely. It remains hard to predict the consequences years down the road, but it seems likely that this will catalyse the dynamics we have identified already in progress. The potential effects on the changing nature of work may be very substantial – and many in the media are speculating on such large-scale impacts (see: Hern, 2020; Burr and Endicott, 2020; Lindsey, 2020).

Whatever that trajectory turns out to be, from a housing studies perspective, an important consequence of the trajectory of labour markets appears to be a future for many in which housing combines conventional housing functions – as somewhere to live and as an investment vehicle – with workplace functions. The notion that housing may also act as a capital good in the form of a site of production and income-generation implies that households face a more complex trade-off in their housing decisions. At the present time, our detailed knowledge of how individuals respond is limited, and the recognition of such limitations is key to initiating a new agenda for housing studies researchers.

Fruitful questions for researchers include how are households adapting existing homes to meet their work needs, how are these needs being incorporated into self-build developments, and, in those countries where much housing is provided speculatively, how are large-scale developers responding? Insofar as the trend toward using the home as workplace continues, what sort of changes to national housing stocks might be expected? At present, knowledge about many aspects of how households are behaving is lacking. We know little, for example, about the balance in each country between those adopting home working practices through staying-put, lifestyle migration or becoming a so-called ‘digital nomad’.

Once the decision to use the home as a workplace has been taken and perhaps physical adaptations to the home have been made, how does the new use of the home impact on the household? What does the extension of where you live to becoming where you work mean for how you feel about your home? Arguably, the growth of new technologies and the rise of using the home as a workplace, has for those involved – both the workers themselves and other members of their households – blurred the boundaries between work and home. This may mark new conflicts in

terms of time and space for carrying out work versus domestic/leisure activities among household members (Pocock 2003; Nippert-Eng 1995; Wapshott and Mallett 2012).

Whereas we have identified some limited evidence for trade-offs between the capital good and consumption dimensions of housing, there appears to be even less existing evidence regarding trade-offs between capital and investment dimensions. Do households where one or more members uses the home as a workplace make different decisions about the investment aspects of their home, for example, by moving up or down market in order change the amount of their investment, or extending a housing loan to realise capital? To what extent do households use the house to finance adaptations made in order to enhance the suitability of the home as a locale of income generation? Do reductions in the time and cost of commuting, provide householders with the ability to repay larger housing loans, and how do they respond to such an opportunity? Beyond the investment decisions made by individual households, it may be that there are aggregate impacts on house prices. One possible overall effect could be an upward pressure on prices, arising because some of the money that would have been incurred in commuting is diverted into an increase in the ability and willingness to pay for housing. Consistent with this, houses with office accommodation commonly attract higher prices than equivalent houses without (McGhie 2014). In that employer location, often concentrated in central urban areas, ceases to act as a constraint on residential location decisions, the gradient of land (and house) prices with distance from CBD may become less pronounced. In other words, house price formation may become less determined by external employment location and more by life-style consumption considerations. However, lifestyle considerations are not uniform. For some this may still be urban locations offering a wide array of consumption possibilities. This reinforces the idea of cities continuing to become less centres of production and more centres of consumption opportunities (see Jayne 2005). For others, this may make non-city and remote locations more attractive. Given the complex nature of housing systems and variegated demand and supply dynamics, a challenge for housing researchers is to find ways of empirically demonstrating any effects from live/work housing on house prices.

Overall, the changing boundaries between home and workplace necessitate a significant reconceptualization of housing as well as an understanding of how these changes may have myriad impacts across different scales. A world in which increasing numbers of people work at home may not only affect housing form and household housing choices, but may transform the physical structure of cities, the distribution of property values and the broader labour and housing markets themselves. Understanding these necessitates a re-evaluation in housing studies of the nature of

housing that recognizes an emerging three-fold conceptualization as consumption, investment and capital good. The potential consequences of the coronavirus crisis only intensify the relevance of understanding trends in home working and their multitudinous impacts on fundamental conceptualizations of the home-work division.

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i It was possible to create a variable capturing whether a respondent's job involved working 'usually' at home, based on several relevant variables from ECWS. In 2005, this includes responding either 'All of the time,' 'Almost all of the time,' 'Around 3/4 of the time,' or 'Around half of the time' to working at home. In 2015, this was based on answering either 'Several times a week' or 'Daily' on having worked at home.

ii Supporting such needs, for example, are companies offering pre-fabricated buildings to be situated in the gardens of existing dwellings and used as a workshop or for office work, meetings and consultations.

iii In the UK there has been the adoption of the acronym "TWATS" to describe those who work at the office only on Tuesdays, Wednesdays and Thursdays.