

Housing in a Mobile World: A Definition of Flexible Housing and the Classification of Solutions

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Authors

Brano Glumac
Luxembourg Institute of Socio-Economic Research
brano.glumac@liser.lu

Gemma Caballé-Fabra
Universitat Rovira i Virgili
gemma.caballe@urv.cat

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Gemma Caballé-Fabra

Purpose: The current global trend of increased mobility influences new housing requirements, specifically affordability and location flexibility. Despite the fact that numerous researchers have been studying the effects of traditional housing tenures, investigating new housing solutions has remained rather a limited field of study.

Design/methodology/approach: These requirements can be caused by different factors and articulated by different housing solutions that are elaborated and classified in this paper. Prior to classification, this paper also provides an adequate definition of flexible housing.

Findings: In a broad sense, flexible housing solution enables households to relocate with ease while at the same time providing security, habitability and affordability. Although many of the described solutions, fitting well within provided definition, have been in use for decades they have not been massively accepted so far. Therefore, this paper provides a classification based on their type of intervention technical, service-based or institutional, and possibility of investment and ownership in order to present them in a new light and appealing to the increasing number of mobile households.

Originality/value: This paper positions that there is a strong need for new housing solutions for the increasing number of households with a frequent residential mobility pattern. It classifies and describes the flexible housing solutions.

Keywords: long-distance migration, residential mobility, flexibility, classification, housing solutions

1. Introduction

Today, the classical and predominant housing tenures in Europe, ownership and tenancy (Pittini *et al.*, 2015; Eurostat, 2017), do not match the emerging longer-term trends of increased mobility caused by different reasons such as work, increasing number of one-person households, study opportunities, refugees, and others. This have resulted in the challenging path to ownership among many households and especially millennials (Clark, 2018) and flex workers (Dol and Boumeester, 2018). Moreover, traditional home ownership and tenancies do not adequately facilitate the freedom of movement (Article 45 of the Treaty of Lisbon) within European countries since each country has its own regime and particularities (Ball, 2016; Sparkes *et al.*, 2016). Despite the fact that numerous researchers have tried to explain the various effects of housing tenures (Henley, 1998; Scanlon and Whitehead, 2004), new housing solutions matching this trend have remained a rather limited field of study with only recent new perspectives. The implementation of these solutions also relates to the scholarly call to re-think the residential mobility of today's households (Coulter, Ham and Findlay, 2015).

Interest in housing studies has been recognized in many disciplines such as architecture, engineering, law, economics, anthropology, sociology, psychology, etc. For that reason, housing research implies inter- and trans-disciplinary approaches (Kemeny, 1992; Bengtsson, 2009; Clapham, 2009). Naturally, this also applies to studying and developing housing in a mobile world. Although notions of home might appear differently to researchers in different disciplines, there is also a more holistic approach. Similar to the place creation influenced by physical, economic and social realities

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(Easthope, 2004), we can define three elements in the concept of home: a physical structure, a financial or economic asset, and a symbolic element consisting of home identity, the territory, and social and cultural constituents (Fox, 2006). The principles of what is to be considered as an adequate home are also aligned with these elements. According to the UN (Committee on Economic Social and Cultural Rights, 1999), an adequate dwelling must fulfill the following requirements: legal security of tenure; availability of services, facilities and infrastructure; affordability; habitability of physical structure; accessibility suited for specific physical needs of each person, and cultural adequacy respecting cultural identity.

As regards the physical structure, it is important to reflect on the existing classification of adequacy levels, such as the table on European typology on homelessness and housing exclusion (ETHOS) developed by a non-governmental organization: The European Federation of National Associations working with the homeless (FEANTSA, 2006). More specifically, inadequate housing relates to people living in temporary and non-conventional structures, people living in unfit housing and people living in extreme overcrowding. Furthermore, the global economic crisis, which started with the real estate ‘sub-prime’ market in the US, has shown the strong relation between housing and the global economy and underlines the economic aspect of the home (i.e. as financial investment, wealth preservation). In this sense, it is important to bear in mind that a home is at the same time a human right and a capital asset (Nasarre Aznar, 2016). As a complex good, it therefore deserves a special treatment in law and regulation. Lastly, there is a symbolic aspect to the notion of home and place (Easthope, 2004) reflecting a psychological, cultural and emotional value that is difficult to measure (Benjamin and Stea, 1995). Characteristic for housing in the mobile world is an additional symbolic element defined as mobile identity (Easthope, 2009). Mobility and place are fundamental aspects of the human condition, and the concept of identity cannot be fully understood without reference to this dual relationship (Easthope, 2009). We may say that as much as one place contributes to one’s personal identity construction, all other places stayed in do so as well, and perhaps even the possibility to easily move to new places.

Overall, when introducing suitable housing solutions for a mobile world all these three elements should be taken into account: the physical or its adequate characteristics, the economic element or its investment options, and the symbolic and its impact on individual identity. This plays an important role in defining flexible housing. Prior to defining what flexible housing is, it is important to reflect on related and overlapping concepts and definitions. Flexible housing should be affordable thus making it a subclass of affordable housing (e.g. Kutty, 2005). Temporary housing has mostly been associated with emergency situations following disasters (e.g. Félix, Branco and Feio, 2013). However, this article aligns a temporary housing concept with more flexible approaches in urban planning, for example by favoring temporary land uses. Furthermore, flexible housing tenures should have features from ownership and tenancies but adapted to these specific housing solutions, so could be termed intermediate tenures (Simón Moreno, Lambea Llop and Garcia Teruel, 2017). On the other hand, flexible design concepts (Geraedts and Ruitkamp, 2013) relate to the flexible use of living spaces (De Paris and Lopes, 2018), contrary we consider flexibility in terms of location and tenure. Assuming an inter- and trans-disciplinary approach, relying on a defined concept of home and mobile identity, and related definitions, it is possible to derive a definition of flexible housing. Thus, flexible housing is housing that may be used by mobile households, regardless of their commuting pattern within a country or across borders, enabling households to relocate with ease, which may be used in both rural and urban locations, which is supported by technical, service-based or institutional intervention, and which possibly constitutes an investment or just ownership and which must also fulfill the international requirements to be considered as a home.

The following sections start with the evidence of the trend of increasing mobility and the needs for flexible housing, followed by the explanation of flexible housing classification and a detailed description of identified flexible housing solutions. Lastly, key points and future trends are elaborated in conclusions.

2. Evidence of increasing mobility and the need for flexible housing

Crude evidence of international mobility is that more people than ever are living abroad. In 2017, there were 258 million international migrants worldwide (United Nations, Department of Economic and Social Affairs and Population Division, 2017). This is also an emerging trend because the number of international migrants worldwide has grown faster than the world's population. Due to this faster growth rate, the share of migrants in the total population increased from 2.8 in 2000 to 3.4 per cent in 2017 (United Nations, Department of Economic and Social Affairs and Population Division, 2017). Europe added 22 million international migrants between 2000 and 2017, second only to Asia. In total, there are 78 million international migrants residing in Europe (United Nations, Department of Economic and Social Affairs and Population Division, 2017). Another institution reported that 36.9 million registered foreigners live in the EU and that foreign citizens thus made up 7.5% of persons living in EU Member States on 1 January 2017 (Eurostat, 2014). However, the total population classified as foreign-born residents in the EU is 60.5 million people (Eurostat, 2014). The difference in reported population might depend on the definition of a migrant and a foreigner.

There are different reasons for the global mobility of populations causing a need for a flexible housing regime (Table 1). These push-pull factors are those that drive people to relocate frequently and enable them to do it with ease. Often, a combination of these push-pull factors is what help determine a population or person decision to relocate and seek for an alternative housing tenure. Push factors are oftentimes requiring that a person relocate or at least want to move. Pull factors, on the other hand, are often advantages that stimulate that move such as beneficial elements of a new flexible housing regimes. Although these factors should be regarded as global, in this paper highlighted are European examples. One reason has been addressed in social science. Sennet (1998) stated that “*a change in modern institutional structure has accompanied short-term, contract or episodic labor*”. More precisely, Sennet (1998) suggested that the change from pyramid organizations towards network structures implies a creative destruction. As a result, corporations break up or merge more easily followed by the faster appearance or disappearance of jobs. This has caused an increasing number of job shifts and the relocation of individuals. Furthermore, economic and political insecurities lead to increasing migration flows that recently reached historical levels in Europe. Lastly, the household itself has faced several changes in recent decades. First, there has been an increasing number of two-income households (Wulff, 1982) which has led to the increasing number of mostly daily but also weekly commuters (Mao, 2018). The main reason for weekly commuting patterns is the difficulty of finding two specialized jobs in the same city, typical for many couples nowadays (Ghasri and Rashidi, 2019). Also, there are an increasing number of one-person households which also leads to an increase in general mobility in the world as individuals are more flexible in their choices than groups (Smits, Mulder and Hooimeijer, 2003). In fact, the increased number of one-person households in Europe has been caused chiefly by an increase in the rate of divorce (Eurostat and States, 2015), individualization (Poortman and Liefbroer, 2010), and an aging population (Tatsiramos, 2006). On the other hand, there are numerous pull factors that contribute to flexible housing needs, such as numerous active infrastructural projects in Europe (Locatelli, Invernizzi and Brookes, 2016) that are developing in parallel with the setting up of a digital infrastructure in European governments (Garson, 2004). Obviously, improved infrastructure allows easier movement of people. Innovations in construction, such as modernized prefabrication, robotization and 3D-printed houses would allow new possibilities and more affordable living alternatives. Another important pull factor is innovation in financial arrangements such as structural financing, blockchain (Nasarre-Aznar, 2018) and crowd-funding. They can provide more affordable housing, for example by being used as a ‘stairs to ownership’, and also be specially designed for a mobile population. There are increasing opportunities for university exchange programs in Europe at master and doctoral level, which is a not insignificant contributor to overall mobility (European Union, 2017). Many governments provide tax-exemptions for travel expenses and this also has a positive impact on a choice for both daily and weekly commuting (Potter,

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Enoch and Rye, 2003). Lastly, there is a trend in companies and governmental institutions to promote more flexible options in working practices while focusing more on individual outputs. Some of them include flexible working hours, working hours per week, and distance working.

Table 1. Push and pull factors of flexible housing regime

Push	Pull
- Faster corporate break-ups and mergers	- Improved physical and digital infrastructure
- Economic and political insecurities	- Innovation in construction
- Household changes	- Innovation in financial arrangements
	- Better access to international study exchanges
	- Tax-exempt travel expenses
	- New working practices

In Europe, evidently, there are a large number of people living abroad and that trend is increasing. These overall estimates of migrant populations in Europe give us basic information and can be useful in efforts to extrapolate the potential population that would prefer flexibility in the place of residence. However, not every migrant or household would prefer this option. This decision would be dominated by available alternatives at any given time, by the preferences of different migrant types (Geieregger and Oehmichen, 2008; Goodson *et al.*, 2017), by the migration phases such as pre-migration, migration and post-migration phase (Bhugra, 2001), etc. Therefore, it is necessary to specify a generic user of flexible housing. Several characteristics define a generic user: cross-border status, commuting pattern, skill level, age group, and the size of a household (Table 2). First of all, whether an individual commutes within a border or is a cross-border commuter will have a consequence on at least one of the very complex cross-border property ownership issues (Sparkes *et al.*, 2016). Furthermore, the commuting pattern of a generic user is essential in order to explore the preferences for available and new flexible housing solutions. For example, a weekly commuter might need housing access to two locations at the same time, which is not a necessity for a person who relocates every three years. In addition, depending on qualifications and related income, citizens might have access to different flexible housing solutions. Age and related life events are influential as well, and specific housing needs have been identified for e.g. young people (Clapham *et al.*, 2012; Forrest and Yip, 2012; McKee, 2012; Hochstenbach and Boterman, 2015). Bearing in mind that they are more mobile and have an increasingly limited access to housing, providing them with a set of suitable flexible housing solutions seems reasonable. Similarly, the elderly or persons with disabilities would have also their specific preferences (Kovacic, Summer and Achammer, 2015; Suari-Andreu, Alessie and Angelini, 2018). Within this group, some of them will be seasonal commuters to warmer climates while others might have financial difficulties in maintaining the basic household needs. Lastly, systematic changes in households such as the increasing number of one-person households and their specific housing preferences (Thornton, 1989; Poortman and Liefbroer, 2010) will also shape different flexible housing solutions. Assuming a generic user profile of flexible housing can thus help us, first in measuring taste heterogeneity, and eventually in extrapolating the overall mobile population in combination with available statistics. Having an insight into what would be the needs and preferred characteristics of housing in a mobile world would provide significant contribution to housing studies.

Table 2. Generic user of a flexible housing solution

Cross-border	Commuting pattern	Skill Level	Age	Household size
Yes	Week	High-Skilled	Young	One
No	Season	Low-Skilled	Mid-Age	Two
	Year		Elderly	Three plus

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3. Flexible housing classification by nature, investment possibility and ownership

Although the trend of modern migratory working patterns can be traced back to the late 19th century, very limited housing tenures are available besides ownership and tenancy. Despite the evidence of the need for a special type of accommodation taking account of increasing mobility (Rao, 2014), homeownership and tenancy are still the most conventional tenures in Europe (Eurostat, 2017). Flexible housing solutions might fill this gap. Not every solution meets the needs of each person and not every solution would be satisfactory for all stakeholders. Therefore, having a multitude of solutions is favorable. Three major characteristics are used to classify the existing flexible housing solutions (Table 3). The provided list of solutions is not set in stone, and it is used rather as an example of classification.

The first characteristic describes whether the solution is of a technical, service or institutional nature. For example, a technical solution depends solely on an intervention in the built environment. They are dependent on technological development, such as 3D-printing, robotics, automated vehicles etc. Although there is a significant amount of research and development behind it, technical solutions are easier to implement than institutional ones because the latter require establishing certain legislative norms and rules. Lastly, a service-based solution would not require either building or institutional intervention. They are mostly provided within the commercial service sector, although there are also many publicly available services nowadays. The service-based solutions are the easiest to implement due to lower research and development costs, increasingly available data and as yet no required changes in legislation.

The second characteristic is the possibility for a household to use a flexible housing solution as an investment vehicle. Not all of the listed solutions have a possibility for investment. A good example for explaining investment possibilities in flexible housing solutions is based on traditional tenures. Renting allows easy residential mobility but does not directly offer the prospect for an investment. On the other hand, home ownership provides a long-term investment but the residential mobility is relatively low. A lot of detail is required to appropriately make a trade-off. For example, when renting there will be no investment risks involved, whereas, on the other hand, the commonly accepted benefit of homeownership is that it is attractive in the long run due to house price increases resulting in inflation protection, paying off mortgages and tax benefits.

The third characteristic is the possibility to own a flexible housing solution. This is not intuitive as the ownership and investment option do not go always hand in hand with respect to flexible housing solutions. This is especially true for solutions that are technical and which are movable goods such as a car. For example, owning a portable dwelling is not an investment as it does not capture the land value. As regards ownership, it is also important to consider the boundaries that exists in cross-border real estate transactions, such as the different conveyancing systems that exist in EU, the access to land registry information, institutional cooperation, etc. (Sparkes *et al.*, 2016).

Table 3. Classification of flexible housing solutions

Flexible Housing Solution	Solution Type	Investment Option	Ownership
<i>Mobile home</i>	Technical	No	Yes
<i>Portable buildings</i>	Technical	No	Yes
<i>Renting</i>	Service	No	No
- <i>Unit</i>			
- <i>Room</i>			
- <i>Bed</i>			
- <i>Use of bed</i>			
<i>Time sharing</i>	Service	No	No
<i>Extended-stay hotels</i>	Service	No	No

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<i>Home-swapping</i>	Service	Yes	Yes
<i>Condo hotels</i>	Service	Yes	Yes
<i>Intermediate tenures</i>	Institutional	Yes	Yes
<i>Equity co-operatives</i>	Institutional	Yes	Yes
<i>REITs</i>	Institutional	Yes	Yes

4. Flexible housing solutions

4.1. Mobile homes

The term mobile home has been used since the 1940s instead of trailer. Such a change in usage was unquestionably motivated by a desire to avoid connotations attached to the former term and to reflect the transformations in the product itself (Bartke and Gage, 1969). There is a huge range of this product and various concepts that are available today (Kronenburg, 1995). Their life span varies. Nevertheless, each of these products is self-movable. Although having the possibility to support a household with flexible choice of living or working location, the major issues of movable homes can be seen in a couple of its long-existing aspects (Bartke and Gage, 1969). Issues of social interaction and inclusion raise the question of the extent to which a landowner should be constrained with respect to the use of his/her property and mode of life to the mobile home neighbors, and whether equal protection is involved when a municipality decides to exclude a certain group of people (those, for example, residing in mobile homes) from its borders. Further, zoning can opt for or against mobile homes and that would result in two distinct problems. The first is whether mobile homes may be deposited on permanent foundations on residential lots zoned for single-family dwellings and the second problem is the assertion that mobile homes belong only in mobile home parks. Taxation can also be seen as an issue because a mobile “home” can be used for living as well as for business purposes. The latter should be taxed, treated, and regulated as a business but living in the same mobile home is not a business. Although all these issues have been addressed in legislation, they also persist even as new technologies emerge. Trends such as using robotics in the construction industry could significantly change the ‘movability’ of mobile homes, their design and, finally, the appreciation of end-users. However, it is important to bear in mind that according to some organizations mobile homes are still not seen as an adequate (FEANTSA, 2006) solution and only a temporal one.

4.2. Portable buildings

Although having a lot of similar characteristics to mobile homes the main distinction is that portable buildings are not self-movable objects, even if they are easily transportable without the full processes of deconstruction and reconstruction. Portable buildings (e.g. yurts) have been used since prehistoric times (Kronenburg, 1995). However, the modern expansion started from the reconstruction needs in the post-World War II era. The most familiar modern type of portable building is designed in such a way that it can be transported to and from a site on a truck with the help of a crane. There are many typologies and taxonomies to explain this sort of building (Kronenburg, 1995, 2013). Disregarding the typology, urban vacant land is a problem, as well an opportunity for transformative social and ecological processes. Portable buildings could provide the benefit of (fast) temporary development and quick results, producing faster gratification for local stakeholder groups. Portable buildings can suit temporary land uses and generally also generate revenue quickly, from which landowners and developers would benefit. Furthermore, temporal functions on vacant grounds can regenerate certain unused sites, show initiative and progress, and alter the perception of vacant land as derelict, blighted and neglected (Németh and Langhorst, 2014). However, there are still a number of problems that have to be addressed when bringing portable building into the housing market (Glumac and van Beurden, 2015): with decreasing or stagnating real estate prices and high demand, the transformation of the existing stock may be more feasible; different target groups would have different preferences, however the willingness to move with portable buildings has to be assessed; there are technical measures that need to be addressed (e.g. insertion into the existing infrastructure); and finally, the proposed business

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models are not always feasible. Future perspectives for portable buildings in housing but also in other urban functions can be supported and get a new twist with new trends of robotization and the increased mobility of the population. Similar to mobile homes, portable buildings are not considered as adequate homes by some organizations (FEANTSA, 2006), for reasons that are mostly related to the experience with temporary, post-disaster housing solutions.

4.3. Renting

As mentioned, the renting sector does allow location flexibility but does not bring any direct possibility of investing in residential real estate. Many European countries are faced with increasing rents especially in capital cities (Musterd *et al.*, 2017; Iammarino, Rodriguez-Pose and Storper, 2018). Barriers exist when migrants want to rent in another country such as high deposits, restrictions on subletting, the minimum duration of contracts, etc. (Schmid and Dinse, 2014). In some cases, renting may also imply violations of human rights. For example, ‘hot beds’, a rotating system where the bed is always occupied by someone, and overcrowding in dwellings. These examples are usually associated with low-skilled workers and they are considered as inadequate housing solutions (FEANTSA, 2006).

4.4. Time-sharing

Only relatively recently, a time-sharing concept has emerged and been used as an alternative for second-home owners (Gray, 2012). This service originated after WWII when European families clubbed together to buy single holiday homes that were used seasonally by each family, and each year a family would use the space in different season (Gray, 2012). Subsequently, fractional financing was applied, in which typically a family would buy ownership for a period of 25 years and use it in certain scheduled week or weeks per year. They would thus own a temporal lease but not the home or apartment. The biggest problem here, until now, has been the cancellation of time-share contracts. Another problem is that it is hardly possible to use this flexible second-home service as a more permanent housing solution. However, different forms of fractional financing, the availability of crowd financing joined with some types of real estate vehicle, might lead to the introduction of a new flexible housing solution.

4.5. Extended-stay hotels

Extended-stay hotels are similar to classical hotel operators, aparthotels (the term used in leisure activities) and serviced apartments (the term used for commercial activities), allowing operators to provide a more personalized service and larger living space (Geieregger and Oehmichen, 2008). It is designed for today’s mobile workforce and flexible work arrangements while, on the other hand, serviced apartments can provide larger living spaces for people taking extended breaks. As with hotels they may vary in their size, capacity, style, standard, quality of amenities, and services that suit the needs of particular local demand (e.g. Flexhotel for seasonal workers in the Netherlands). For the occupation period of a week or less this service competes with traditional hotels and for the period for more than a month with traditional letting. Although an interesting concept, it is questionable if in this form this service would be a feasible alternative for households that seek a flexible choice of location. As for all previous flexible housing options, there is no possibility for a household to use this service also as an investment vehicle.

4.6. Condohotels

Condohotel is a hotel organized through a condominium regime and it is a hotel establishment whose rooms belong to different owners, where the hotel company is responsible for the management of the hotel and the use of the room is shared between the owners and those guests who sign the accommodation contract with the hotel company (Gunnar, Hart and Atwood, 1982; Sidabukke, 2017). In other words, a condohotel consists of the agreement between several owners in a tourist establishment where each of them owns a private unit that can be a room, an apartment, a bungalow

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or other type of unit (Cabrera, 2012, pp. 67) and transfer it to the hotel company so that it can offer the room to other guests, through accommodation contracts, for the period that the owner is not using the private unit. In exchange, the hotel company shares a part of its benefit (a rent) with the owners. The private unit (i.e. room, apartment, bungalow) can be registered with the land registry. Condohotels exist in many European countries (Van der Merwe, 2015) but also in North and South America and Australia (Penner, Adams and Rutes, 2013). Despite its attractive features, this regime has not been successful because of its unusually complex legal configuration. However, it is worth improving the regulation in places where tourism and a condominium regime are clearly ingrained. It is important to note that residential use is usually excluded, since condohotels are predominantly used for holiday/tourism purposes (i.e. several months per year).

4.7. Home-swapping

Home-swapping is an alternative form of tourism which requires trust. Its increasing popularity is a function of its economic aspect but other aspects are very important as well, such as an authentic cultural experience, the ability to travel more often, and the use of a second home (Forno and Garibaldi, 2015). Home-swapping is not a new phenomenon and it can be traced back to the Middle Ages (Forno and Garibaldi, 2015). The modern phenomenon of home-swapping originated in the 1950s in Great Britain and the United States (Forno and Garibaldi, 2015). Although the swapping period can be up to one year such options are relatively limited. Therefore, this service is much more aligned with travel experiences than a service resulting from the increase in working mobility. However, similar to other service-based flexible housing solutions, the improvements in digital infrastructure can provide easier logistics and access to different unused goods (e.g. space) thus making this option more feasible as a housing solution.

4.8. Co-operatives

Co-operatives are distinguished enterprises that have based their philosophy on certain values since their inception around 1850 (Hill and Doluschitz, 2014). In Germany, co-operatives are one of the pillars of society and the economy counting 22 million members in total among which 2,8 million in the housing sector (Hill and Doluschitz, 2014). On a worldwide scale, global membership of co-operatives stands at one billion (Birchall, 2012). Since the first founded co-operation there have been many revision of the core principles (Mändle, 2001) and one of the recent definitions states that co-operation is: “*a business organization that is owned and controlled by members who are drawn from one (or more) of three types of stakeholder – consumers, producers and employees – and whose benefits go mainly to these members*” (Birchall, 2012).

There are two forms of co-operatives: equity and non-equity. The former operates in the private housing market and the owners of a unit own a proportional share of the co-operative corporation. Such co-operatives do not receive funding from the government and normally exiting members sell their share at market value (Sousa and Quarter, 2005). The latter form of co-operative is non-equity-based and has a social purpose to provide quality housing with reasonable service costs for all members. Governments support non-equity co-operatives that defray a portion of the costs on behalf of low-income members. As in social housing the dwellings are available for use only and the housing unit of an exiting member in a non-equity co-operative is not sold on the market but simply transferred to an incoming member (Sousa and Quarter, 2005). These two forms have many different subdivisions that vary across countries, while different, hybrid types of housing co-operatives (Ruonavaara, 2005; Sousa and Quarter, 2005; Grosskopf, Münkner and Ringle, 2009; Eichwald and Lutz, 2011), such as Atkinson housing co-operatives, have also developed alongside.

Although this housing system has been created on the principles of the socio-democratic institution, critics (Christophers, 2013) argue that such a housing system reveals the creation, reproduction and intensification of socio-economic inequality, a result completely the opposite of the purpose of its creation. Regardless of the problems that might occur with such a housing system, the

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possibility of using equity co-operatives as a flexible housing solution could be still viable. The pre-requirement would be to have European coverage of a housing portfolio, as there is a possibility that households can swamp units within a housing co-operative. This implies at least one problem; the heterogeneity of housing legislation in different EU countries would jeopardize if not prevent the possibility of creating such a housing vehicle. However, its potential lies either in legislative and financial homogeneity across the EU or in the deregulation of financial organization on a EU-wide scale. To conclude, equity co-operatives are regarded as investment options for households but do not satisfy the condition of location flexibility.

4.9. Intermediate tenures: shared ownership and temporal ownership

The term ‘intermediate tenures’ derives from the legal features that can be situated as being between ownership and tenancy. In fact, shared ownership and temporal ownership take the most attractive aspects of both tenures such as stability, security, flexibility and affordability (Simón Moreno, Lambea Llop and Garcia Teruel, 2017). The aim of these tenures was to ‘democratize’ ownership (Simón Moreno, Lambea Llop and Garcia Teruel, 2017) and facilitate access to housing while acting as a preventive measure for evictions (Kenna *et al.*, 2016). Intermediate tenures have been legally recognized in the Catalan Civil Code since 2015 (arts 547-1 and 556-1 CCC). These tenures are not totally new in Europe (Nasarre Aznar, 2015). England also recognizes these land tenures despite there being some differences with the Catalan tenures (Whitehead and Monk, 2011). Moreover, the Netherlands, for example, has the ‘koopgarantie’. This is a kind of restricted property that entitles the buyer to buy a housing association dwelling at a discount of 25-30% in exchange for the profits or losses being shared between the owner and the housing association when the property is subsequently sold (Simón Moreno, Lambea Llop and Garcia Teruel, 2017).

Art. 547-1 CCC defines temporal ownership as the right that provides the temporal owner with ownership for a certain period of time. At the end of the period established, the ownership will revert back to the successive owner (who may or not coincide with the initial owner or the seller). The main characteristics of temporal ownership are: The temporal owner acquires the ownership of a good for a certain period of time, while the successive owner is not the owner of the good during the temporal ownership but has the right to receive the agreed price and the right to recover the good for free once the term expires. Both temporal owner and successive owner have a free hand in their rights. The term of the temporal ownership must be between 10 and 99 years (for immovable property).

The shared ownership scheme (from art. 556-1 to art. 556-12 CCC) enables the gradual acquisition of homeownership. The buyer (material owner) starts acquiring a property share from the seller (formal owner) who retains the remaining property share. The Catalan Act 19/2015 proposes an ideal model: The acquisition of 25% of the property by the buyer, 5% of which is paid using his own resources and 20% paid by external financing. The main features of this scheme are: the material owner has the right to gradually increase his share of the property (and this cannot be excluded by contract) and she has the exclusive right to the use and enjoyment of the unit. The duration of the shared ownership cannot exceed 99 years. The distribution of rights and duties of the parties (material and formal owners) and also the expenses is unequal. Both owners are entitled to freely dispose of their property share or a percentage of ownership.

4.10 Residential real estate investment trusts (REITs)

There are numerous real estate investment vehicles available, classified by Sotelo (2013). This underlines the importance of relations between two important characteristics: latitude and capital costs. The latitude defines the range of possible uses for the financial resources provided by the principal financier to the agent or entity receiving the financing for fulfilling the tasks (Sotelo, 2013). Different financial institutions offer different latitudes. Among these, REITs have a medium ratio compared to bank credits (low capital costs, low latitude) and venture capitalists (high capital costs, high latitude).

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Although residential REITs could be a viable way to encourage institutional investors to invest in residential properties, the existence of successful commercial REITs in one market does not guarantee that residential REITs will be widely accepted in other countries (Newell, Lee and Kupke, 2015). In Europe, residential REITs have gained the most significant support in the UK. German REITs were prevented from active involvement in the residential sector in response to German tenants having serious concerns that German REITs would be less tenant friendly than current landlords (Ball, 2012), although these concerns might cause a small but rather well performing REITs (Newell and Marzuki, 2018). In Spain, there are promising legal frameworks set to support REITs (Nasarre-Aznar and Molina-Roig, 2017). There are many classes of REIT available (Fisher and Hartzell, 2015), and some of the new propositions (Newell, Lee and Kupke, 2015) could be implemented in European housing systems as well and provide a base for a niche residential REIT that would support location mobility and offer an investment vehicle for households.

European housing systems is clustered on national states, it is therefore crucial to test the feasibility of residential REITs (Huston, Warren and Elliott, 2011) that could support mobility in Europe. The portfolio of such REIT vehicles has to be Pan-European so that the end-user will have movement flexibility. The prospect of such residential REITs would be to lower risk by capturing a new niche market, to lower the initial cost of the professional private investor, to lower the vacancy risk, the maintenance risk, and the volatility risk since the portfolio would be multi-national. As for co-operatives, the trends that might positively influence the emergence of such REIT vehicles are legislative and financial homogeneity across the EU or the deregulation of financial organization on a EU-wide scale.

5. Conclusions

The mobility trends in Europe are evident and resembles to global instance. Even on the regional scale, in which the overall difference in national migration flows remains the same, mobility is a significant factor.

Factors influencing mobility are numerous, tangled and somehow elusive in measurement. However, it is possible to roughly divide them between push and pull factors. Within push factors we can include corporations that break up or merge at a much faster pace than before, ongoing economic and political insecurities, as well as structural household changes. On the other hand, some of the pull factors that support and stimulate working mobility are improvements in infrastructure, innovations in construction (i.e. robotics, 3D-printing, automated vehicles, and more efficient and flexible construction processes), improved financial arrangements (e.g. structural financing, crowd-funding), tax-exempted travel expenses, and new working practices. In addition, these various positive trends are likely to reinforce each other, but the exact manner in which they will do so is difficult to predict. Both push and pull factors are represented by many uncertain variables thus making the forecasts particularly wide.

Although there are many indications that mobility has been increasing in Europe and that existing traditional housing tenures cannot match this trend, flexible housing solutions are not much discussed, explored, or nurtured. This might be as a consequence of many institutions within the housing sector favoring the *status quo* (Rli and Rli, 2015). Flexible housing solutions should therefore go beyond traditional ownership and tenancy arrangements but also beyond the traditional building types in order to respond to the mismatch of existing housing tenures and long-term trends in mobility.

It would be convenient if there were as many tenures and housing alternatives as there are personal and economic circumstances or situations. However, to make the flexible housing concept operational it is essential to have an insight into a generic user or a mobile citizen. Assuming its generic characteristics is a first step to determine the actual demand side for these solutions and to enable matching a specific profile to a specific solution, empirically.

In fact, this inclusive perception of housing has been recognized in point 35 of the New Urban Agenda of Habitat III (United Nations, 2016), where it says: “*We commit ourselves to promoting, at*

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the appropriate level of government, including subnational and local government, increased security of tenure for all, recognizing the plurality of tenure types". Flexible housing solutions are also essential for promoting the real freedom of mobility within the EU, in accordance with article 45 of the Treaty of Lisbon. Thus, extending housing outside the classic dualism of ownership and tenancy into the greater possibilities of different technical, service-based and institutional solutions seems reasonable.

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