



# Comparison of housing market sustainability in European countries based on multiple criteria assessment



Tiina Nuuter<sup>a</sup>, Irene Lill<sup>a,\*</sup>, Laura Tupenaite<sup>b</sup>

<sup>a</sup> Department of Building Production, Faculty of Civil Engineering, Tallinn University of Technology, Ehitajate St. 5, EE-19086 Tallinn, Estonia

<sup>b</sup> Department of Construction Economics and Property Management, Faculty of Civil Engineering, Vilnius Gediminas Technical University, Sauletekio al. 11, LT-10223 Vilnius, Lithuania

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## ABSTRACT

The aim of this research is to assess the sustainability of the Estonian housing market, which is characterized as owner-occupied, in comparison with other EU countries in the light of different socio-economic indicators. For this purpose a method of Multiple Criteria Complex Proportional Evaluation (COPRAS) was used. In order to perform integrated analysis of housing market sustainability the Decision Support System for Housing Sustainability Assessment (DSS-HS) was developed. This system enables the performance of multiple criteria assessment of housing market sustainability in selected countries according to six criteria groups (general economic, housing stock, housing affordability, population and social conditions, housing quality and environmental quality). The analysis of ranking and assessment results allows recommendations to be made for improving the indicators in order to increase housing market sustainability. A case study presents a practical application of the proposed methodology. It introduces the DSS-HS system, calculation results, conclusions and recommendations based on an assessment of Estonian housing market sustainability in comparison to other selected countries.

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## Introduction

We agree with Tim Iglesias, who views housing issues through five comprehensive paradigms: housing as a human right means that adequate, safe, and affordable housing is critical to proper human development. Housing as an economic good means that substantial capital gains and losses occur regularly, as housing is mostly financed, produced and distributed by the private market. Housing as a home means rights and privileges affecting safety, freedom, and privacy. This includes access to and tenure in safe, decent housing for all people. Along with these main paradigms, housing is providing social order and is one competing land use (Iglesias, 2012). A lot of attention is focused on tenure forms: “As on the macro level, the policy theory of market correctives means that political decisions on tenure forms are crucial. The dominant policy theory says it is not for the state to decide how citizens should be housed, but it may be for the state to set up guarantees that citizens have a real opportunity to find decent housing in the market at a reasonable cost. This is why housing tenures should be

seen as the most important political instruments of housing provision as welfare state policy” (Bengtsson, 2012). Ways to defend and support individual renters should also be found in E.K. Wyly’s statements (Wyly, 2013). We are convinced that housing as a human right contains also freedom of choice of the tenure.

In the process of transition to a market economy, the Estonian authorities decided to privatize the existing rental housing stock in the hope that private home ownership would be the best way to maintain the rather old and shabby housing stock and, on the other hand, to redistribute housing wealth. This decision was supported by the EU Housing Policy Guidelines and world-wide housing policy trend to increase home ownership (Jowsey, 2011; Levitin and Wachter, 2013). As it turned out, the outcomes of this policy were negative, bad loans led to financial collapse and the bubble that resulted in the 2007 credit crunch was significant not only for its size but also for its nature. This was an over-lending induced crisis (Lawson, 2009).

The tenure split of the 27 EU members reveal that Eastern European countries Estonia, Romania and Bulgaria lead the owner-occupancy rate, which reaches almost hundred percent. In Lithuania and Slovenia, the proportion of owner-occupiers is about ninety percent. Unfortunately, the high home ownership rate in these countries is accompanied by a high rate of housing deprivation – corresponding to 28.6% and 28.8% in Romania and

\* Corresponding author.

E-mail addresses: [tiina.nuuter@ttu.ee](mailto:tiina.nuuter@ttu.ee) (T. Nuuter), [irene.lill@ttu.ee](mailto:irene.lill@ttu.ee) (I. Lill), [laura.tupenaite@vgtu.lt](mailto:laura.tupenaite@vgtu.lt) (L. Tupenaite).

Bulgaria, 12.2% in Estonia, 16.8% in Lithuania and 17.5% in Slovenia (CECODHAS, 2011). Naturally some questions arise. Why is the EU home ownership rate 60% and, despite all the efforts to increase home ownership in the UK and US, the rates in these countries with their mature housing markets are still below 70% (Brissimis and Vlassopoulos, 2009; CECODHAS, 2011; Brett and Schmitz, 2009)? Is housing market with a high owner-occupancy rate sustainable? These questions are further analyzed in this research.

## Literature review

After the Second World War, policies in Europe were concentrated to reducing housing shortages including social housing programs. Institutional arrangements and housing subsidy systems differed, but the governments of all EU countries influenced the provision of housing, even in times of strict public expenditure constraints. No country has a free-market approach, where individuals determine the demand and supply of housing relying on a general increase in household incomes (Oxley, 2011). Although Cullingworth's statement referred to by Oxley (2011) that: "Policies are the cultural products of history, time and place: they are rarely exportable", is commonly accepted, prevailing policies of increasing the home ownership were easily imported to the Baltic States.

Common arguments in favor of home ownership are lower maintenance cost, possible capital gains and higher prestige. This is true if homeowners have no repayment burden and if the location and quality of housing units are consistent with market price movements. In this sense, development projects on the outskirts of larger towns are not the best examples.

Arguments in favor of rental housing are mobility, reduced responsibility of tenants for the maintenance and less costly movement to another location or apartment. Tenants can also respond to the change of their income flows by moving into smaller housing units.

Usually housing price variations influence choice between renting and buying and the strategic decision of property investment. Though emerging markets are extremely inefficient and buyers continue to purchase houses regardless of their rising price (Tsai, 2013). Buying as an investment reduces the purchasing power of people in lower income classes and forces prices upwards. In this case, key questions are housing sustainability and affordability.

A broad definition of sustainable housing is that everyone, including everyone today and in future generations, has a decent place to live (Li and Shen, 2002). So sustainability starts with affordability and housing cannot be sustainable unless it is affordable. Affordable housing is defined in the Housing Europe Review (CECODHAS, 2011) as: "generally housing that is available for purchase or rent at a market value affordable for the majority of the population", but the term is also used to describe housing provided at sub-market prices to households on low income. Housing affordability is from one side dependent on economic development of a country (region) and reflects the ongoing cost of housing related to the household income. The ongoing cost of housing is either rents or monthly mortgage payments (Leishman and Rowley, 2012). As the population of a country, city or county consists of different households in different locations with different social status and having different incomes, the questions to answers are: affordable to whom, on what standard of affordability and for how long? (Stone, 2006).

Up to 2013, over 800 dwellings have been repossessed by the mortgage holding commercial banks in Estonia. This means that these families have lost their homes and, worst of all, still have payment obligations as house prices have decreased. Lack of affordability is not the only form of housing deprivation, in addition there

could be a variety of forms – housing fails to meet physical standards of decency, apartments are overcrowded, unsafe or are in an inaccessible location. All these forms of deprivation more or less characterize Estonian housing in comparison with other EU countries.

Kallakmaa-Kapsta (2013) constructed a housing affordability index for the Estonian housing market (mortgage payment restriction as 30% of a households' net income) and made conclusions that, since 2009, an average household can afford to buy an average flat in Tallinn. Indeed, in Tallinn and its surroundings, where almost half of the population lives, house prices and incomes were above the average.

Findings by Nuuter and Lill (2013) revealed that the average ratio of house price to income in Estonia was 4.1 in 2008; 2.8 in 2009; 2.9 in 2010 and 3.0 in 2011. In 2011 the figure for the lowest income quartile was 8.1; for the second 4.8 and for the third 3.5. Suhaida et al. (2011) classify median home price to median household ratio as follows: Severely Unaffordable  $\geq 5.1$ ; Seriously Unaffordable 4.1–5.0, Moderately Unaffordable 3.1–4.0; Affordable  $\leq 3.0$  (Suhaida et al., 2011). It corresponds with housing policies in many developed countries, where affordability is the relationship between the housing cost and incomes, with no more than a certain specified percentage of income (ranging between 25% and 35%) (Mulliner and Maliene, 2011).

A preferred measure of affordability is the ratio of lower quartile owner-occupied house price to lower quartile household earnings (Meen, 2012), referred by Leishman and Rowley (2012). As incomes are extremely diversified and the situation is worsening, only 60% of the population of Estonia can afford to buy a home even if, for some of them, a home is moderately affordable (Nuuter and Lill, 2013). In 1998 Meen forecast the home ownership rate in the UK for the period 2011–2016 to be 71.7%. The actual rate in 2012 was 66.7% (EUROSTAT, 2014; Meen, 1998) which is very close.

Broadly, affordability means the ability to acquire a housing unit and sustainability refers to capacity to pay over the longer period (mortgage length). This raises another issue which makes life cycle analysis highly misleading. Housing cost in Estonian statistics represents maintenance cost (including services) and the extreme minority of rents (most of which are rents with rent ceilings in the social housing sector) as owner-occupied housing counts for 96% (Nuuter and Lill, 2013). Actual housing cost, especially for those who acquire a home for the first time and with mortgage obligations, is much higher.

Mortgage payments are not included in housing cost statistics in Belgium, France, Greece, Italy, Luxembourg and Portugal (Garrido-Yserte et al., 2012). This might not be misleading if the share of home ownership is small, but there are worries in Spain, where the weight of housing expenditure in Consumer Price Index (CPI) is only 10%, but the actual housing cost is considerably higher (Garrido-Yserte et al., 2012). At the same time, Spain and Ireland have owner-occupancy rates of about 85% (CECODHAS, 2011).

In most of the countries, including Estonia, the households under the poverty standard, qualify for subsidies. The reflection of these subsidies in statistics and their share in different countries is unclear. Housing cost might differ according to tax policy. In Estonia, mortgage interest for first time buyers, is tax-free. Some countries introduce tax to the land, some to the property. Differences are illustrated by the share of property tax in GDP. In Estonia, the share is 0.23%, in Lithuania 0.40%, in Denmark 1.26% and in UK 2.97% (McCluskey and Plimmer, 2011). Cocconcelli and Medda (2013) suggest tax-reform to Estonia, to avoid possible house price bubble.

In addition, there is a growing cost of maintenance, as housing stock contains buildings of different quality and age. Mortgage payments are related to a long period, so affordability means sustainability of home ownership. Leishman and Rowley (2012)

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