



Intersection of the global climate agenda with regional development: Unequal distribution of energy efficiency-based renovation subsidies for apartment buildings



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ABSTRACT

The residential sector is an important target area for achieving Europe's 2020 energy saving aims. There is virtually no evidence, however, of how incentives for attaining energy efficiency interact with countries' regional development aims. This article presents recent experiences from Estonia, where an energy renovation subsidy programme financed with carbon emission trading funds was carried out between 2010 and 2014. We show that despite equal access to subsidies for residents living in various places, a regionally unequal distribution of subsidies occurred. Empirical analyses confirm that low-performing regions acquire less public subsidy, thus adding another layer of regional inequality to existing socio-economic differences. Findings suggest that renovation subsidy distribution is related to regional socio-economic indicators and that real estate value explains 40% of subsidy distribution variations between regions. Although the energy policy goal of carbon conservation is important, ignoring the location and organisational capacity of local communities results in missed opportunities to mitigate growing regional disparities.

1. Introduction

“Success to the successful” is a systems' trap that Meadows (2008) has vividly described in a study of systems. The phrase suggests that social groups that already enjoy higher “capital” accumulation—due to their greater education, wealth, and social networks—tend to also be far better equipped to seize additional benefits. We argue that this phenomenon can be prevalent in societies, especially when access to certain publicly-available incentives requires more human, social, organisational or other types of capital and distribution of such benefits is competitive.

In Europe, it is important that the ongoing energy transition (Bridge et al., 2013) and cohesion policies support each other. Regional policy is a classical cross-sectoral policy field that can only reach its aims when parallel sectoral policies, including energy policy, embeds regional development in its agenda. In the context of a multi-level governance system, it is also important that the impact of policies at various governmental levels are consistent. For example, EU energy policy aims should be consistent with the policy targets of the EU's economic, social, and regional policies, however each member state also has the responsibility to apply EU targets in a way that ensures balanced

development within national borders. The tools and impacts of energy policies are already by nature more global; the strategies at the national level could potentially consider how energy policy measures could alleviate rather than deepen socioeconomic stratification and regional inequalities within countries.

Many attempts have been made to measure and to understand the mechanisms of energy poverty (Bouzarovski et al., 2012; Braubach and Ferrand, 2013; Healy and Clinch, 2004). At the household level, energy poverty is understood as “the inability to secure a socially and materially necessitated level of energy services in the home” (Bouzarovski and Tirado Herrero, 2017, 69). Low-income groups living in energy-inefficient dwellings often pay disproportionately high energy cost; therefore, specific social protection measures or energy policy instruments are needed to alleviate this component of their poverty. Links between spatial inequalities and energy policies are less studied, but due to segregation in cities and disparities in regional development, vulnerable groups inevitably also tend to concentrate in space.

Bouzarovski and Tirado Herrero (2017) emphasise a clear divide between countries according to the core-periphery boundaries in Europe: in Southern European and (formerly socialist) Central and Eastern European (CEE) countries, energy poverty is generally higher,

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and even the middle class is affected by high energy prices. In Northern and Western European countries, energy poverty threatens weaker social groups, who often live in less energy-efficient dwellings. Furthermore, CEE countries typically struggle with the legacy of an inefficient energy sector and low quality housing. A large share of the housing stock in CEE countries originates from the socialist years when energy prices were low and housing construction and maintenance was heavily subsidised. Energy poverty in CEE can be explained by interrelated conditions: privatisation of energy infrastructure; a transition from public to almost fully private ownership of housing; large investment needs in both sectors; in some countries dependence on energy imports; related sharp increases in energy tariffs and other housing costs for households; and, slow progress in social welfare programmes. As such, the housing sector in CEE countries urgently needs investments; consequently, energy poverty is a critical issue in both larger cities as well as in peripheral regions of these countries.

In this study, we explore an energy efficiency housing renovation subsidy programme applied at the national level in Estonia that possesses a built-in component of competition between communities applying for public subsidies. More specifically, we study the first comprehensive public subsidy programme occurring between 2010 and 2014 in Estonia (during the post-socialist period) intended to support energy efficient housing renovation. Our empirical contribution—which demonstrates **how energy efficient housing renovation grants were distributed in Estonia at the core-periphery scale**—fills a gap in scholarly research in explaining how globally-oriented climate change aims interact with country-level regional development aspirations. This study therefore contributes to discussions about how to avoid the “success to the successful” trap in connecting energy policy with other cohesion aims.

This article first introduces the relations between energy policy and social inequality generally while focusing on regional polarisation. Next, we analyse to what extent the notion of equality is addressed in EU energy directives and member states’ energy efficiency action plans. This is followed by the identification of relevant policy goals in Estonia, providing context for energy subsidy programmes introduced in the subsequent section. We then describe the data employed and techniques used. After presenting the data and results from our empirical analysis, we offer conclusions and identify policy interventions that could improve the coherence between global/European energy and country-level regional policies.

2. Role of equity in energy policy

2.1. The context of regional polarisation

The term ‘regional polarisation’ suggests that successful regions, compared to lagging regions, provide richer opportunities for economic growth, a more diverse social life, better housing opportunities, and greater possibilities for individual fulfilment. While regional disparities between EU member states are decreasing, the inequalities within member states are increasing (Heidenreich and Wunder, 2008). The reasons for growing disparities are complex. According to Lang (2015), the formation of peripheral regions is a social and economic but also a discursive and political process. Also, sometimes weak regions are not getting weaker per se but stronger regions are developing faster (Nordregio et al., 2007).

Formerly prosperous industrial and agricultural regions are often faced with double deprivation. In former socialist countries, such regions received abundant state infrastructural and housing investments. The volume of housing construction was large in fast-growing major CEE cities; at the same time, many people were attracted to smaller industrial towns (Tammaru, 2001) and to collective agricultural enterprises which dominated rural centres (Marksoo, 1990), where state-regulated salaries were competitive and apartments were generously distributed to arriving specialists. By the beginning of the post-socialist

transition, peripheral regions in CEE countries were characterised by relatively good infrastructure and housing stock. Today, investment needs in these places are large and the out-migration of an economically productive population undermines the financial stability of small municipalities even further. The problem is also low return on housing investment. Real estate prices tend to rise only in major urban regions that attract enterprises and new residents. For these reasons, investments in energy efficiency are most likely to offer a return in prosperous regions where the value of improved real estate remains stable or appreciates. This makes co-financing attractive for residents, whereas in peripheral regions such motivation develops more modestly.

The complexity of regional polarisation emergence renders coherent policy intervention difficult to apply and its outcomes challenging to evaluate. It is argued that EU regional policy interventions are a waste of resources as they do not alleviate regional disparities (Boldrin and Canova, 2001). This is only partly true, because interventions for addressing polarisation may not work as intended due to the lack institutional capacity at the level of nation-state (Charron, 2016), or because of differences in social capital within and between communities (Ojamäe and Paadam, 2015; Raiser et al., 2002; Taylor, 2000). This means that intervention policy per se is not useless, but some communities are more capable of utilising EU subsidies while others are not.

Within EU member states, “peripheralisation” and “metropolisation” appears to be a structurally embedded and path-dependent processes (Lang, 2015; Martin and Sunley, 2006). For many peripheral regions in CEE with agricultural or industrial backgrounds, the most prosperous times are in the past. New and competitive economic activities have disproportionately developed in capital cities and other larger centres with diverse economic structures and healthy connections to global economies. This is also reflected in national internal migration patterns: larger metropolitan areas are attractive destinations for those leaving regions with growing unemployment (Leetmaa and Väiko, 2015). While regional polarisation is a Europe-wide trend (Boldrin and Canova, 2001; Gardiner et al., 2004), in CEE countries polarisation together with slow development in social protection and regional policy capacity have produced a severe loss in human capital (Raagmaa, 2001) in lagging regions. Most public subsidy programmes, however, presume local initiative, and in peripheral regions such local partnerships tend to be weaker.

In the 1990s, the housing privatisation process was considerably faster in core regions. The approach of housing privatisation in most CEE countries was to diminish public ownership of housing units (Kährnik, 2000) so that residents would assume housing costs. But this approach did not work smoothly even in major cities, because investment needs were beyond households’ capacities to pay, especially during the early post-socialist years. Little by little, (non-governmental) apartment associations in larger apartment buildings assumed various administrative and financial responsibilities, but the capacity of associations varied: in some residential buildings, effective leaders organised gradual improvements while in others, the apartment association staff was only able to accomplish the bare minimum with low communal costs. Even in large cities, it took time to establish the organisational capacity of apartment associations. In peripheral districts, maintenance and renovation of apartment houses is now often overseen by municipal officials rather than by owner communities. At the same time, some energy efficiency renovation strategies presume that a targeted community is able to mobilise its members to acquire available subsidies: an optimal renovation programme for each particular building must be identified considering technical, economical, financial, and procedural aspects. Given these conditions, we argue that disparities in energy poverty—similar to disparities in other regional development concerns—are deeply and institutionally rooted, and communities in peripheral regions may lack organisational capacity (e.g. social and financial capital) to compete for public subsidies.

We stress the importance of the polarisation phenomenon on a regional level because we assume that energy policy applications (e.g.

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