HOUSEINC

Affordable, sustainable and inclusive housing for marginalised communities

D5.9 Interlinkages of housing inequalities: Findings from the case studies

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About

The objective of HouseInc is to apply innovative methodology to deeply analyse interlinked dimensions of housing inequalities in the context of marginalised communities.

HouseInc will empirically examine economic, social and ecological drivers and assess impacts of various indicators on housing inequality to derive policy recommendations that foster the adoption of effective measures addressing housing inequality across Europe. With a transdisciplinary dialogue, the project develops innovative social, financial and digital solutions that can be up scaled and thus, contribute to a better socio-economic and sustainable integration of vulnerable groups in European societies.

HouseInc takes a systemic view and assesses interlinkages of housing inequalities - emphasising energy and mobility poverty, digital dimensions, employment opportunities, family and socio-demographic conditions, energy-efficiency, and health - on a micro-, meso- and macro-level. The interdisciplinary HouseInc consortium - consisting of research institutes and universities, policy think tanks, NGOs, and practitioners on the ground - involves case studies to engage directly with members of four marginalised communities in or from Eastern Europe.

Besides a mix-method approach, including modelling and a GIS-based analysis depicting geographical and future housing inequality, we implement a multinational survey to better understand housing inequality in light of recent events such as COVID-19 and Russia's invasion in the Ukraine. The research results will be assessed, mapped, and scaled up using Living Labs and various stakeholder engagement activities to provide innovative solutions addressing housing inequalities and translating them into valid local, regional, national and EU policy recommendations impacting EU and national funding programs and providing a comprehensive overview and guidance for policymakers to mitigate housing inequalities.

Project partners

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Abbreviations

Abbreviation	Full Form
D	Deliverable
Four As	Accessibility, availability, affordability, and acceptability
ID	Identification Document
WP	Work Package
T	Task

1. EXECUTIVE SUMMARY

This deliverable constitutes the final output of Task 5.1 of the HouseInc project. It presents an analysis of interlinked drivers and outcomes of housing inequalities, based on four case studies conducted in vulnerable communities in the Czech Republic, Romania, Italy, and Germany. Drawing on empirical data generated through qualitative document analysis, stakeholder interviews, and focus groups, the findings of these in-depth case studies are detailed in deliverables D5.5 to D5.8. The present report (D5.9) synthesises these findings to identify and categorise cross-cutting drivers and outcomes of housing inequality across the diverse local contexts of the four HouseInc case studies.

Due to the different local contexts and qualitative methodologies applied in the four HouseInc case studies, this deliverable does not offer a comparative analysis of the findings. Instead, the report uses the HouseInc framework (D2.2) to synthesise insights and conceptualise the main manifestations of housing inequality, as well as the associated drivers and outcomes. The overall objective is to contribute to the further development of an analytical approach that can help policymakers identify and design evidence-based policy interventions.

The deliverable highlights six overarching manifestations of housing inequality framed through the "four As" of housing inclusivity (i.e. affordability, accessibility, availability, and acceptability). These include 1) unaffordable housing in relation to energy costs and 2) energy efficiency challenges, as well as 3) a lack of residential mobility as manifestations of housing unaffordability; 4) various forms of exclusion as manifestations of housing accessibility challenges; 5) substandard housing as a manifestation of housing availability; and 6) residential dissatisfaction as a manifestation of housing acceptability challenges.

These manifestations are analysed in terms of their drivers and outcomes across five geographic scales: household, building, neighbourhood, regional and national. This approach provides a spatial framework that can help to determine the most appropriate level of governance for a given response. The spatial classification is complemented by an analytical approach that distinguishes between three types of drivers: norms and practices, material infrastructures, and policies embedded in the political economy of global market dynamics. This framework is then applied by illustrating pathways of housing inequality for three of the six key manifestations: unaffordable housing due to energy costs, residential immobility, and housing exclusion. These pathways demonstrate how the various types of drivers interact to produce or reproduce inequalities and help identify the most suitable levels of governance and types of intervention. For example, they show whether policy, norms and practices, or infrastructure should be addressed. At the household level, the pathways also illustrate the difference between modifiable and structural vulnerability factors that drive housing inequalities. This aims to guide the design of context-sensitive, tailored policies for vulnerable communities.

The results of this deliverable thus illustrate the findings of T5.1. They seek to provide input for subsequent tasks in WP5 (T5.2 and T5.3), focusing on the role of geographic scale and deriving implications for policy interventions at the local level of the HouseInc case studies. Moreover, the deliverable serves as input for WP6, which derives and develops innovative solutions to housing inequality and provides a framework for the upscaling of such solutions, and WP7, which, triangulating the HouseInc findings of WP3, 4, and 5, derives high-quality policy recommendations for the national, regional and EU-level.

2. DISCLAIMER: ETHICAL RESEARCH AND DATA PROTECTION

The objective of HouseInc is to analyse interlinked dimensions of housing inequalities in the context of marginalised communities. This makes the compliance with ethical research principles and data protection laws imperative.

This deliverable is based on D5.5 to D5.8, which draw on personal and sensitive data collected through stakeholder interviews and focus groups (i.e. the case study background reports that are classified as sensitive and not available to the public in line with HouseInc's ethical research approach). Written informed consent was obtained from all research participants contacted for these purposes, and interview and focus group guidelines were designed and implemented based on the ethical research guidelines of the HouseInc project detailed in D1.8. Access to any obtained personal and sensitive data has been restricted to the core research team at the responsible institutes, and the data is stored on a secure server in folders with restricted access in accordance with the GDPR. All identifiable, personal data has been anonymised and is – in this deliverable, only described in aggregated form.

3. INTRODUCTION

As access to and provision of affordable and sustainable housing becomes an increasing challenge in many European countries, the question of how to meet this challenge and provide not just shelter but quality housing for all people living in Europe is becoming more urgent. Unequal housing conditions - in terms of accessibility, affordability, acceptability and availability of housing that meets basic human needs in the context of sustainability challenges - have a profound impact on the interrelated social, economic and environmental dimensions of the health and well-being of European societies (Echeverría et al. 2008). The European housing crisis is exacerbated by the current polycrisis of geopolitical instabilities (such as the Russian war in Ukraine, the erratic foreign diplomacy of US President Trump), the aftermath of Covid-19, as well as the far-reaching effects of the global environmental and climate crisis.

Housing inequalities are multidimensional, with the drivers and outcomes of such inequalities being interlinked and context-dependent (see D2.1). Understanding the drivers of housing inequality that contribute to a lack of well-being, social cohesion and economic growth, and contributing to better policy design that seeks to ensure a good quality of life for all, is at the heart of HouseInc's empirical research. Achieving these goals requires appropriate and context-specific policy solutions at different levels of governance (local, regional, national and EU), based on a thorough understanding of (a) where these drivers and outcomes of housing inequality occur, (b) how they are interlinked, and (c) what types of drivers cause manifestions of housing inequalities and in which context.

3.1. OBJECTIVES AND STRUCTURE OF THE DELIVERABLE

This deliverable aims to identify and categorisedrivers and outcomes of housing inequalities based on case-specific, empirical insights drawn from the HouseInc case studies. It considers various observations of different manifestations of housing inequalities in these cases, and seeks to provide preliminary insights into the interlinkages and pathways involved within these case studies. To achieve this objective, the deliverable draws on (1) the empirical findings of the four HouseInc case studies documented in D5.5 to D5.8[1] and (2) the conceptual framework of the project developed and outlined in D2.2. Using the contextual, in-depth findings of the HouseInc case studies, this approach seeks to complement the findings of WP3 and WP4, which work with national-level data, to better understand the drivers of housing inequality and to derive solutions and policy recommendations that are both appropriate to national, regional and local contexts, while allowing for lessons learned at different geographical scales and across European states that provides the baseline for further research within WP5 and WP7 of the HouseInc project. Importantly, this deliverable does not compare case study findings but summarises important evidence-driven insights seeking to explores overarching manifestations of housing inequality as well as corresponding drivers and categorises them within a framework of geographic scale.

The guiding questions for this report are threefold:

1. What are the drivers and outcomes of housing inequality identified by the case studies in the context of the manifestations of housing inequality studied?

[1] Deliverables 5.5-5.8 are classified as „sensitive" and thus not available to the public, due to the sometimes highly sensitive nature of data pertaining to particularly vulernable communities. They are on file with the HouseInc consortium and available for limited review by request.

2. How can the drivers and outcomes be categorised at different geographical scales, and how does this inform our understanding of interlinked pathways of inequalities?
3. Finally, what are potential implications for policy interventions (to housing inequality that can be derived from such a conceptualisation of across-scale interlinkages?

Based on the empirical evidence from the HouseInc case studies, the overall argument of this deliverable is that to understand the different scales of the drivers of housing inequality, as well as the scales at which the effects of housing manifestations occur, policy solutions need to be designed to address both the drivers and the outcomes. These scales can be conceptualised along geographic levels of governance and as norms and practices, infrastructure, and policies that cut across geographic levels and are categorised as "types of drivers and outcomes" in this deliverable. Policymakers and academics require an in-depth understanding of situated drivers and outcomes of housing inequality to successfully design solutions to various manifestations of housing inequality. This deliverable is a first step of the HouseInc empirical analysis towards such an in-depth understanding by outlining key findings of the four HouseInc case studies.

The focus of this deliverable is thus on the drivers and outcomes of housing inequality within the context of the vulnerable households and communities under study in the four case studies, as these are disproportionately affected by housing inequalities, both in terms of frequency and intensity. In housing inequality studies, vulnerable communities include a wide range of groups identified in the literature. These groups include racial and ethnic minorities, gender and sexual minorities, migrants and people with a low socioeconomic status (Addis et al. 2009; Brown et al. 2020; Jepsen and Jepsen 2024; Sunikka-Blank and Galvin 2022). These vulnerability factors increase the likelihood that households and communities will be exposed to the drivers of housing inequality without the capacity to mitigate or adapt, and they are often experienced intersectionally.

The deliverable is structured as follows: Section 3.2 adapts *and further develops* the HouseInc conceptual framework to the research objectives of this report and outlines the methods. Section 4 provides a brief overview of the four HouseInc case studies and classifies the examined manifestations of housing inequality along four dimensions of inclusive housing, such as affordability, accessibility, availability and acceptability. The section further discusses how questions of quality housing in the context of sustainability challenges are addressed in the case studies. Section 5 outlines the results on drivers and outcomes of the six identified manifestations of housing inequality based on a thorough review of the case study background reports and categorises them within the HouseInc framework of geographic levels of governance. Section 6 analyses these results to conceptualise interlinkages of housing inequality across geographic scales, explores variations between case study findings, and, based on the outlined empirical findings, extends the analytical framework to include types of drivers and outcomes, categorised as material infrastructures, norms and practices and policies embedded into social, political and market dynamics that cut across geographic levels. The section further draws on the empirical findings of the case study to develop pathways of housing inequality and derive preliminary implications for policy interventions to address challenges of housing inequality. Section 7 summarises the results and offers a brief outlook.

3.2. ANALYTICAL FRAMEWORK AND METHODS

The analysis draws on the conceptual framework of the HouseInc project provided in D2.2 that also outlines HouseInc's working definition of *housing equality* as access to affordable, available and acceptable

quality housing for all, particularly under consideration of ongoing sustainability challenges (such as increased energy costs, more frequent heatwaves or increased flood and severe storm hazards). Inclusivity, defined through HouseInc's four A's – accessibility, availability, affordability and acceptability – and a context-dependent definition of quality housing based on a minimum threshold of satisfying basic human needs, constitute the two core dimensions of the project's understanding of equality in housing.

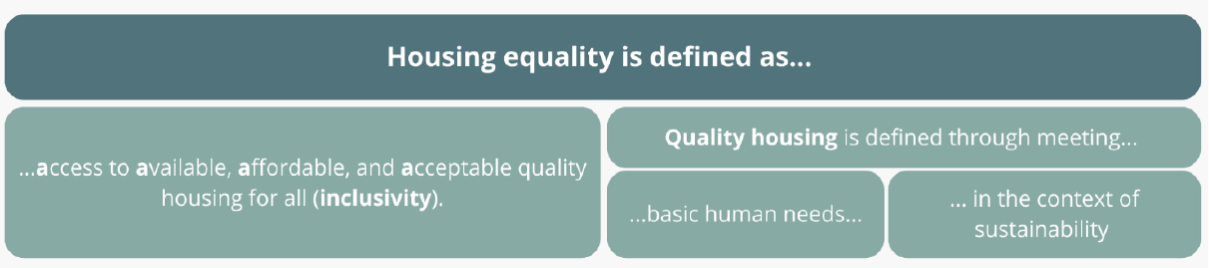

Figure 1: Definition of housing equality

To assist our analysis of what drives or hinders equality in housing and what potential outcomes of housing inequality might be, the deliverable draws on HouseInc's conceptual model of drivers, manifestations, outcomes, and solutions of housing inequality. Drivers are defined as the underlying causes of housing inequality responsible for one or more manifestations. Manifestations present observable phenomena of such inequality. Outcomes refer to long-term consequences of manifestations of housing inequality, often linked to wider societal issues. And solutions are defined as strategic interventions designed to alleviate causes or mitigate effects of specific manifestations. Moreover, the analysis of this deliverable draws on the geographic scales of household level, building level, neighbourhood level, regional level, and national level suggested in D2.2 to categorise drivers, manifestations and outcomes of housing inequality.

The analysis in this report is mainly based on the empirical data provided by the case study background reports (particularly the final versions documented in D5.5, cited as Stadler et al. 2025 in this report, D5.6 is cited as Divíšek et al. 2025, D5.7 is cited as Miraglia et al. 2025, and D5.8 is cited as Musca and Panica 2025). The reports investigate housing inequalities in the four HouseInc case studies by drawing on secondary data, such as policy documents, public reports, statistics and grey literature, as well as on primary data collected between November 2024 and February 2025 as part of the HouseInc research activities. Data collection methods included a total of 51 stakeholder interviews[2] and six focus groups with community members, with a total of 48 participants. The empirical data was collected and analysed within the context of each case study and documented by the HouseInc partners Liberitutti, the University of Bocconi, Romodrom, ISAS CR, Politeia, EPG, Mannheim City and Fh ISI. For all four case studies, there were certain limitations in terms of access to and collection of data. These limitations were reflected in the individual case study reports and are briefly summarised in the table below.

Table 1: Methodological limitation of empirical data collection phase

Czech Republic	Romania	Italy	Germany

[2] For the Czech case study, data collection included 12 stakeholder interviews and 10 interviews with community members to replace the focus groups. The number of 22 interviews for the Czech case study is included in the total number of stakeholder interviews (51 interviews in total).

An interview format had to replace the planned focus groups due to the cohesive structure of the target communities (inappropriateness to ask for sensitive data within a focus group).	Key institutional actors might be underrepresented in interviews due to the inability to reach them during the field phase of T5.1.	Difficulties in recruiting stakeholders for interviews during the field phase of T5.1.	Difficulties in recruiting residents with a migrant background to participate in the research due to segregation tendencies of these communities in the neighbourhood.
	Focus group results might not fully reflect the experiences of men and young people	Limited Italian language skills among refugees from Ukraine required additional translation and interpretation efforts	A lack of gender balance in focus groups with exclusively female participants

This deliverable is thus based on the individual case study deliverables, which means that the results are explorative rather than representative. To identify and subsequently categorise drivers and outcomes of housing inequality and describe the different manifestations of housing inequality observed in the four case studies, Fh ISI conducted a qualitative content analysis in MaxQDA using D5.5, D5.6, D5.7 and D5.8 (i.e. the final case study background reports). The initial coding scheme of the content analysis was derived from the analytical framework. The following codes were used to carefully screen and categorise insights within the four case study deliverables:

Table 2: Coding scheme to assess manifestations, drivers and outcomes of housing inequality in HouseInc case studies

Conceptual factor of housing inequality	Inclusivity dimension of the identified manifestations	Geographic scale of drivers, outcomes and solutions
Driver	Affordability	Individual
Manifestation	Accessibility	Household
Outcome	Availability	Building
Solution	Acceptability	Neighbourhood
		City/Town/Village
		Regional/National Level

The coding was carried out in three analytical steps. First, the conceptual factors of housing inequality were coded to differentiate drivers, manifestations, outcomes and solutions for each case. In a second step, the identified manifestations of housing inequality were further differentiated between dimensions of inclusivity, such as affordability, accessibility, availability and acceptability. A third step was applied to coded drivers, outcomes and solutions to further differentiate between geographic scales. Multiple encodings were used, for example, if drivers could also be operationalised as outcomes. The coding was carried out by one researcher and checked for inter-coder reliability by another researcher. The empirical findings – based on a deductive coding approach using the HouseInc analytical framwork – are subsequently put in conversation with the extended housing studies literature outlined in D2.1 (the HouseInc state of the art literature). The objective is to draw some preliminary conclusions to provide a baseline for further research in WP5 (on geographic scales and levels of proximity) and the development

of policy recommendations in WP7 of the HouseInc project. This explicit purpose of this deliverable is to provide a categorised summary of the four case study findings that are based on qualitative research. Comparative analyses of drivers and outcomes as well as policy landscapes – while useful for lesson-drawing or "benchmarking" (Stephens and Hick 2023) - are beyond the scope of this deliverable and will be explored in subsequent tasks and publication of the project. Section 6, exploring interlinkages of housing inequality identified from the case studies, analyses both across-case similarities and some variations across the studies to inform the development of a extended analytical framework for subsequent actities within the project highlighting the embeddedness of local, national and regional drivers of housing inequality, such as household factors, practices and norms, institutions and policies, within broader historical pathdependencies of political, social and economic market dynamics.

4. MANIFESTATIONS OF HOUSING INEQUALITY IN THE HOUSEINC CASE STUDIES

As mentioned above, the HouseInc project defines housing equality as the inclusive access to quality housing that is understood through meeting basic human needs in the context of ongoing sustainability challenges. Importantly, this definition does not suggest uniform housing conditions for all but emphasises equitable access to housing that supports people's physical, mental and social well-being. Ensuring quality housing for all means creating an inclusive housing system that is based on the principles of affordability, accessibility, availability and acceptability (see D2.2). Housing inequality, then, is the systemic failure to provide inclusive access to quality housing and manifests itself through a variety of different phenomena with potentially different but often overlapping drivers that cause such manifestations of housing inequality. Moreover, manifestations of housing inequality – i.e. the visible and embodied effects of drivers of inequality – can also result in different outcomes defined as long-term impacts of such inequality dimensions on human (and by extension ecological) well-being. To address housing inequality – and work towards housing equality as defined above – we need to observe the different ways in which housing inequality manifests and identify the drivers and outcomes of such manifestations. Solutions then need to be specifically designed to either alleviate drivers of or mitigate the effects of different housing inequality phenomena, enabled through carefully conceptualised indicators to evaluate the impact of such solutions.

4.1. BRIEF OVERVIEW OF THE HOUSEINC CASE STUDIES

HouseInc's four case studies were carefully selected within the project to highlight different dimensions of housing inequality. The four selected cases show that housing inequality cannot be captured comprehensivel by statistical data alone (e.g. either due to a lack of data on certain sections of the population, as in the case of the Roma community in the Czech Republic and Romania, or difficulties to capture interlinkages and intersectionalities with national or regional level statistics). A more in-depth, qualitative perspective complements national and regional statistics and supports the identification of drivers and effects within the context of specific, often marginalised, social groups. The following boxes provide a brief overview of the four case studies, describing the research question of each report, a summary of the main findings, as well as the case-specific policy potential as identified by the respective case study authors.

The work of Romodrom examines housing inequality with an emphasis on the Roma population in two selected cities in the Czech Republic, Karviná and Ostrava. The case study of Politeia analyses housing issues at both the national and local levels with a particular focus on informal housing and segregated

communities living in Dârvari, Ciorogârla. The work of Liberitutti illustrates community-based reception systems for Ukrainian refugees in the Piedmont Region, North-West Italy, in response to the ongoing conflict triggered by Russia's invasion of Ukraine. Romodrom, Politeia and Liberitutti are HouseInc project partners and active NGOs working with vulnerable communities in the housing sector on an everyday basis. Finally, the case study of Mannheim-Vogelstang in Germany offers insight into housing inequalities, focusing on the perceptions of energy poverty and possible policy solutions to address energy poverty in the Vogelstang district in the city of Mannheim. Like the three NGOs, the City of Mannheim is a partner in the HouseInc project.

Czech Republic (CZ)

The Czech case study, drawing on the work of the NGO Romodrom, investigates housing inequality within a specific marginalised group, with an emphasis on the Roma population in two selected cities in the Czech Republic, Karviná and Ostrava.

Authors of the case study report (D5.6)

Michal Divíšek, Kateřina Kubrichtová, Eva Nedomová (Romodrom)

Martin Lux, Martina Mikeszová, Petr Sunega (ISAS CR)

Main research question

What challenges of discrimination in housing do Roma face as an ethnic minority in the Czech Republic in the cities of Karviná and Ostrava?

Summary of findings

Housing inequality is a complex issue influenced by numerous internal and external factors. These include the challenges Roma face in accessing mortgages due to low incomes, discrimination, excessive housing costs, state, municipal, and local housing policies, as well as the attitudes of property owners. Both the causes and consequences of housing inequality manifest in various areas, such as excessive housing costs, the risk of falling into energy poverty, and reduced social mobility. For the Roma community living in the Czech Republic, compared to the general population, there are more frequent instances of lower education levels, reduced mobility, lower incomes, and more challenging access to information, leading to lower overall functional literacy, including financial and energy literacy. Roma individuals in the Czech Republic continue to face discrimination across many areas.

Housing inequality is shaped by both structural and individual factors, creating a cycle of exclusion that is difficult to break. Segregation serves as both a cause and a consequence of housing inequality, as individuals facing financial hardship, discrimination, or legal barriers are pushed into socially excluded areas. These areas often suffer from poor housing conditions, high energy costs, and limited access to quality services, reinforcing financial strain and deepening exclusion. Additionally, long-term exposure to these conditions influences behavioural patterns, making it harder for individuals to escape poverty and access stable housing. Without systemic interventions, these disparities will persist across generations.

Case-specific policy potential:

Addressing housing inequality requires a coordinated policy response at the national, local, and individual levels. A unified housing support law is essential to address legislative fragmentation and prevent discriminatory practices. At the municipal level, expanding access to social housing and financial support mechanisms, such as rental guarantees, can help remove economic barriers. Social work and long-term support programs must be adequately funded to provide continuous assistance,

while digital tools should be adapted to help low-income households manage energy expenses more effectively.

Romania (RO)

The Romanian case study, drawing on the work of the NGO Politeia, analyses housing issues at both the national and local levels, with a particular focus on informal housing and segregated communities living in these types of settlements, with a focus on the Roma community in Dârvari, Ciorogârla

Authors of the case study report (D5.8)

Madalina Musca (Politeia)

Daniela Panica (EPG)

Research questions

1. How do Dârvari residents experience and adapt to informal living conditions?
2. What are the current policies and practices set in place for addressing informal living conditions?
3. What are the main barriers local government faces in implementing these policies?
4. What are some potential solutions for addressing informal living in Romania?

Summary of findings

Findings suggest that citizens living in informal communities (i.e. people living on land that is not technically owned by them and who have no official form of identification due to the lack of formal residency) face multiple forms of inequality, beginning with lack of documentation, which restricts their access to essential social services such as healthcare, social assistance, education, waste management, and energy. Families live in overcrowded and unsafe conditions, with many lacking legal ownership of their homes or land. The infrastructure is severely underdeveloped: most households lack access to basic utilities, such as electricity, running water, and heating. This creates a precarious environment where energy poverty and unsafe living conditions are the norm, exposing families to significant risks, especially during the winter months. Most of the community relies on informal employment, often in low-paying and unstable jobs, which perpetuates a cycle of poverty. The lack of formal contracts not only leaves workers vulnerable to exploitation but also discourages participation in official employment due to outstanding debts and fines. Educational opportunities are limited, and early dropout rates remain high, particularly as children are pressured to contribute to family incomes, further narrowing their prospects. Discrimination plays a critical role in this marginalisation. The Roma community faces systemic exclusion from essential services, such as healthcare and education, and their voices are often unheard in political decision-making processes. Women are further marginalised, as traditional patriarchal norms confine them to domestic roles, limiting their economic independence and access to opportunities.

Case-specific policy potential:

Addressing informal living in Romania requires complex and resource-intensive measures from the national government and local municipalities to both identify and address the challenges faced by people in informal housing. Because of this, progress on helping people living in informal housing has

often been slow, although our findings also suggest that significant progress has been recently made with the adoption of a legal framework which can facilitate the work of governmental agencies, as well as local municipalities to identify and address the needs of informal communities. However, significant work remains in identifying these communities and developing targeted measures tailored to the diverse needs that people from these settlements have.

Italy (IT)

The Italian case study focuses on the work of the NGO Liberitutti involved in the community-based reception systems for Ukrainian refugees in the Piedmont Region, North-West Italy, in response to the ongoing conflict triggered by Russia's invasion of Ukraine.

Authors of the case study report (D5.7)

Eugenia Miraglia, Eleonora Perobelli, Raffaella Saporito (UB)

Domenica Moscato, Elisa Espinosa (Liberitutti)

Research questions

Which political, administrative and socio-economic factors influence housing inequality in community-based reception systems for Ukrainian refugees in the Piedmont Region, North-West Italy, in response to the ongoing conflict triggered by Russia's invasion of Ukraine?

Summary of findings

Housing inequality within the refugee reception system stems from an exogenous shock (war) that forces physical and cultural displacement. The case study illustrates how housing is conceived not just as a shelter but as a foundation for personal and professional development as well as for social stability and inclusion. In the context of refugees fleeing war, the housing system results in temporary and often inadequate accommodations, where refugees live in a condition of uncertainty and precarity. This significantly affects integration processes in terms of labour market opportunities, access to education and formation, ability to develop stable social relations, as well as mental well-being, and quality of life as a whole. However, from primary data emerged that key factors such as the geographical location of the accommodations, the activation of strong local community networks, and the reception system model can mitigate housing inequalities and improve long-term integration outcomes. Policymakers and stakeholders must prioritise these elements to ensure that housing serves not just as shelter but as a foundation for stability and inclusion.

Case-specific policy potential

The case study highlights that the impact of housing policies depends on the intersection between refugee population characteristics, pre-existing inequalities in the host regions, and the extent to which housing policies are designed to address and manage these dynamics, to avoid unintended consequences. It also shows how, in order to be sustainable and responsive, housing systems must promote integration between housing solutions and additional policy initiatives related to different services (language, education, employment integration), while being ready to change as contextual characteristics and beneficiary needs evolve. A comprehensive and flexible approach, which considers both short and more structural long-term strategies, assessing the social, economic and psychological needs of refugees, may be essential in this context. Taking into consideration these aspects would further improve housing policies to actively promote and encourage integration.

Germany (DE)

The German report is the result of a cooperation with the City of Mannheim and concentrates on perceptions of energy poverty and possible policy solutions to address energy poverty in the Vogelstang district in the city of Mannheim.

Authors of the case study report (D5.5)

Maria Stadler, Hannah Janßen, Anne Kantel, Iska Brunzema (Fh ISI)

Maria Riffat and Georg Pins (Mannheim City)

Research questions

1. How do Vogelstang residents experience and adapt to the risks of energy poverty in the context of rising energy costs and widespread energy inefficiency in the neighbourhood's buildings?
2. How do different population groups, particularly the elderly and younger people (with or without migration biography), experience energy poverty?
3. How do these groups perceive and engage with city policies aimed at tackling energy poverty through energy efficiency retrofitting?

Summary of findings

The findings reveal significant differences in how energy poverty is perceived among stakeholders and residents in the district. While city administrators do not see it as a major issue (e.g. because the issue of energy poverty is not visible in municipal statistics and people often live just above the threshold for social welfare benefits), residents and non-official stakeholders report that many households struggle with high energy costs and inefficiencies. Additionally, there is a notable lack of awareness about city policies and programs addressing energy inefficiency and energy poverty effects in the building sector, driven by factors such as diverse communication needs, low public trust, and social segregation tendencies within the neighbourhood. These challenges highlight the need for more inclusive communication strategies. Furthermore, energy poverty is deeply embedded in broader housing inequality, influenced by disparities in housing quality, ownership status, and access to financial and institutional support and should be addressed in an integrated way as part of the city's overall housing and neighbourhood development policies.

Case-specific policy potential:

The case study highlights the need for improved and needs-tailored communication and information pathways to address the diverse population groups in the neighbourhood (particularly focusing on energy and housing poor residents, who are a heterogeneous group in themselves) to increase the visibility of the city and its programs and to improve public trust. One possibility to achieve this would be the establishment of a one-stop shop in Vogelstang to offer advice and implementation support for energy renovations as well as services to alleviate energy poverty. In this light, subsidy/policy programs are needed to mitigate both the investment costs for homeowners as well as the effects of modernisation/renovation costs for tenants, e.g. due to often implemented rent increases after energy renovations that are not balanced by reduced energy costs.

Finally, the case highlights the importance of improving the attractiveness of the neighbourhood (e.g. cleanliness, but also services and events for younger people and residents with migration biographies).

4.2. MANIFESTATIONS OF HOUSING INEQUALITY ALONG THE FOUR DIMENSIONS OF INCLUSIVE HOUSING

The following section illustrates selected overarching manifestations of housing inequality identified through research in the context of HouseInc's four case studies, embeds these within the existing literature, and conceptualises them along the four As of housing inclusivity, namely affordability, accessibility, availability, and acceptability. The purpose of this conceptualisation is to highlight dimensions of inclusivity or the lack thereof in visible and embodied housing inequality within the case studies to support future solutions and policies in addressing such inequalities.

Figure 2: The four pillars of housing inclusivity

As already outlined in detail in D2.2, the four As of housing inclusivity are constructs that have frequently been explored within the literature either as stand-alone, singular constructs or in combination, particularly in the context of health care services (Goudge et al. 2009; Miteniece et al. 2017; Penchansky and Thomas 1981). Regarding housing studies, existing scholarship often focuses on the concept of affordability (Galster and Lee 2021; Mulliner, Malys and Maliene 2016; Sunega and Lux 2016), the notions of availability (An et al. 2022; Besbris, Schachter and Kuk 2021), and adequacy, the latter of which is often framed in relation to acceptability (Bogdon, Silver and Turner 1994). However, the concepts often lack clarification and are missing a unitary conceptual framework. In D2.2, the HouseInc project attempts to address this gap by proposing an integrative framework, where *housing availability* refers to the existence of an adequate supply of housing stock to meet the demand for housing in a given area (Besbris et al. 2021), *housing affordability* refers to the relationship between housing costs and a household's income or wealth, *housing accessibility* captures the (un)ease with which individuals can access housing and the surrounding services, considering their (lack of) abilities and resources, and *housing acceptability* is based on the perceived adequacy of the quality of housing and the congruence between housing and an individual's cultural norms and believes (HouseInc D2.2, pp. 11-15).

To achieve inclusive access to quality housing, all four dimensions of inclusivity, i.e. all four of the As, need to be met. In the following, we describe examples of housing manifestions within the framework of the four As identified within the HouseInc case studies, namely **unaffordable housing in relation to energy costs and energy efficiency challenges** as well as the **lack of residential mobility** as manifestations of housing unaffordability; various **forms of exclusion** as manifestations of housing accessibility challenges; **substandard housing** as manifestions of housing availability; and **residential dissatisfaction** as a visible phenomenon of housing acceptability challenges.

Table 3: Overview of overarching manifestations of housing inequality along the four dimensions of inclusivity in HouseInc's case studies

	Czech Republic	Romania	Italy	Germany

Accessibility	E.g. **spatial exclusion**, officially designated exclusion zones	E.g. **exclusion** as limited access to essential infrastructures (transport, healthcare)	E.g. **spatial exclusion**, housing disconnected from the broader urban fabric	E.g. **exclusion** as limited access to housing for elderly people or people with disabilities
Availability	E.g. substandard housing due to apartments with **mould and in poor technical condition** in marginalised locations	E.g. substandard housing due to the **absence of basic amenities** like bathrooms, and overcrowding	E.g. substandard housing due to **energy inefficient** buildings	E.g. substandard housing due to outdated buildings that urgently require **energy efficiency** upgrades
Affordability	E.g. **restricting heating** during the winter months due to inefficient and high-cost heating systems	E.g. **Economic exclusion** renders housing unaffordable	E.g. **unaffordability** manifests in a lack of residential mobility	E.g. homeowners face **high upfront investments** required for energy-efficient renovations
Acceptability	E.g. **neighbourhood dissatisfaction** (also in municipal housing), e.g. due to vandalism, particularly in socially excluded areas	E.g. lack of residential satisfaction due to **insecure tenure and constant eviction threats**	E.g. dissatisfaction with housing situation due to a **lack of privacy and a lack of social integration**	E.g. lack of residential satisfaction due to monotonous architecture and **poor building quality**

Affordability

Housing affordability, or the inability to afford housing costs by some, is often described as one of the key drivers of housing inequality (Anacker 2019; Baker et al. 2016; Wetzstein 2017). Housing affordability can capture the challenge or inability to afford any available housing or a specific standard of housing and is an issue of distribution that differs between groups in society. It thus describes a "relationship between housing and people" (Stone 2006:153). Many European countries experienced a rise in rent and housing costs in recent decades (Meen 2018) while household incomes have lagged behind (Anacker 2019), resulting in a shortage of affordable housing for certain segments of society. Importantly, affordable housing is mostly a concern for low and middle-income households, and particularly but not exclusively an issue for urban spaces (Haffner and Hulse 2021), as there is a certain segment of the high-income population for whom all housing is affordable. As Lerman and Reeder (1987) suggested, the concept of affordable housing seeks to capture the relationship between housing costs and a household's income (and ore recently also wealth), in which this relationship results either in no housing at all, low-quality housing with reduced everyday life opportunities, or good quality housing with reduced opportunities and a lower overall quality of life since the household can no longer afford non-housing related expenses

(Anacker 2019; Kutty 2005; Lerman and Reeder 1987). Housing affordability manifests, i.e. becomes visible, in various ways that are deeply interconnected with local housing standards and the cultural appropriateness of housing quality and expectations around quality of life. Additionally, issues of housing affordability, such as increasing housing costs, affect different parts of society differently (Gan and Hill 2009; Meen 2018).

Two of the key manifestations of housing unaffordability in the context of the HouseInc case studies emerged as **unaffordable housing costs in relation to energy costs, energy efficiency renovations of buildings,** and a **lack of residential mobility**.

First, housing costs, particularly in relation to rising energy prices and the financial demands of energy-efficient renovations, demonstrate housing unaffordability, as highlighted by the empirical findings of three of HouseInc's case studies (CZ, RO and DE). In these cases, rental costs are perceived as a significant burden by low- to middle-income households, often consuming a large proportion of household income and leaving limited funds for other essential expenses. This economic strain can lead to cost-saving behaviours, such as restricting heating during the winter months, which may negatively impact comfort and well-being (DE). Certain households experience difficulties in accessing energy because of unpaid debts to energy suppliers (CZ). Homeowners face an additional challenge in the form of the high upfront investment required for energy-efficient renovations. While these renovations can be cost-effective in the long term, they are often financially out of reach in the short term (DE). Renters, on the other hand, feel disempowered to make such changes as they lack control over structural decisions or do not have the financial means to replace inefficient electrical appliances (DE, CZ). In addition, inefficient housing practices, such as persistent water leaks resulting in high water and energy bills or shared utility meters in multi-household buildings where costs are divided equally regardless of actual consumption, further exacerbate the perception and reality of unaffordable living conditions (case study CZ and DE). Moreover, in the case study of Romania, 42% of families reported that they either do not have a stove or that the one they have is faulty and poses a safety risk, they experienced cold every day last winter due to an inability to heat their home and poor quality of housing (RO, specifically: Musca and Panica 2025:30).

Second, housing unaffordability manifests in a lack of residential mobility as observed in all four of the HouseInc case studies. Although factors such as neighbourhood attachment and social ties with friends and family also play a role, high rents, housing costs and land prices significantly limit residents' ability or willingness to relocate. This immobility impacts both inter-neighbourhood movement (DE, IT, CZ and RO) and residential mobility between housing types (DE). For example, older residents in the German case study experience residential immobility by being unable to downsize or move into more accessible homes due to the fact that rents have increased steadily over the past decade, and they cannot afford the higher rental costs of new apartment leases. These financial barriers restrict adaptive housing choices, thus reinforcing sub-optimal, low-quality living situations even when needs change. Moreover, in cases of debt or low income, tenants may also be unable to pay rental deposits for a new flat or may face rejection as tenants (CZ).

Accessibility

Housing accessibility includes a physical dimension related to features of housing units allowing for barrier-free access to and mobility within the unit, which is particularly relevant for people with disabilities (Imrie 2005; Lindsay et al. 2024) or the elderly (Heller et al. 2024; Serrano-Jiménez, Blandón-González and Barrios-Padura 2022). It is further related to spatial accessibility to other services, such as transportation

infrastructures, employment opportunities, public health, as well as child and elderly care institutions (Acolin and Wachter 2017; Bohman 2021; Wachs and Kumagai 1973). Finally, housing accessibility includes a social dimension, which encompasses knowledge and resources to overcome language and cultural barriers to accessing the housing market (such as tenant protection policies, understanding rental agreements, or having access to the national debt and mortgage system) (Arundel and Ronald 2021; Besbris et al. 2021; Hernandez et al. 2009).

Challenges of housing accessibility manifest through the concept of exclusion across all four case studies, but in slightly different ways. In some cases, segregation emerges spatially, with entire districts or neighbourhoods perceived as disconnected from the broader urban fabric (DE, RO) or even officially designated as exclusion zones (CZ). These types of segregation are often closely linked to stigmatisation, i.e. due to the bad reputation of the neighbourhood (DE, RO). The German case study also mentions a lack of accessible housing for people facing disabilities. In other instances, exclusion is driven by limited access to essential infrastructure, such as transportation, education, and healthcare, particularly in rural areas or within temporary housing arrangements (IT, RO). These layered forms of exclusion highlight how both physical separation and infrastructural neglect contribute to barriers in housing accessibility. Referring to the social dimension of housing accessibility, the case studies refer to a lack of knowledge about energy bills and energy providers, which creates a barrier for tenants and homeowners to switch to more affordable options (DE, CZ). Moreover, social exclusion also manifests in a lack of access to city or regional services (DE, IT) and proper (social and political) representation at the local, regional and national level (RO, CZ). For example, the Roma community in the Czech Republic is significantly underrepresented in politics, at both the national and local levels. Despite being a significant ethnic minority, Roma individuals rarely hold office or influence decisions that affect their communities. There is no strong Roma political party or substantial Roma representation in mainstream politics. Although government and NGO initiatives exist, they often lack Roma input and are top-down. Similarly, there is no big or important (in terms of electoral measurement) political party in Romania which visibly advocates for the rights and antidiscrimination of Roma, as most advocacy work is done through local NGOs, and local political representation in the region under study in HouseInc is also missing.

Availability

Assessing the adequate supply of appropriate housing to meet demand in any given area is a complex issue with some scholars having argued in the case of the US, for example, an adequate stock of housing exists, but that there is a mismatch between the distribution of incomes and the distribution of housing prices resulting in housing affordability rather than availability issues (McClure and Schwartz 2025). Others have argued that a housing shortage does indeed exist and that estimates depend on how researchers define housing surpluses and deficits, particularly along the question of an adequate housing stock and appropriate quality of housing (Airgood-Obrycki and McCue 2025). Housing availability is thus an issue connected to challenges of affordability and acceptability (i.e. contextual appropriateness).

Housing availability, particularly for lower income tenants, often takes the form of **substandard housing** in all four case studies. This includes a range of deficiencies, such as the absence of basic amenities like bathrooms, and overcrowding, which is particularly prevalent in informal settlements in Romania. In Italy, many apartments and buildings inhabited by refugees from Ukraine are energy inefficient and require renovation. Properties within the Widespread Reception programme, of which Liberitutti is a part, are rented from municipalities or private landlords, and are often particularly poor in quality and lack energy efficiency. Residents of these housing options, i.e. Ukrainian refugees, generally perceive living

arrangements, such as sharing apartments with landlords, as uncomfortable and inadequate. Similarly, in Germany, a significant proportion of housing available to low-income groups consists of outdated buildings that urgently require energy efficiency upgrades, such as better insulation, new water pipes or new heating systems, relating this availability dimension to affordability in regard to energy efficiency upgrades as discussed above. Residents also reported clear differences in living space quality and neighbourhood attractiveness, such as access to green spaces or problems with littering, which contribute to overall dissatisfaction with the neighbourhood. In the Czech case study, housing conditions are also often energy inefficient, unhealthy and spatially segregated. Many residents experience housing deprivation firsthand, living in apartments with mould and poor conditions in marginalised locations. Specific issues, such as air-locked radiators, difficulty maintaining stable indoor temperatures and excessive ventilation, exacerbate discomfort. Water consumption arrears are common, reflecting the poor condition of facilities. These factors are also closely linked to broader patterns of social exclusion and segregation, which illustrate the interconnection between different manifestations of housing inequality, such as substandard housing and housing exclusion.

Acceptability

Housing acceptability refers to the degree to which individuals or families perceive their living conditions as suitable and satisfactory, shaped not only by physical attributes but also by perceived appropriateness and personal belief systems (Abidin et al. 2019; Amérigo and Aragonés 1997). Acceptance and satisfaction with housing are deeply influenced by whether a dwelling aligns with a person's situated norms, values, and lifestyle practices (Jabareen 2005; Zangger 2023).

Acceptability of housing is reflected in residential satisfaction across the case studies, revealing how broader social and political dynamics shape lived experiences. In the German case study, for example, residents view the monotonous architecture and poor building quality as symbolic of limited political will and investor disinterest, thereby reinforcing the neighbourhood's undesirable stigma. This perception is further reinforced by the area's predominantly non-affluent population and high proportion of residents from migrant backgrounds. Similarly, the Romanian case study reveals that residents of informal settlements face insecure tenure and constant eviction threats, undermining their sense of safety and stability. These conditions significantly diminish residential acceptability, highlighting the intersection of material conditions and social marginalisation. The example of the Czech case study shows that some residents do not want to invite visitors, or that relatives do not want to visit due to the poor quality of housing. The dissatisfaction with the neighbourhood also relates to municipal housing, particularly those in excluded localities, where residents describe incidents of vandalism, such as broken windows and cars. In this sense, housing acceptability goes hand in hand with a lack of availability of good-quality housing. Residents do not have the option to choose a better apartment and are therefore forced to remain in flats that are not acceptable to them. In the Italian case, for example, sharing a flat with the landlord is considered an inadequate housing situation due to a lack of alternative accommodation, with both aspects of acceptability and availability playing a role.

5. RESULTS: DRIVERS AND OUTCOMES OF HOUSING INEQUALITY MANIFESTATIONS ACROSS GEOGRAPHIC SCALES

In the following chapter, we will describe drivers and outcomes of the above-identified manifestations of housing inequality and categorise them according to the geographic scale they manifest. The empirical

evidence is drawn from the case study background reports (D5.5-D5.8), which, due to the sensitive nature of some of their insights, are categorised as non-public HouseInc reports in the project. All information drawn from these reports is thus presented in aggregated and anonymous form only. The objective of this chapter is to illustrate how drivers, manifestations and outcomes of housing inequality interact with each other within the specific situated contexts of the four HouesInc case studies, identify how they are spread across scales as well as different types of drivers and outcomes and apply these insights to selected pathways of housing inequality to derive preliminary policy insights.

The categorisation of geographic scales builds on the project's conceptual framework (D2.2.) but adapts the therein proposed scales by combining individual and household levels and further distinguishing between neighbourhood, regional and national levels. The five geographic scales applied in this section are thus corresponding to the following levels: household level, building level, neighbourhood level, regional level, and national level. The categorisation of geographic scales in this section is based on the project's conceptual framework (D2.2), but the proposed levels have been adapted by merging the individual and household scales, and by further differentiating between the neighbourhood, regional and national levels. The five resulting scales are: household, building, neighbourhood, regional, and national. The allocation of manifestations, drivers and outcomes across these scales is derived from empirical observations in the four HouseInc case studies. This allocation is therefore not intended to be representative or generalisable to other contexts but is specific to the data collected within T5.1 of the HouseInc project. Furthermore, it is recognised that certain drivers associated with one scale within the HouseInc observations may manifest at other scales in different contexts, reflecting the multi-scalar nature of housing inequalities.

This multi-scalar approach builds on scholarship that emphasises the interacting spatial dimensions of housing inequality and its implications for policy interventions. Research has demonstrated that housing inequalities are (re-)produced at different geographical scales, ranging from the household level (Jepsen and Jepsen 2024; Lux and Sunega 2023), neighbourhood level (Anguelovski et al. 2018; Besbris et al. 2021; Bohman 2021), to regional level and national levels (Fields and Raymond 2021; Forrest and Hirayama 2015; Li, Wong and Cheung 2016). In line with this literature, the subsequent sections illustrate how manifestations, drivers and outcomes occur and interact across scales within the HouseInc case studies. In doing so, this deliverable aims to generate insights for policy design that recognise the interdependencies between levels of geographic and governance scales. This perspective is consistent with the recommendations of housing studies and urban policy research for multi-scalar strategies (Baddeley 2011; Barrozo et al. 2024), and where effective solutions need to take the coordination of local, regional and national governance structures as well as historical developments and institutional path-dependencies into account (Brenner and Theodore 2002; Wilson, Morrison and Everingham 2018). While the empirical findings presented here contribute to this body of research, they reflect solely the observations of the HouseInc case studies and cannot be extrapolated beyond these specific contexts. This is subject to subsequent activities within the HouseInc project within the scope of WP7.

5.1. DRIVERS AND OUTCOMES OF UNAFFORDABLE HOUSING IN RELATION TO ENERGY COSTS

In many European countries, the issue of unaffordable housing in relation to energy costs, or the topic of energy poverty, has been increasingly put on the agenda. In the Czech Republic, energy poverty has escalated significantly in recent years. As of 2023, approximately 1.3 million people—around 13% of the

population—live in energy poverty, up from 770,000 in 2020.[3] Among the most affected are marginalised groups, notably Roma households (Klusáček and Kalendová 2023). Estimates for Germany suggest that between 2.7 and 6.5 million households in Germany are affected by energy poverty, defined as the inability to keep their homes adequately warm or an excessively high proportion of income spent on electricity and heating (Noka 2024). The large difference between these estimates is due to the fact that available data on this in Germany is limited, and the government lacks an official definition of energy poverty to work with. In HouseInc, the Czech and German case study focused particularly on issues of housing affordability in relation to household energy costs, but all four case studies delivered some insights on this particular manifestation.

Drivers:

High rental costs can be identified as a significant driver of energy poverty by consuming a large share of household income, and thereby limiting the financial resources left to pay for energy bills and efficiency upgrades. Renters are disproportionately affected as they often have limited control over the energy efficiency of their homes, further compounding high energy expenses. In the Czech case, for example, housing costs represent a significant portion of Roma household budgets. While the data on housing costs are only approximate, they indicate that around 33% of Roma households fall into the category of excessive housing costs, meaning they spend more than 40% of their disposable income on housing, which leaves a small residual budget for other necessary living costs. In comparison, the figure for the general population is much lower, at 9.1% (Šimíková et al. 2024). Combined with the fact that 67.8% of the Roma population in the Czech Republic are renting instead of owning their homes (compared to 19.1% of the general population) (Office of the Government of the Czech Republic 2024). This makes high rental costs (in combination with low household budgets) a significant driver of unaffordable housing in relation to energy consumption.

According to Eurostat data 2024, Germany is recognised as the leading rental market in the European Union, with almost 53% of the population living in rented accommodation in 2024 (DESTATIS Statistisches Bundesamt 2025). Rental prices have increased by 7.5% within the last five years, rendering high rental costs potentially a key challenge for widespread energy poverty (Statista 2025). This is also the case for Vogelstang, the case study of Germany, where rents (particularly for new tenants) have been steadily increasing (ImmoScout24 2025). Initially planned as a social housing estate, the district's social commitment to provide affordable social housing has long been lifted. Due to rent control policies, some of the "older" rental contracts still offer affordable rent for low to middle-income households. However, the low rents are also a barrier to providing necessary energy efficiency updates by some (private) landlords or housing companies. Moreover, rental costs of newer, updated apartments available on the housing rental markets, as well as land and property prices for homeownership, increased significantly over the past decades, making (part) of the district less affordable for many.

Relatedly, high investment costs for energy efficiency updates in buildings (see e.g.Galvin 2024) is also driving the risk of energy poverty, as a lack of necessary upgrades leads to higher energy consumption and costs to maintain basic comfort. This deepens the financial difficulties of those who are already

[3] People in the Czech Republic are considered to be in energy poverty if they live in a household with an income up to the 5th income decile and report either that they cannot afford to adequately heat their home, or that they have energy-related debts, or that they spend more than 20% of their net monthly income on energy. At the same time, they must also be in poverty (i.e. income poverty, subjective poverty, or material deprivation)

vulnerable and can even affect residents' health, due to poor insulation causing mould, water leaks, draughts or overheating. This is particularly relevant for highly energy inefficient buildings prevalent across all of the HouseInc case studies. High investment cost for energy efficiency buildings affect both tenants renting their housing, because – as mentioned above – they might either face significant rent increases or a lack of necessary efficiency updates, and homeowners, who – depending on financial government subsidy programs available – have to cover a large or the full amount of such investment costs, which is a challenge for low to middle-income households without significant savings or wealth.

Rising energy prices – increasing the cost of essential services like heating, cooling, and lighting – exacerbate already existing financial burdens in low-income households or put previously unaffected households at risk of experiencing energy poverty. The energy crisis, triggered by post-COVID market disruptions and worsened by the war in Ukraine, caused a steep rise in energy prices in all of the countries under study. In the Czech case study, this has disproportionately affected low-income households, who now face higher monthly advance payments for the energy bills and overall higher annual costs (Divíšek et al. 2025:19f). In the German case study, the effects of rising energy prices are also felt by low-income residents and those living in energy inefficient buildings with gas heating systems (Stadler et al. 2025). This effect is exacerbated by a lack of energy literacy, when residents are unaware or unable to select potentially cheaper energy service providers in their region, as particularly outlined by the Czech case study.

On the household level, low income is identified a primary driver of energy poverty, as households with limited financial resources often struggle to afford adequate heating, cooling, and electricity, leading to changes in practices (e.g. under-consumption of energy despite need) or leading to limited residual income for other life-necessary expenses after housing costs, such as rent, mortgages and paying off electricity and heating bills.

In the Czech as well as the Romanian case, for example, Roma households are identified among the low-income groups in the countries that are – at the same time – struggling with inadequate heating and utility arrears. In the Romanian case study, many households rely on wood-burning stoves that put further strains on their households' budgets (as wood is expensive). Furthermore, these stoves are insufficient for heating in harsh winters, affecting residents' health (Musca and Panica 2025:35f). Similarly, according to available data, approximately 16.9% of Roma individuals in the Czech Republic report living in households with inadequate heating. In comparison, the general population in the country reported a much lower incidence of 6.1% in 2023. Additionally, 26.1% of Roma households face overdue payments on heating, electricity, gas, or water bills. This is significantly higher compared to the general population, where only 1.9% experienced such issues in 2023, as reported by Eurostat (Šimíková et al. 2024). Between 2021 and 2023, around 65% of tenants in Romodrom's Housing First program, which seeks to assist particularly vulnerable households, accumulated electricity bill arrears, generally between 2,000 and 5,000 CZK (80–200 EUR), with some cases reaching 11,000 CZK (438 EUR) (Divíšek et al. 2025:25). In the German case study, different perspectives on the question of whether Vogelstang is a comparatively "poor" or "low-income" district arose. According to official statistics, the district had a comparatively high employment rate of 64.1% (City of Mannheim average: 60.7%) (Kommunale Statistikstelle Stadt Mannheim 2023). However, statistics also show an increase of over 34% in unemployment in the district between 2019 and 2023 (Stadt Mannheim 2024a). In the statistics, Vogelstang also shows lower-than-average consumption expenditures, meaning that households on average have lower consumption levels and patterns than other areas of the city (Stadt Mannheim 2022; Stadt Mannheim 2024b), potentially suggesting lower

wages and per capita income compared to other districts. Depending on the area and housing type, a predominantly socially and economically disadvantaged groups of residents exist, with household income levels below the poverty line receiving social benefits or just above the threshold to be eligible for financial support from the government, rendering the socio-economic fabric of the district highly variable.

In many cases, the experience of living in a low-income household is driven by a lack of employment opportunities in the neighbourhood, in some cases exacerbated by racialised and ethnic exclusion from the job and housing market (Divíšek et al. 2025). For example, in the Czech case study, the Roma community under study remains particularly vulernable due to systemic soco-economic disadvantages, such as a low median monthly income per person (of 11,200 CZK compared to 20330 CZK for the general population, high rates of unemployment among Roma (17.6% compared to 2.5% nationwide), and a high rate of informal work (10.7%) and precarious employment (50% on fixed-term contracts vs. 6.7% in the general population) due to structural economic and demographic shifts in the past decades as the two cities Karviná and Ostrava are emblematic of broader socio-economic transformations tied to the decline of heavy industry, especially coal mining (Šimíková et al. 2024). Since the 1990s, this transition has resulted in rising unemployment, population decline, and deepening social inequalities. Moreover, demographic changes, such as a growing elderly population and a decline in birth rates, have reshaped housing demands as well as job market dynamics in recent decades. Combined with ongoing systemic, ethnic and racialised discrimination, these economic developments rendered Roma communities disproportionately affected by low-income living conditions as a household-level driver impacted by more structural conditions, such as the privatisation of the housing market in the early 1990s and 2000s in the country (Labour Office of the Czech Republic 2024).

Lack of employment opportunities in the immediate neighbourhood, as well as social and cultural exclusion from the job market, are also highlighted within the German case study (Stadler et al. 2025). Longer commuting distances and the restriction to low-skill employment options exacerbate the financial strain for low-income households. Furthermore, language barriers or lack of knowledge of the energy service provider system, i.e. energy literacy challenges, are also described as a challenge when distributing information about energy services or other type of information such as debt advice, which disproportionally affects residents with (more recent) migration biographies (ibid.:37f). Similarly, the Czech case study highlights the challenge of energy literacy identifying that many of their client's experience difficulties in understanding their energy bills, particularly in relation to their energy consumption patterns (Divíšek et al. 2025:31). In some cases, this is further complicated by the fact that utilities are registered in the landlord's name, meaning the landlord handles the entire process, which is also a common practice for heating bills in Germany.

Furthermore, the Czech case study shows that household habits, which also include the needs of children, can lead to higher energy consumption due to the fact that they (a) are often at home more frequently and (b) require different room temperatures for comfort. More than 24% of families in the Czech case have four or more children, leading to higher energy consumption needs and higher risks of energy poverty (Šimíková et al. 2024). Families with children, and particularly those with single parents due to the intersectionality with lower household income, are identified at increased risk of energy poverty, which is an observation also illustrated by the Italian case study (Miraglia et al. 2025). Gender norms thus significantly impact housing affordability in relation to energy costs.

Moreover, both the Czech case study and the German case study show how age can play a significant role in housing unaffordability due to energy costs. The Czech case observes a demographic shift towards a

higher percentage of elderly people in the cities under study, while the German case study focuses on a district with a comparatively higher proportion of elderly residents than other districts in the region (Divíšek et al. 2025; Stadler et al. 2025). Both case studies highlight the role older age might play in the need for higher energy consumption while at the same time needing to save energy costs due to the low-income situations of retirees, with significant impacts on public health. The German case study, moreover, illustrates the challenge of single elderly living alone in larger houses and apartments (for example, after their children moved out and/or their partner is deceased), which also means a considerably higher amount of energy consumption to heat a larger space, combined with lower incomes (Stadler et al. 2025:23, 33). At the same time, there is a potential lack of motivation to invest in energy efficiency measures at an older age, such as investing in new heating systems, because the cost of these measures might not be recouped within their lifetime.

Outcomes:

Unaffordable housing due to energy consumption can result in the loss of housing or a forced move to cheaper housing (potentially with a lower quality of the dwelling), resulting in a loss of people's immediate neighbourhood network, with potential impacts on a neighbourhood's social cohesion. Furthermore, unaffordable housing due to energy consumption can also result in a diminished quality of life because other expenses, such as costs for schooling, daycare, or social life and leisure activities, are no longer affordable. Another outcome manifests in the reduction of heating or electricity costs below a healthy level, directly impacting residents' mental or physical health. Besides heating, the issue of cooling is also gaining importance throughout Europe. In rented apartments, there is often no possibility to cool relevant living spaces, which makes elderly people especially vulnerable to heat waves.

Table 4: Drivers and outcomes of unaffordable housing in relation to energy costs across geographic scales

	Household	Building	Neighbour-hood	Regional	National
Manifestation:					
Unaffordable housing costs in relation to energy costs	x				
Drivers:					
High rental costs			x		
High investment costs for energy efficiency updates					x
Rising energy prices					x
Energy inefficient buildings		x			
Ethnic and racialised discrimination			x	x	x
Job market: lack of employment opportunities			x	x	
Low income	x				
Energy literacy challenges	x				
Age	x				
Gender norms			x		x
Outcomes:					
Loss of housing	x				

Loss of familiar neighbourhood, social network	x				
Social cohesion			x		
Diminished quality of life	x				
Physical and mental health issues	x				

5.2. DRIVERS AND OUTCOMES OF ENERGY EFFICIENCY CHALLENGES

One of the key manifestations of housing inequality is the lack of energy efficiency in the housing inhabited by many people in the communities studied in HouseInc. This ranges from a lack of proper insulation of building walls, floors, doors and windows of building types built in the 1960s/1970s (as in the German case study) to a lack of windows or doors and leaking roofs (as in the Romanian case study). The lack of energy efficiency is closely related to the lack of substandard housing but is treated separately in this report: all energy inefficient buildings also belong to the category of substandard housing, but not all manifestations of substandard housing are due to missing energy efficiency renovations or builds.

Drivers:

One of the driving forces of a lack of energy efficiency is the tenure type of housing, i.e. the ownership status. For example, in the Czech case study, the majority of the Roma population is living in rental housing (67.8% of the Roma population compared to 19.1% of the general population (Office of the Government of the Czech Republic 2024)). This is limiting the possibilities to influence the energy efficiency of buildings and appliances. The type of tenure is therefore an important driver of energy efficiency challenges. Tenants are dependent on the transparency of their landlords and the fair distribution of costs. For example, inequality also arises from shared utility meters when tenants can't track their water consumption and therefore have no means to control or reduce their expenses (Divíšek et al. 2025:33). Similarly, housing ownership structures have a significant impact on energy efficiency renovations in the German case study, as they consist of a mix of private owner-occupied housing, small (private) landlords, as well as rental property owned by larger housing companies and associations (including social housing) in the district. This diversity of ownership type, often within the same building complex, makes a coherent energy-efficiency and renovation strategy difficult, as different needs, financial resources, and capabilities to renovate (or not) collide (Stadler et al. 2025:25f).

Moreover, the type of building contributes to the need for energy efficiency upgrades or renovations. For example, the district of Vogelstang in the city of Mannheim was developed in the 1960s and 1970s to address the housing shortage in Mannheim (ibid.). These old types of buildings are often unrenovated and energy inefficient, however, also showing differences depending on the ownership status. Similarly, the Romanian case study highlights that many of the houses occupied by members of the Roma community are self-built due to the fact that their occupants lack proper documentation of land and property ownership (Musca and Panica 2025). These self-built houses often lack essential features to ensure energy efficiency: buildings are insulated by plastic sheets to cover windows and doors, and heating is often provided by wood-burning stoves or makeshift gas heaters (ibid.: 35). The Italian case study also highlights the type of available buildings as a driver of energy efficiency. Available properties to house refugees within the Widespread Reception programme are limited, as many of the accommodations are rented from municipalities or private citizens, and the houses are often a bit older and lack energy efficiency measures. Works to improve the housing units' carbon footprint are within the owners' responsibility, who are not forced to intervene on this issue in relation to the Widespread Reception project. As a consequence, fixtures are not highly energy efficient and boilers are not condensing, which can lead to

higher energy consumption and costs and diminish the overall quality of the housing experience (Miraglia et al. 2025:15f, 21). This also means that available household appliances are not necessarily energy efficient. Similarly, due to financial constraints of members of the Roma population in the Czech case study - and depending on the condition of the rented apartment - tenants are often forced to use old or inefficient appliances or heating systems (Divíšek et al. 2025:32). High energy costs arise particularly when heating systems are not functioning properly, for example air-locked radiators setting the heating to the right level to maintain a constant temperature and then heating to high temperatures while also excessively ventilating (ibid.).

The German case study furthermore suggests the role a conservative, non-environmental oriented ideology might play as a driver of energy efficiency-related challenges in buildings (Stadler et al. 2025:20). The Mannheim City administration often refers to "sinus milieu structures" of the district under study,[4] highlighting the perceived presence of a strong middle-class, traditional, and conservative milieu in the community under study. It is assumed that it is more difficult to motivate traditional and conservative milieus for participation in the implementation of refurbishment measures than some of the other milieus, because members of this milieu are, in general, considered less environmentally proactive and less open to change.

A lack of public trust further contributes to the challenge of potentially addressing and solving some of the energy efficiency challenges in the case study. This is particularly highlighted by the Romanian case study that identifies strained relationships between members of the Roma community and public authorities as a main barrier to formally organising, for example, energy supply in the neighbourhood (Musca and Panica 2025:24). In the German case study, programs exist on the local level provided by the City of Mannheim that are targeted towards supporting energy efficiency challenges, especially for low-income households. For example, low-income households can receive grants for new, energy-efficient refrigerators and freezers or free energy consulting. Furthermore, funding schemes for energy renovation and changes to heating systems exist for homeowners. However, many residents do not know about the programs and do not trust the city to be the appropriate actor in implementing support and advice programs (Stadler et al. 2025).

In contrast to a lack of energy efficiency that many case study examples show, housing inequality in the German case study is also driven by policies aiming to increase energy efficiency standards. For example, the local energy provider in the city of Mannheim recently announced plans to phase out the local gas network. Therefore, all households still connected to the gas network need to find new heating sources, such as connecting to district heating. This is considered a financial burden for homeowners that creates uncertainties. Another uncertainty relates to the national Building Energy Act, which increases the requirements for energy efficiency measures, which is also perceived as a burden on landlords and tenants with direct and indirect effects on rental prices and refurbishment costs (ibid.: 22f).

[4] The City of Mannheim uses the methodology of a Sinus Milieu analysis to embed potential social, economic and ecological challenges within Vogelstang's societal constructs, particularly influencing strategies and decisions in regard to public participation. Such an analysis can provide insights into the various social groups within the area, which are essential for effective district development, planning, and city administration. Understanding these groups allows for the tailored implementation of measures that address the community's diverse needs Stadt Mannheim 2023.

Outcomes:

The consequences of energy efficiency problems often result in substandard housing, particularly affecting health risks, such as the inability to heat homes adequately in winter or cool them in summer. In the Romanian case, due to economic and social exclusion, most residents cannot afford proper materials to insulate, improve, or build their homes. As a result, their homes fail to retain heat, leading to persistently cold living conditions. This often causes children to fall ill frequently (Musca and Panica 2025:36). Additionally, the lack of access to proper heating methods forces some families to rely on improvised solutions, such as indoor fires, which over time severely impact children's health, increasing the risk of respiratory problems. In the German case study, especially elderly residents are vulnerable to heat waves as there are often no possibilities to cool rental apartments, while more privileged residents have air conditioning systems installed (ibid. 34). In addition, energy efficiency problems can contribute to energy poverty as a manifestation of housing as discussed in section 5.1 above.

Table 5: Drivers and outcomes of energy efficiency challenges as a manifestation of housing inequality across geographic scales

	Household	Building	Neighbour-hood	Regional	National
Manifestation:					
Energy efficiency in buildings		x			
Drivers:					
Tenure type (ownership status)	x				
Building type		x			
Age of appliances	x				
Conservative, non-environmentally oriented ideology	x				
Public trust			x		
Increasing requirements for energy efficiency measures (GEG policy, local implementation of gas phase-out)					x
Outcomes:					
Substandard housing	x				
Health	x				
Energy poverty	x				

5.3. DRIVERS AND OUTCOMES OF A LACK OF RESIDENTIAL MOBILITY

The lack of residential mobility as a manifestation of housing inequality is discussed in two ways: either the inability (due to a lack of material or social resources) to move housing within the same neighbourhood or the inability to move across neighbourhoods.

Drivers:

In the case of Germany, residential immobility within the same neighbourhood was highlighted as a housing challenge concerning the elderly population living in large spaces (multi-room flats or houses) either alone or as a couple, while other families with children cannot find affordable housing large enough

to fit their needs. Moreover, large spaces can also turn into a financial burden for the elderly as it is a challenge to maintain the space over time properly or heat larger apartments or houses in winter. Nevertheless intra-neighbourhood mobility, i.e. the movement of one party from one dwelling to another within the same neighbourhood is quite limited, which is driven by people's **age** (moving houses is burdensome), **emotional attachment** to their home, and financial constrains as many of the elderly in the district live on **low-income** pensions and **housing prices** have increased significantly over the past years, making it difficult to find smaller, but equally or less expensive housing than the space they seek to vacate (Stadler et al. 2025:22, 36). Similarly, the Italian case study identifies the lack of affordable alternatives within the same region as one of the main drivers of why Ukrainian refugee families find it difficult to move between housing options (Miraglia et al. 2025).

Residential immobility across neighbourhoods was also highlighted by the German case study, both as a response due to emotional attachment and familiarity with the status quo, as well as a response due to high housing costs outside the current neighbourhood. The Romanian and Czech case studies also illustrate how residential immobility is driven by regional and state policies as well as systemic economic and racialised discrimination. Roma residents in Dârvari, Romania, report experiencing housing discrimination when landlords refuse or when public authorities neglect their request for basic services, making mobility across neighbourhoods impossible to achieve (Musca and Panica 2025:24). In the same light, the Czech case study identifies the fact that some landlords, as well as social housing programs, require applicants for their rental units to be free of any debt and submit certain fee-based certificate to access the public housing sector as a key barrier for many low-income, vulnerable households in regard to residential mobility (Divíšek et al. 2025:31).

Outcomes:

Outcomes of a lack of residential mobility are reported as residential dissatisfaction, often combined with a continuing low income due to a lack of employment opportunities within the immediate vicinity, which also contributes to intergenerational cycles of poverty, an interlinkage particularly observed by the Czech and Romanian case studies on vulnerable Roma communities.

Table 6: Drivers and outcomes of residential (im)mobility as manifestation of housing inequality across scales

	Household	Building	Neighbour-hood	Region	National
Manifestation:					
Residential immobility		x	x		
Drivers:					
Age (elderly)	x				
Low income/debt	x				
Emotional attachment to the home/neighbourhood	x				
High housing costs			x		
Social housing policies (fees and requirements)				x	x
Economic and racialised exclusion			x		x

Outcomes:					
Residential dissatisfaction	x				
Cycles of intergenerational poverty	x				

5.4. DRIVERS AND OUTCOMES OF HOUSING EXCLUSION

Across all four case studies of HouseInc practices of exclusion reflect how housing inequalities manifest through systemic barriers that prevent certain individuals or groups, often rendered vulnerable by socio-demographic characteristics such as race or immigration status, intersecting with class and gender, from accessing affordable and secure quality housing. Housing exclusion is both a manifestation, i.e. a visible symptom, and one of the main drivers of many other manifestations of housing inequality.

Drivers:

Exclusion occurs through many mechanisms. Geographic barriers, such as landmarks in the form of high-traffic roads delineating a district as in the case of Vogelstang in the German study, or a lack of appropriately paved roads to access the neighbourhood altogether as in the case of the Romanian case study, spatially segregate neighbourhoods and settlements (Musca and Panica 2025:34f; Stadler et al. 2025:23f). Combined with a lack of available transportation options – such as identified in the German, Romanian and Italian case studies – albeit to significantly varying degrees –these geographic barriers act as drivers of spatial exclusion with a particularly high impact on vulnerable communities. For example, the Italian case study highlights how a lack of available, regular public transportation options in the mountainous region around Turin intersects with already present social and economic exclusion experiences of Ukrainian refugees and exacerbates their effects. The lack of public transportation hinders the search for work and integration of the refugees even if there are housed in small municipalities that can offer everyday needs, such as school, healthcare and grocery stores (Miraglia et al. 2025:23f). Similarly, the Romanian case study illustrates how a lack of public transportation as well as any appropriately paved road infrastructure hinders access to the semi-urban located informal settlements of Roma communities in Dârvari, Ciorogârla, and how this contributes to the availability and access of public and energy infrastructures and access to employment options driving economic exclusion from the labour market. Roma residents have the choice between no job, a low-paid informal job or a job far away from family and neighbourhood networks making them increasingly rely on social benefits to cover housing and living expenses (Musca and Panica 2025:36). To a different extent, the German case study also highlights how the lack of well-paid employment opportunities within close proximities of people's home forces them to commute long-distances to work (which costs both time and money, i.e. for fuel) and contributes to a lack of neighbourhood familiarity and cohesion (Stadler et al. 2025:24).

Spatial exclusion practices are mirrored in some policy practices as in the case of the Czech Republic, where the practice of identifying and officially designating "socially excluded communities", i.e. areas in which more than 20% of the residents receive a living allowace, was temporarily formalised by a 2017 amendment to the Law on Assistance in Material Need, granting municipalities the authority to introduce a general measure known as "no-benefit zones." These zones were designated in areas with a high incidence of "undesirable social phenomena" (Divíšek et al. 2025:19). The measure was promoted as a tool to combat exploitation by landlords profiting from poverty, and many city representatives presented it as an effective means to prevent the influx of individuals who were seen as unable or unwilling to integrate into areas with a high occurrence of social issues. Many city councillors described it as an effective measure to prevent the influx of so-called "inadaptable" (ibid.) citizens into low-income and high-crime

rate localities. The core of this amendment was that new residents in areas where no-benefit zones were declared were no longer automatically entitled to the housing allowance. However, this provision did not affect those who were already living in the area under a contract.

By the end of 2018, no-benefit zones had been declared in 52 municipalities. In some municipalities, the measures were later revoked by regional authorities themselves, and they are no longer in effect today due to their abolishment by a Constitutional Court ruling. However, while in effect, some municipalities and cities designated only specific localities, streets, or buildings with a certain street number as no-benefit zones (in Ostrava), while others applied this measure to the entire municipality (e.g. in the city of Karviná). Research by the Platform for Social Housing showed that instead of effectively addressing the issue of housing and housing insecurity, this measure led to higher migration of vulnerable individuals and the creation of new excluded localities. The problem also manifested in the inability of people to move from a socially excluded locality to a "better address," especially in cities where the no-benefit zone was declared across the entire municipality (Government of the Czech Republic 2021). While the no-benefit zones are no longer in effect today, the challenge of residential immobility (i.e. the ability to move away from a socially excluded locality) persists.

In addition to the issue of spatial exclusion practices, the German case study exhibits two different dimensions of social exclusion. On the one hand, manifesting itself in parallel to spatial barriers, the community under study is often perceived as a "non-desirable" neighbourhood by people living in other districts in the city. This perception is based on the district's predominantly monotone architecture from the 1960s / 1970s, a relatively high proportion of residents with migration biographies, and a predominance of lower to middle-class residents (Stadler et al. 2025:31). Many residents of the neighbourhood themselves strongly reject this narrative. On the other hand, some neighbourhood-internal exclusion dynamics can be observed. Although the migrant/non-migrant divide is socially constructed, the research observed some separation between groups. Elderly non-migrants form a visibly active sub-community supported by city initiatives and civil society, while younger non-migrants are less involved. Social structures and events are seen as dominated by older generations, leading to limited intergenerational exchange. There is also a social gap between long-term residents and newcomers, regardless of background. Recent arrivals, especially those with migration histories, often feel disconnected and rarely participate in community structures. Focus groups highlighted a sense of growing anonymity and difficulty in building social networks in Vogelstang (ibid. 31f). The Italian case study also identifies language barriers as well as cultural differences as key drivers of social exclusion in their work with Ukrainian refugees in the country (Miraglia et al. 2025:27).

Both the Czech and the Romanian case studies highlight the role of historical path dependencies driven by structural factors, such as housing policies and systematic ethnic and racialised discrimination, in understanding housing exclusion as a manifestation of housing inequality. In the Romanian case, one of the main drivers of housing exclusion identified is informal living, which has been exacerbated by housing policies in Romania implemented after 1989 (Musca and Panica 2025:37). The privatisation of housing and the subsequent eviction of especially tenants from Roma communtities combined with a lack of social housing have left vulnerable communities with no other option than living in informal settlements, a concept which has only recently been acknowledged as a challenge to be addressed by actual legislation (Law 151/2029) and is defined as ""groups of at least 3 housing units spontaneously developed, occupied by individuals or families who are part of vulnerable groups defined according to the Social Assistance Law no. 292/2011, with the subsequent modifications and completions, and who have no rights over the land

they occupy" (Locuire Informala n/a). Throughout Romania's history, Roma communities have faced great challenges driven by systemic discrimination with the legacy of slavery still affecting their quality of life and opportunities making informality (i.e. living on land that is not technically owned by the Roma residents living on it and due to the lack of formal residency having no official identification) one of the driving forces of housing exclusion in the country).

In interaction with systematic ethnic discrimination and policies, such as the temporary no-benefit zones, the Czech case study identifies low income and debt as a crucial driver of housing exclusion on the household level. Securing housing is inherently costly: tenants often have to pay a deposit and a fee to a real estate agent (Divíšek et al. 2025:31). In some municipalities, additional financial barriers exist, such as requiring tenants to settle outstanding debts from previous occupants. Debt can be an obstacle both in the private rental market and in accessing municipal housing, where authorities may consider debts owed to the municipality or its affiliated organisations. In addition, landlords and real estate agents may also hold systemic biases, often favouring tenants with stable employment, no outstanding debts, and no reliance on unemployment benefits—factors perceived as ensuring regular rent payments. Moreover, living in precarious conditions can sometimes impact communication styles and self-presentation, reinforcing stigma and creating further barriers to accessing stable housing. Recent data from the Czech Republic show that 28.4% of Roma have faced some form of discrimination in at least one monitored area over the past 12 months. Of these, 14.6% experienced discrimination weekly, and 35% reported facing it about once a month (Šimíková et al. 2024). The most common area of discrimination is housing. According to the Report on the State of the Roma Minority in 2021, Roma are often excluded from property viewings, as real estate agencies or property owners frequently fail to invite them (Office of the Government of the Czech Republic 2023). Findings from the Jan Evangelista Purkyně University indicate that Romani applicants receive 32% fewer positive responses to apartment inquiries (Štrobach 2023). According to the Fundamental Rights Agency, 55% of Roma have experienced housing discrimination in the past five years (FRA 2022). These findings align with research by Romodrom.

In addition to spatial and social exclusion, political exclusion is a significant dimension of exclusion as a manifestation of housing inequality across all case studies. The Italian case is one of the key examples of a lack of political representation, as it looks at refugees without any right to vote in their country of residence. Both the Czech as well as the Romanian case studies describe a significant lack of political representation of Roma communities on both the local and national levels of the country. And in the German case study, the district under study is characterised by a low level of voter turnout throughout the past election cycles and an increasing popularity of the right-wing party AfD, at the very least indicating feelings of disenfranchisement with mainstream politics and a perceived lack of representation in the neighbourhood.

Furthermore, a critical, but often overlooked driver in the case of the Romanian case study is legal invisibility due to informality. According to Romania's Civil Code Articles 86-102, a person's identity is tied to their name and their home address, the latter of which can only be verified and confirmed to the local authorities by the homeowner (Musca and Panica 2025:17). As a result, people living in informal settlements often face difficulties in obtaining or updating their IDs, and in some cases, they can only obtain temporary IDs. Thus, many residents lack official identification documents, making it difficult for them to access essential services, such as health care, education and social benefits. Moreover, without official residency papers, they are unable to register for social assistance programs or obtain stable employment.

Outcomes:

Housing exclusion interacts with and reinforces both economic and social exclusion. This is particularly evident in the Romanian case study, where Roma residents often lack official documentation hindering them to access stable and secure housing, which has impacts on access to basic utilities, such as electricity or waste disposal services, leaving people with substandard housing with significant impacts on people's physical and mental health, their education, and social networks (Musca and Panica 2025:36). Moreover, housing exclusion is also tied to increasing economic marginalisation as it can limit residents' access to better employment opportunities.

Table 7: Drivers and outcomes of housing exclusion as manifestations of housing inequality across geographic scale

	Household	Building	Neighbour-hood	Regiona	National
Manifestation:					
Housing exclusion	x		x		
Drivers:					
Geographic barriers (spatial segregation)			x		
Lack of public transportation				x	
Low-income	x				
Migration biography	x				
Ethnic minority / systemic discrimination			x		x
Housing policies (socially excluded localities)			x		x
Informality / legal invisibility					x
Lack of political representation				x	x
Outcomes:					
No or limited access to social and public services	x				
Substandard housing	x				
Low income	x				

5.5. DRIVERS AND OUTCOMES OF SUBSTANDARD HOUSING

Substandard housing quality was identified as a visible manifestation of housing inequality across all four case studies, but is most prevalent in the Romanian case, which focused on informal settlements. Many residents in the neighbourhood under study live in self-constructed homes, lacking proper foundations, insulation, and adequate roofing. Houses are frequently overcrowded, with multiple generations living together in a small space. Moreover, many homes in the region under study lack access to essential utilities, with, for example, limited or no access to running water, gas, sewers or proper sanitation and reliable electricity (Musca and Panica 2025:34f). In some cases, families rely on unsafe connections to power sources, leading to fire hazards and frequent outages.

Drivers:

Drivers of the substandard housing conditions in the country can be traced back to historic, **systemic discrimination**, the **privatisation of housing** post-1989 that forced vulnerable communities, such as many Roma, to settle informally, and the **political neglect** of such informal settlements resulted in insufficient development of infrastructure, such as roads, electricity networks and waste disposal services and the challenge of **informality** (Musca and Panica 2025:34). As described above, informal settlements are now officially recognised by law, providing some political incentives for public authorities to address these challenges, as the status quo makes it almost impossible for individuals residing in informal settlements to have a deed of ownership for their home, which makes the housing situation insecure.

The Czech, German and Italian case studies all highlight how energy efficiency functions as a driver of housing inequality (see section 5.2 above). For example, based on experience from the HouseInc project partner Romodrom in CZ, the highest arrears for energy are often seen in water consumption, resulting either from leaking faucets or toilets or due to high levels of water consumption of low-income families with more **children**, especially in apartments with bathtubs (Divíšek et al. 2025:32). Findings from the German case study indicate that manifestations of energy efficiency and substandard housing overlap significantly, particularly in housing for **low-income families** with **migration biographies** living in multi-storey apartment buildings with a mix of ownership types (Stadler et al. 2025).

Outcomes:

Substandard housing has wide-ranging and often long-lasting impacts on the physical, psychological, and socio-economic well-being of residents. These effects are especially pronounced for vulnerable populations, including children and the elderly. Poor housing conditions directly contribute to negative health outcomes. Inadequate insulation and heating systems can lead to persistently cold indoor environments, and dampness and mould can further pose health risks. Data from the Romanian case study highlights how inadequate housing conditions negatively affect children's ability to study. Overcrowded homes without proper heating, furniture, or electricity make it nearly impossible for children to prepare for school, reinforcing cycles of educational disadvantage (Musca and Panica 2025:11). Living in unsafe, insecure, or unhealthy housing conditions also contributes significantly to psychological stress and residents may suffer from chronic anxiety, depression, or a sense of powerlessness due to ongoing uncertainty around eviction, unaffordable maintenance, or unlivable conditions. Substandard homes often come with hidden and ongoing financial costs. Poor insulation and outdated heating systems result in disproportionately high energy bills, placing a heavy burden on low-income households. Residents may be forced to choose between necessities, such as food, medication, and heating, creating a cycle of deprivation.

Table 8: Drivers and outcomes of substandard housing as a manifestation of housing inequality across geographic scales

	Household	Building	Neighbour-hood	Regional	National
Manifestation:					
Substandard housing		x			
Drivers:					

Ethnic and racialised discrimination			x		x
Informality driven by policy					x
Low income	x				
Migration biography/refugee history	x				
Energy inefficiency		x			
Outcomes:					
Children's education	x				
Intergenerational poverty	x				
Physical and mental health	x				

5.6. DRIVERS AND OUTCOMES OF RESIDENTIAL DISSATISFACTION

Residential dissatisfaction is a common theme across all four case studies in HouseInc. For example, residents in the German case study described the neighbourhood as a place where people "dwell" rather than live with pride or place-based emotional attachment. A lack of inviting public spaces, visible neglect (e.g., litter and rundown areas), and limited amenities, especially for young families, such as kindergartens, contribute to this feeling. Some residents noted efforts by individuals to beautify areas, but overall, maintenance is poor.

Drivers:

This neglect is seen as both a cause and result of declining identification with the area, with residents pointing to the city's lack of engagement. Some even feel embarrassed to say they live in the district, describing it as close to becoming a "social flashpoint" (Stadler et al. 2025:35). Neighbourhood perceptions of safety and beauty thus play an essential role in understanding residential (dis)satisfaction. Findings in the Czech case study highlight the role neighbourhood cohesion can play for residential satisfaction and long-term residence. Particularly in environments where tensions or prejudice exist, neighbours may isolate Roma families, file complaints for minor issues, or apply pressure for eviction through landlords or housing associations (Divíšek et al. 2025:18ff). This leads to housing insecurity, which affects residential satisfaction. Housing insecurity in the Czech Republic is exacerbated by the fact that no comprehensive state policy directly regulating the rental market. Although the anticipated Housing Support Act in the country represents progress, it does not provide a holistic solution to the issue and overlooks the prevention of housing loss or legislative regulation of the rental housing market, which is a critical gap in addressing long-term housing insecurity (Divíšek et al. 2025:18, 31).

Both the Romanian and the Italian cases also highlight the role of housing insecurity with different focal points. The Italian case study illustrates how temporality in housing situations deeply affects both neighbourhood integration (and inclusion or exclusion as discussed above) as well as residential satisfaction (Miraglia et al. 2025:28). In the Italian case, which deep-dives into the housing situation of Ukrainian refugees, the integration process is frequently slowed down due to two reasons, namely their economic security (which differs to the one of other refugees in that many of them reiceve financial support from family remaining in the Ukraine) and the absence of long-term migration plans.

The Romanian case study particularly highlights the role of informality in driving housing insecurity, affecting residential satisfaction. The residents of the community in this case have built houses on land that is not technically owned by them, making them vulnerable to eviction and often leading to legal disputes and uncertainty over the residents' or even the community's future. Moreover, the Roma

residents of Dârvari face significant economic and social challenges. Many work informally or on minimum wage, and struggle to make ends meet, live in poverty and uncertainty, with limited access to basic services (electricity, education, healthcare, etc.), contributing to residential dissatisfaction (Musca and Panica 2025:11).

Outcomes:

In the long term, residential dissatisfaction can result in a decline in mental and physical health and general well-being, as well as strained social relationships affecting societal cohesion and stability.

Table 9: Drivers and outcomes of residential stability as a manifestation of housing inequality across geographic scales

	Household	Building	Neighbour-hood	Regional	National
Manifestation:					
Residential dissatisfaction	x				
Drivers:					
Lack of neighbourhood perceived beauty and safety			x		
Lack of social cohesion			x		
Housing insecurity/temporality	x				
Lack of policy			x	x	x
Informality					x
Outcomes:					
Health & well-being	x				
Social stability			x	x	x

6. INTERLINKAGES OF HOUSING INEQUALITY

6.1. INTERLINKAGES ACROSS GEOGRAPHIC SCALES

As described in chapter 5, drivers, manifestations and outcomes of housing inequality within the observed data of the HouseInc case studies arise at different geographic scales. The following is a summary of identified drivers and outcomes of housing inequality in Task 5.1 of the HouseInc project.

Table 10: Summary of drivers of housing inequalities across geographic scales

Household level	Building level	Neighbourhood level	Regional level	National level

Low income/debt Lack of energy literacy Age (children, elderly) Tenure type (ownership status) Conservative or non-environmental ideology Emotional attachment to home/ neighbourhood Migration biography Energy consumption behaviour	Energy-inefficient buildings Building type Age of appliances	High rental and housing costs Job market: lack of employment opportunities Spatial segregation / geographic barriers Perceived neighbourhood safety and aesthetics Lack of social cohesion Informality / legal invisibility	Lack of public transportation Social housing policy requirements and fees Public trust	High investment costs for energy efficiency upgrades Rising energy prices Ethnic and racialised discrimination Gender norms Stringent energy efficiency regulations (e.g. GEG, gas phase-out) Discriminatory housing policies in socially excluded areas Lack of political representation Lack of inclusive policy frameworks

Table 11: Summary of outcomes of housing inequalities across geographic scales

Household level	Building level	Neighbourhood level	Regional level	National level

Loss of housing Loss of familiar neighbourhood / social ties Diminished quality of life Physical and mental health issues Substandard housing conditions Health-related burdens Energy poverty Residential dissatisfaction Cycles of intergenerational poverty Low income / limited economic opportunity Children's reduced access to education	-- *n/a*---------	Lack of social cohesion Limited access to public/social services	Social instability	Social instability

The categorisation of the drivers and outcomes of housing inequality across five geographic scales is inherently context-dependent and subjective to a certain extent as it is based on single-case observations with a limited amount of qualitative data. The classification varies depending on the specific manifestation of housing inequality being examined. In certain cases, a factor identified as a driver at one scale may thus also occur at a different scale or even occur as an outcome in a different context. For instance, low household income, recognised in the study as a common driver of all manifestations, can simultaneously emerge as an outcome of housing exclusion, demonstrating the cyclical and reinforcing nature of these dynamics. If left unaddressed, housing inequality can intensify its root causes, creating a self-perpetuating cycle of disadvantage.

Despite these complexities, mapping the manifestations, drivers and outcomes of housing inequality across different geographic scales can provide valuable insights into where additional analytical and policy attention should be focused. This can provide a framework for identifying leverage points to better understand and address the multifaceted nature of housing inequality.

A notable observation is the distribution pattern of drivers and outcomes across scales. Drivers are relatively evenly spread across the household, neighbourhood, and national levels, indicating that housing inequality is shaped by an interplay of factors operating at multiple layers of governance and society. In contrast, the outcomes are largely concentrated at the household level (with no empirically observed outcomes at the building level). This suggests that while the causes of housing inequality are systemic and multi-scalar, its consequences are most directly and acutely experienced by individual households, particularly those already in vulnerable positions.

Over time, however, the accumulation of these household-level impacts can scale up, influencing broader societal dynamics. Widespread housing inequality may erode social cohesion, undermine neighbourhood stability, and, at a larger scale, affect urban, regional, and even national stability. However, these implications go beyond the scope and empirical evidence of the HouseInc case study.

6.2. VARIATIONS OF DRIVERS, MANIFESTATIONS AND OUTCOMES ACROSS CASE STUDIES

This can be explored further by taking a closer look at the variations observed in drivers, manifestations and outcomes across the four case studies. Thus, while the previous section identified interlinkages across geographic scales, this section briefly explores variations across case studies. This allows us to see how identified drivers, manifestations and outcomes can play out differently in different places. It also takes historical developments and institutional path dependencies, and thus place-embeddedness, further into account (Brenner and Theodore 2002). Exploring some of these variations will contribute to the identification of drivers that can explain more generalisable trends of housing inequality, thus helping to develop an extended analytical framework of interlinkages of housing inequality.

The German case study

The district of Vogelstang, located in Mannheim, southwest Germany, serves as one of the case studies in the HouseInc project, and examines perceptions around energy poverty and energy policies as a dimension of housing inequality. The research focused on two distinct residential groups: older residents (primarily without migration biographies, often living in single-family homes) and younger residents with migration biographies (many of whom are first, second, or third-generation migrants from Eastern Europe, residing in multi-family and high-rise buildings). Given that most buildings in the district were constructed in the 1960s and 1970s, they face significant energy efficiency challenges in the existing building structures, exacerbating the risks of energy poverty.

One key finding of the case study is that energy poverty is perceived differently across stakeholders and residents. While city administrators do not consider it a major challenge in Vogelstang, residents and non-official stakeholders report that they perceive many households to be struggling with high energy costs, low(er) room heating temperatures, and energy inefficient building conditions. Identified drivers for these differences in perceptions. The difference might be explained by different understandings of what energy poverty looks like or how to measure it (Stadler et al. 2025). Taking a closer look at potential drivers and manifstations of the perceived energy poverty risk of residents and non-official stakeholders, several factors stand out in the German case. One the one hand, socio-demographic factors, such as older age, migration biography and lower income are identified as key drivers of being at risk of energy poverty as they may impact (1) the knowledge about how to mitigate high energy and living costs, (2) the motivation to do so; (3) the social capital to access available public ressources, such as funding programmes, and (4)

the financial means to e.g. invest into energy efficiency measures or move to a more energy efficient building (also due to high housing and rental costs in the area). A complex mix of ownerhip structure of the residential building was identified as a second set of key drivers influencing manifestions of housing inequality as energy poverty. The ownership structure in Vogelstang consists of a mix of private owner-occupied housing, small (private) landlords, as well as rental property owned by larger housing companies and associations (including social housing). This diversity of ownership type, often within the same building complex, as perceived as making a coherent energy-efficiency and renovation strategy difficult as different needs, financial resources, and capabilities to renovate (or not) collide. Finally, spatial, political and economic exclusion mechanisms play a key role in driving perceived risks of energy poverty in the case study. The district is geographically separated from the main city with several large roads or natural landscapes serving as perceived spatial barriers despite a well-developed public transport system connecting the district to the inner-city. Employment opportunities in the district are rare with most of the residents communiting by car to work and back home every day. Finally, a feeling of political exclusion (i.e. feeling left behind) drive narratives of racialised and economic "othering" in the district and appear to play a role in perceptions around neighbourhood attractiveness, energy poverty and neighbourhood segregation.

All of these drivers are influenced and interact with the existing policy landscape. On the national level, the Building Energy Act (GEG) increases the requirements for energy efficiency measures, which is perceived as a burden on landlords and tenants with direct and indirect effects on rental prices and refurbishment costs. On the local level, the city owned energy provider MVV has announced to withdrawal from the gas network contributing to high level of perceived uncertainty around affordable heating within the next few years. At the same time, the city offers a range of funding programmes and information campaigns trying to alleviate potential hardship due to energy and climate transition measures. The research shows, however, that these programmes are often not well known among residents. According to the authors of the German case study, this information gap can be attributed to (1) diverse communication needs due to the neighbourhood's diverse population, including a large older demographic and a significant number of residents with migration biography, uses different channels for information, (2) low public trust in the city's institutions, and (3) perceived social segregation with divisions between long-term and newer residents that hinder information flow and limit knowledge exchange (Stadler et al. 2025).

The Czech case study

The second HouseInc case study explores the persistent housing discrimination challenges faced by the Roma ethnic minority in the Czech Republic. As with the German case study, the findings indicate that socio-demographic factors affecting households, such as low incomes, outstanding debts and limited educational attainment, are key drivers of energy poverty. The findings also emphasise how these factors impact residents' employment opportunities, restricting access to higher-paying or skilled roles. Functional illiteracy exacerbates housing inequality further by limiting individuals' ability to navigate the rental market, understand legal terms and fulfil contractual obligations. At the same time, the case study highlights structural factors resulting in socio-economic barriers to entering the housing market, even for those with the necessary financial resources. Discrimination in both the private and municipal housing markets remains a persistent issue, rendering housing inaccessible to Roma applicants regardless of their financial standing. Legislative fragmentation also plays a role: the absence of a unified social housing law leads to inconsistencies as housing regulations are dispersed across different legal frameworks such as

municipal governance laws, the Civil Code and various ordinances. While municipalities are legally prohibited from direct discrimination, they have discretionary power in determining allocation criteria for public housing, and exclusionary practices often persist. Anti-discrimination measures usually address individual cases rather than systemic injustices, leaving broader structural issues unresolved. (Divíšek et al. 2025).

These discriminatory practices are embedded within an enabling housing regime in the Czech Republic, which has a historical legacy identified as one of the key drivers of housing inequality in this case study. During the communist era, housing policy in Czechoslovakia was characterised by state control and central planning. The state was the main provider of apartments, which were allocated to citizens based on waiting lists. Rents were heavily regulated and remained low to ensure affordability, but this led to insufficient investment in maintenance and new construction. Large-scale prefabricated housing estates were constructed in an attempt to address the housing shortage. Homeownership was limited as most urban housing was state-owned or managed by cooperatives under state oversight.

Following the Velvet Revolution of 1989, the housing sector underwent a significant transformation. State-owned apartments were gradually privatised, and tenants were given the opportunity to purchase their flats at favourable prices. Rent deregulation was introduced, leading to rising housing costs, particularly for low-income households. State-led housing construction ceased largely, shifting responsibility to the private market. While these changes improved housing quality, they also resulted in growing affordability issues, as market-driven housing development did not adequately address the needs of lower-income groups. In this context, low income and unemployment result in limited access to mortgages, making home ownership more challenging. Consequently, rental housing is more prevalent among the Roma population than homeownership. According to the 2022 Report on the State of the Roma Minority, 14.7% of the Roma population in the Czech Republic live in their own homes, compared to 75.1% of the general population. Meanwhile, 67.8% reside in rental housing (compared to 19.1% of the general population), 5.3% live in hostels and 2.4% occupy spaces not approved for residential use (Office of the Government of the Czech Republic 2023). At a local level, municipalities can manage their housing stock, purchase apartments from private owners or provide social housing for disadvantaged groups. However, the manner in which they do so is entirely at the discretion of the respective municipality.

Therefore, addressing energy poverty as a manifestation of housing inequality in the Czech Republic requires a coordinated approach at national and local levels, the authors of the Cyech HouseInc case study conclude. They find the current legal landscape is fragmented, with overlapping regulations and ordinances creating inconsistencies. A unified legislative framework could provide the necessary structure for effective housing policies and ensure a coherent and stable foundation for long-term solutions. Furthermore, national oversight mechanisms must prevent discriminatory housing policies, including covert forms of exclusion that hinder equal access to housing. At a local level, municipalities seem to play a crucial role in offering viable alternatives to substandard housing arrangements, such as hostels. Local authorities could thus expand social housing initiatives and reduce barriers to accessing municipal housing, given their detailed understanding of local conditions. Without municipal engagement, the authors suggest, national policies may struggle to achieve their intended impact (Divíšek et al. 2025).

The Italian case study

The HouseInc Italian case study examines community-based reception systems for Ukrainian refugees in the Piedmont region of north-west Italy, in response to the ongoing conflict triggered by Russia's invasion

of Ukraine. Following the invasion in February 2022, Italy's National Service, coordinated by the Civil Protection Department, began providing humanitarian assistance and reception services to Ukrainian refugees under the EU Civil Protection Mechanism. A new community-based reception model involving 12 third-sector organisations was implemented across Italy. The Liberitutti Cooperative led a group of social actors, communities and families in Piedmont to host up to 603 Ukrainian refugees in small villages. This case study is based on this experience. The community-based reception system consists of facilities provided by the Liberitutti Cooperative and dispersed throughout the region to avoid concentration in large cities. These facilities are designed to provide widespread assistance and reception services through co-housing arrangements with families, or through accommodation offered by municipalities and private entities.

The findings of the case study highlight several key drivers of housing exclusion. Firstly, the temporality of refugees' legal status was identified as a key factor in perceptions of housing insecurity and a lack of social and economic integration. Secondly, it highlights the socio-demographic characteristics of refugee households. Unlike typical migration flows, which predominantly involve young men, this specific migration largely comprises women and single-parent families. This is a direct result of the Ukrainian government's ban on men aged 18 to 60 leaving the country, prompting many women to flee alone or with their children. Another notable aspect is the presence of older people, who are rarely seen in traditional migration flows. Thirdly, the geographical distribution of accommodation is a crucial factor in determining the housing experiences of refugees and their integration into society. The location of housing influences access to employment, education and social networks, all of which are critical elements. In rural areas, a lack of access to transport can hinder social and economic integration (Miraglia et al. 2025). Finally, the case study highlights the role of the design of policy, in this case the refugee reception system, can significantly shape the social and economic trajectories of marginalised groups, such as refugees.

The Romanian case study

This Romanian case study explores drivers, manifestations and outcomes of housing inequality within an informal Roma settlement in Dârvari, Romania. The residents have built houses on land that does not legally belong to them, which has led to legal disputes and uncertainty over the community's future. The Roma residents of Dârvari face significant economic and social challenges. Many work informally or for minimum wage and struggle to make ends meet. The community also experiences discrimination from both broader Romanian society and local authorities. This discrimination takes many forms, including limited access to healthcare and education, and social exclusion. Many residents live in poverty and uncertainty, with limited access to basic services and opportunities (Musca and Panica 2025).

The case study identified systemic policy factors, such as the shift in the housing regime post-1989, as key drivers of housing inequality among the Roma population. As in other Central and Eastern European countries, informal settlements have emerged in Romania amid the abrupt transition from planned to market economies. This shift created legislative voids and inadequacies in the tools and roles involved in urban planning (Ghid de intervenție în așezările informale 2020). More specifically, informal settlements are the result of two factors: rapid urbanisation between 1950 and 1975, which caused home displacement, and rapid changes in economic and social structures during the post-communist period. The most vulnerable populations were forced to settle in inadequate conditions due to increased levels of poverty, a generally lower quality of life, and forced evictions during this time.

County-level data indicates significant variation in the number and size of informal settlements across the country. In Romania, an informal settlement is defined as a grouping of at least three dwellings, typically developed spontaneously on the outskirts of urban and rural areas. These settlements often involve the illegal or legal occupation of land and lack access to fundamental technical and utility infrastructure, adequate living conditions and other facilities, which endangers the health and safety of the resident population. According to Article 24, Paragraph 3 of Law No. 292/2011 on Social Assistance, an improper dwelling is defined as improvised housing or a housing structure that does not meet the minimum requirements specified in Annex No. 1, Section A of Law No. 114/1996, as amended (Ministerul Dezvoltării, Lucrărilor publice și administrației 2022).

Moreover, the case study identifies gender dynamics as a key socio-demographic factor. In many families, men hold positions of authority within the family and community, and the family structure is patriarchal. Women are expected to adhere to traditional gender roles, such as caring for the home and children, and often have limited access to education and employment opportunities. Families often comprise multiple generations living under the same roof, and extended family networks play a significant role in community life. The community also faces significant challenges related to poverty and unemployment. Children are vulnerable too, with limited access to education and social services (Musca and Panica 2025).

Finally, systemic ethnic discrimination, tied to policy trajectories of informality, is one of the key factors identified in this case study, driving social, political and economic exclusion dynamics. The Roma community faces systemic discrimination from local authorities and Romanian society at large, which limits their access to essential services such as healthcare, education and housing. Men in the community primarily work in the informal labour sector, such as construction or agriculture, where they are vulnerable to exploitation. The absence of formal contracts means that many are underpaid, work in unsafe conditions or fall victim to employment scams abroad. According to the authors of the case study, this exclusion perpetuates the cycle of poverty and exacerbates housing inequality.

Variations across case studies: Outlook for further project activities

Preliminary exploration of the variations in drivers and manifestations of housing inequality across case studies highlights the importance of socio-demographic factors at household level. Family situation, low income, age, migration history and ethnic minority status are consistent drivers of disadvantage in accessing housing. However, the way in which these factors manifest, and the long-term outcomes experienced by households, differ across contexts. Case study research suggests that these variations can be traced back to differences in political priorities regarding housing equality, the structure of the policy landscape and historically rooted path dependencies. In particular, processes of racialised, economic and political exclusion have shaped institutional arrangements and policy developments in ways that continue to perpetuate present-day inequalities.

This indicates that the drivers and manifestations of housing inequality must be analysed within the broader political economy that shapes policy, social and market dynamics, rather than in isolation. Local housing contexts are embedded in multi-scalar processes of neoliberal regime dynamics that intertwine structural conditions with historically path-dependent institutions and political choices (Brenner and Theodore 2002). Household-level disadvantages need to be analysed in the context of mediating institutional frameworks, economic regimes and political histories specific to each setting.

While a more detailed comparative exploration of these dynamics lies beyond the scope of the current deliverable, the insights gathered here lay the groundwork for further investigation. The following section therefore introduces an extended analytical framework designed to capture the interplay between socio-demographic drivers, policy landscapes, and political-economic contexts. This framework will be further developed in subsequent activities within the HouseInc project.

6.3. INTERLINKAGES OF HOUSING INEQUALITY: AN EXTENDED ANALYTICAL FRAMEWORK

As the brief and preliminary exploration of variations across case studies illustrates, classifying drivers and outcomes of housing inequality based solely on geographic scale may not be sufficient to capture their complexity and interconnectedness. While this approach provides a spatial framework and can help understand which level of governance is best suited to respond, it risks failing to distinguish between different types of drivers that may exist at the same geographic level but differ fundamentally in nature depending on the political, social and economic context and historical legacies they are embedded in or arising from.

For example, characteristics such as age, gender or migration history are not factors that can—or should—be changed through policy or behavioural interventions at the household level. These so-called "structural vulnerability factors" indicate an increased risk of housing inequality, but they are immutable and ethically unacceptable to modify. Rather, protective measures are needed if they are used as baselines for discriminatory practices at a systemic level. In contrast, other household-level drivers and outcomes, such as low income, ownership status, and levels of energy literacy and consumption, are "modifiable risk factors". These can be addressed through targeted policy measures, infrastructure support or behavioural interventions.

It is thus important to recognise that in the case of household-level factors, some drivers and outcomes are amenable to policy action, such as improving energy literacy or increasing housing subsidies, and others require protective or compensatory measures, such as enforcing anti-discrimination laws to counteract gender or ethnic bias. Therefore, policy responses must be tailored not only to where drivers occur, but also to the type of driver. This approach responds to research in housing studies that calls for a multidimensional conceptualisation of vulnerability that takes systemic failures, individual at-risk approaches and positive and negative capabilities (both at the household and systemic level) into account (see e.g.Zhu et al. 2021).

Moreover, we build the insights of section 6.1 and 6.2 as well as on Nasrabadi et al. (2024) and suggest that the drivers and outcomes at the building level, neighbourhood level, regional level and national level can be categorised into three different types of drivers:

- Norms and practices (e.g. systemic racial or gender-based discrimination)
- Infrastructures (e.g. electricity networks, road and transportation systems, building types)
- Policies (in sectors such as housing, but also related sectors, such as energy, employment or health)

These types of drivers and outcomes interact with one another and across geographic scales. For instance, household ownership status is closely linked to income. Similarly, rising housing and energy costs are not isolated market phenomena, but rather the outcome of historical policy choices such as the liberalisation

and privatisation of housing. And a lack of employment opportunities in specific regions or geographic barriers to access (public) transportation or energy infrastructures are shaped by long-term economic planning decisions at local, regional and national levels. Finally, the entire analytical framework of geographic scale and type of drivers is embedded into the political economy of supernational market dynamics, shaped by political institutions, and global capital flows, influencing national and regional housing systems (Nelson, Warnier and Verma 2024).

In light of these interdependencies and based on the empirically driven insights from HouseInc's four case studies, this deliverable proposes extending the original geographic-scale framework of D2.2 to include an additional dimension, namely types of drivers (and – in theory - also outcomes) that cut across geographic scales:

1. Geographic scale: household, building, neighbourhood, regional, and national
2. Type of driver: practices and norms, material infrastructures, and policies

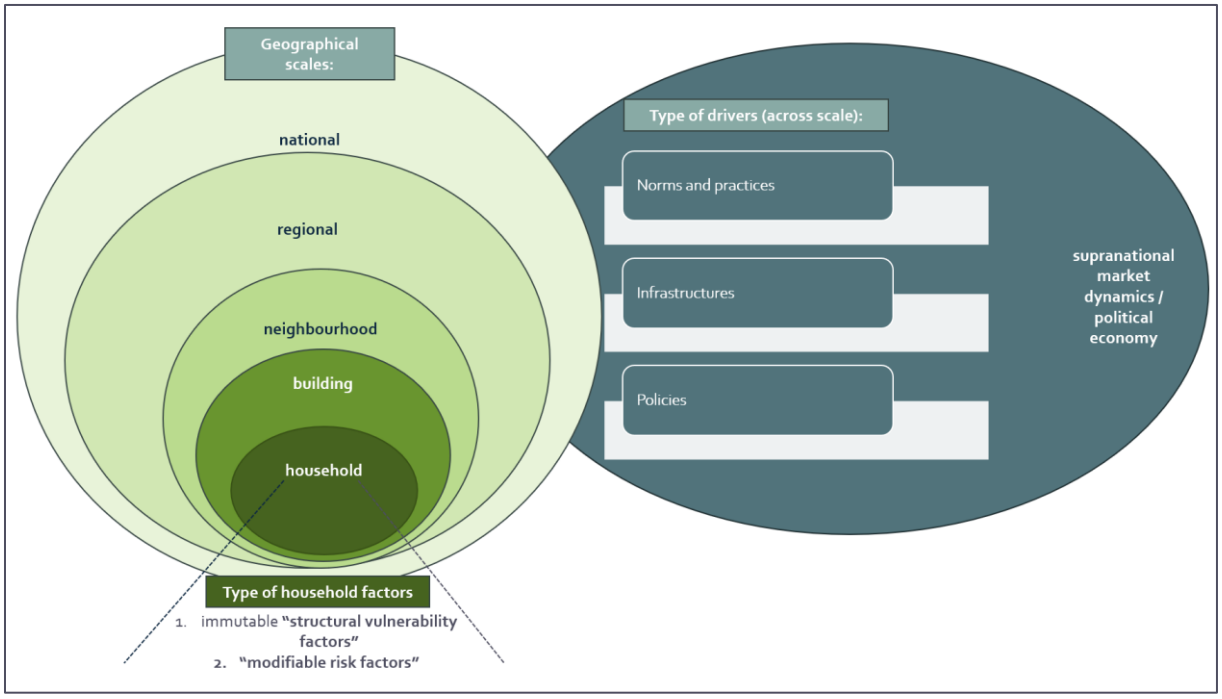

Figure 3: An extended analytical framework of housing inequality interlinkages

6.4. SELECTED PATHWAYS OF HOUSING INEQUALITIES

Drawing on the analytical framework developed here, we can identify pathways and interlinkages of housing inequality to draw initial conclusions on relevant leverage points for policy interventions. In the following, we use the manifestations of (a) housing inequality as unaffordable housing in relation to energy costs, (b) residential immobility, and (c) housing exclusion as exemplifying pathways emerging from the empirical evidence from the four HouseInc case studies. We subsequently outline first insights for the development of policy recommendations to address drivers and alleviate the effects of housing inequality.

6.4.1. PATHWAY A: INTERLINKED DRIVERS OF UNAFFORDABLE HOUSING DUE TO ENERGY COSTS

Geopolitical events and market dynamics drive up energy prices and co-constitute dynamics such as the financialisation of housing, as well as high investment costs for energy efficiency updates in liberalised housing and energy markets. Unmitigated by policy and aided by national liberalisation and privatisation policies in the housing and energy markets throughout the 1990s and early 2000s, this contributes to high regional housing costs, particularly in the rental sector and in energy-inefficient buildings. Combined with rising energy prices, this results in high energy costs at the household level. At the same time, ethnic and racial discrimination, as well as gender norms, contribute to a lack of infrastructure at various levels, particularly a lack of employment opportunities, resulting in economic exclusion and exacerbating social exclusion of low-income households, such as those with elderly people, many children and single parents. The combination of low income and high energy costs results in unaffordable housing in terms of energy consumption, with long-term consequences such as diminished quality of life, loss of housing, or substandard housing (see Figure 4).

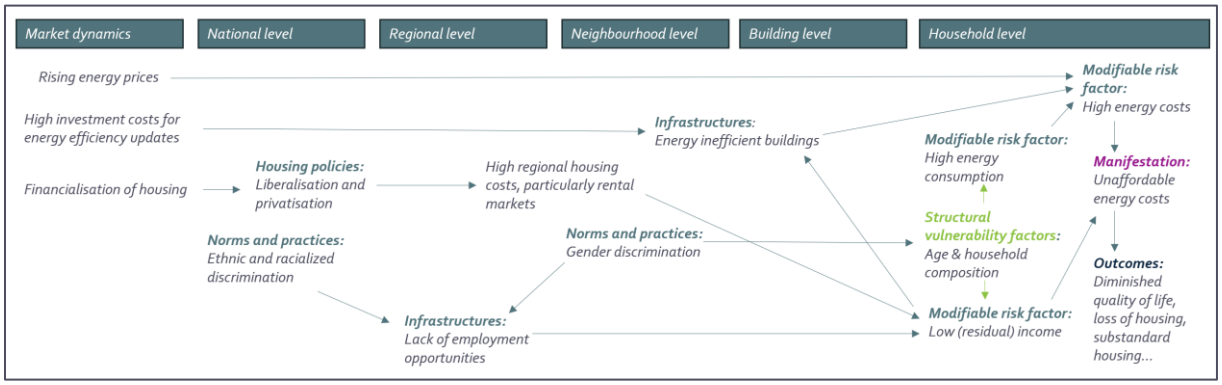

Figure 4: Pathways of housing inequality: The case of unaffordable housing due to energy costs

6.4.2. PATHWAY B: INTERLINKED DRIVERS OF RESIDENTIAL IMMOBILITY

Figure 5 illustrates another empirically informed pathway of housing inequality, which manifests in residential immobility, particularly at neighbourhood and building levels. This pathway illustrates how interconnected drivers at various geographical levels restrict residents' ability to move, thereby reinforcing patterns of socio-spatial inequality. At the national level, the financialisation of housing, driven by market dynamics, and housing policies such as the privatisation of housing stock and the lack of social housing availability, have contributed to rising housing costs in particularly in the Czech and Romanian case study, but these effects can also be observed in the German case study. These costs can further be exacerbated by rental access requirements, including but not limited to application fees, mandatory identification and proof of debt-free status, which all raise entry barriers and costs for tenants.

Consequently, high housing costs restrict access to adequate housing, particularly for vulnerable and low-income communities, causing them to disproportionately live in substandard housing conditions. Economic and racialised exclusion norms and practices embedded at the national level further exacerbate these barriers. These exclusionary norms also manifest locally, driving discriminatory rental practices at neighbourhood and building levels and thereby reinforcing residential immobility. Tenants who face discrimination based on ethnicity, migration background or perceived social status often find themselves unable to secure housing elsewhere, even when affordability is not the only issue. Structural vulnerability factors such as age, household composition, ethnic minority status and migration history contribute to residential immobility indirectly by reinforcing low household income and increasing exposure to

discriminatory practices and directly by creating specific needs. The latter includes the need for barrier-free, inclusive housing for the elderly, and proximity to schools and healthcare infrastructure, especially important for families.

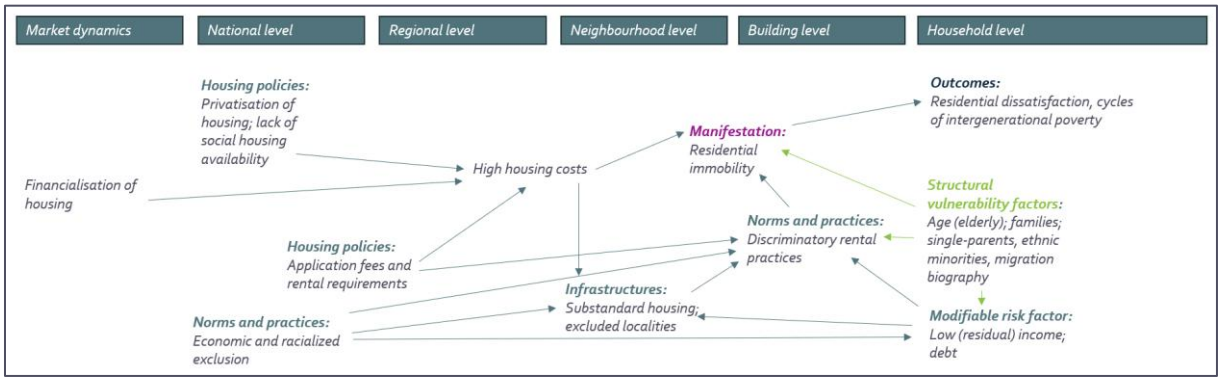

Figure 5: Pathways of housing inequality: The case of residential immobility

6.4.3. PATHWAY C: INTERLINKED DRIVERS OF HOUSING EXCLUSION

Using the analytical framework developed in Section 6.2 to identify the pathway of housing exclusion highlights that manifestations can occur at different scales. In this case, these are the neighbourhood and household levels. At the core of this process are the norms and practices of ethnic and racial discrimination, which have become institutionalised and normalised over time and across contexts through housing market mechanisms and public policy. These exclusionary norms, which are often implicit in discriminatory rental practices, interact with decades of housing privatisation policies, can result in challenges of informality (as in the Romanian case study) and legal invisibility among vulnerable communities in some of the other contexts as well. These dynamics are particularly evident in socially excluded areas and informal settlements, as illustrated by the Romanian and Czech case studies. At neighbourhood and regional levels, infrastructural barriers, including geographic isolation and inadequate public transport (as highlighted in the Italian and German case studies), further restrict access to the quality housing Such infrastructural exclusion compounds the isolation of already marginalised groups and limits their ability to access employment, education and services, thereby deepening their exclusion.

Simultaneously, housing exclusion also manifests at the building and household levels. On the one hand, low household income can directly restrict access to quality housing and specific neighbourhoods, particularly in commodified markets with limited affordable options. Indirect exclusion also occurs through discriminatory practices rooted in racialised norms and structural vulnerability factors such as age, family status (e.g. having children) or ethnic minority background. These factors make it more difficult to secure housing, regardless of formal eligibility or income.

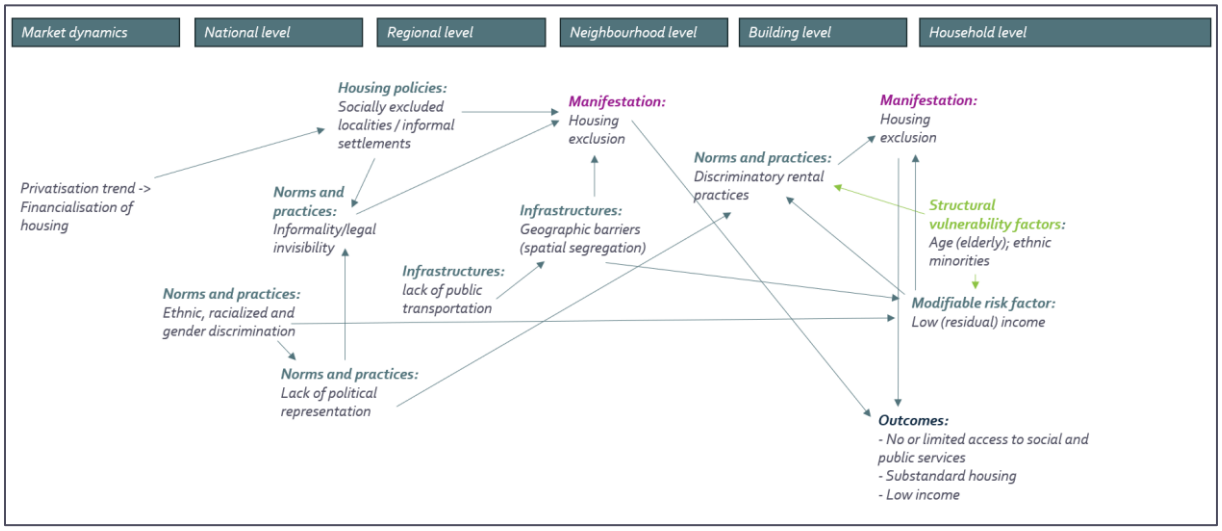

Figure 6: Pathways of housing inequality: The case of housing exclusion

The outcomes of housing exclusion, such as housing precarity, overcrowding, informal tenancy or a lack of access to basic services, are mostly experienced at the household level. Furthermore, housing exclusion is closely linked to other forms of housing inequality outlined in this deliverable, such as residential immobility and unaffordable energy costs. This reflects a wider ecosystem of interrelated vulnerabilities and systemic failures.

6.5. PATHWAYS OF HOUSING INEQUALITY: IMPLICATIONS FOR POLICY INTERVENTIONS

The figures above thus identify several empirically derived pathways of housing inequality that result in various manifestations and outcomes. They illustrate the relationships between factors at different geographical scales. The pathways demonstrate how market dynamics, national, regional, neighbourhood and building levels contribute to housing inequality at the household level (and sometimes vice versa). This can help policymakers identify the most suitable level of governance for policy intervention. Moreover, the pathways identify the type of drivers, distinguishing (a) between norms and practices, (material) infrastructures and policies and (b) between modifiable and immutable drivers (the latter almost exclusively at the household level).

For instance, while high household energy costs are driven by rising energy prices, energy-inefficient buildings, and high consumption, each of these factors presents an opportunity for targeted policy responses. At the national level, these could take the form of subsidy programmes. At national, regional, and neighbourhood levels, funding could be made available for energy-efficiency renovations. At the household level, this could take the form of campaigns promoting behavioural changes in energy use. However, such efforts must account for structural vulnerability factors such as age and household composition, which cannot and should not be altered but instead require protective policy measures. Additionally, as outlined in the pathways above, structural factors such as norms and practices can occur at national, regional, and neighbourhood levels (as highlighted in the Romanian case study, where gender discrimination plays a significant role in understanding housing inequality in informal settlements). Although much more difficult to change, the impact of norms and practices as contributing causes should

not be underestimated. Finally, policy interventions can directly address infrastructural challenges such as a lack of employment opportunities due to geographic barriers or ethnic, racial and gender discrimination.

Similarly, the pathway of residential immobility illustrates that discriminatory rental practices and the prevalence of substandard housing, particularly in socially excluded areas, are key drivers of this manifestation of inequality. These practices often operate through informal mechanisms, such as selective tenant screening, implicit racial or ethnic bias, and exclusionary application requirements, that systematically restrict certain groups' ability to relocate, even when housing is technically available. National and regional housing policies play a dual role in this: they can either perpetuate or counteract these dynamics. In some contexts, weak enforcement of anti-discrimination laws or a lack of regulatory oversight can indirectly sanction discriminatory practices. Conversely, well-designed policies can provide leverage for intervention. For instance, offering landlords incentives to rent more inclusively, such as state-backed rental guarantees, subsidies, or insurance schemes, can reduce their perceived risk and improve access for marginalised groups.

Finally, the pathway of housing exclusion provides valuable insights into the development of policies at regional and neighbourhood levels, as well as their interlinkages with national policies, norms, and practices. It particularly highlights the impact of geographic, economic, and social barriers on patterns of spatial and housing exclusion. Regional and neighbourhood actors can address some of these challenges by developing public transport options, for example, thus reducing geographic barriers. However, the pathway also reveals how these exclusionary dynamics are often deeply embedded in historical political decisions and structural developments. These include long-term disinvestment in certain areas, legacies of segregation and the uneven provision of infrastructure and services. Short-term policy responses, such as income subsidies for low-income households or the enforcement of anti-discrimination regulations targeting landlords, can help mitigate the immediate manifestations of housing exclusion. However, long-term solutions require more structural and transformative interventions. These include addressing legal invisibility, expanding political representation for marginalised communities, and ensuring the non-discriminatory availability of social and affordable housing, particularly in regions experiencing acute housing stress.

In conclusion, the above pathways offer an empirically grounded framework for understanding the multi-scalar nature of housing inequality and its manifestations within and across the HouseInc case studies. By additionally distinguishing between types of drivers (norms and practices, material infrastructures and policies) and modifiable and immutable factors (the latter mostly at the household level), these pathways can guide the formulation of targeted, context-sensitive policy interventions. They emphasise the importance of aligning policy responses with the relevant level of governance, ranging from national subsidy schemes to neighbourhood-level infrastructural investments. Importantly, the pathways also emphasise that effective policy must engage with both visible manifestations, such as inadequate housing or energy inefficiency, and more intangible but deeply entrenched structural inequalities, such as policy path dependencies and discriminatory norms and practices.

7. CONCLUSION

This deliverable aimed to identify the drivers and outcomes of six manifestations of housing inequality to further develop an analytical framework for identifying policy interventions that mitigate these drivers and alleviate the effects of housing inequality, particularly for vulnerable communities. It draws on and synthesises the empirical findings of the four HouseInc case studies investigated in Task 5.1 with a specific focus on understanding *interlinkages* between drivers and outcomes of housing inequality. While explicitly avoiding a comparative approach to respect the context-specificity of each case, the deliverable's purpose was to derive insights from observed manifestations of housing inequality within the HouseInc project, namely: (1) unaffordable housing costs in relation to energy costs, (2) energy efficiency renovations, (3) a lack of residential mobility, (4) social exclusion, (5) substandard housing, and (6) dissatisfaction with the neighbourhood.

In the first step, these six manifestations were empirically described and situated within existing housing inequality literature using the insights from the four HouseInc case studies in the Czech Republic, Romania, Italy, and Germany. They were categorised along four dimensions of housing inclusivity: affordability, accessibility, availability, and acceptability (see chapter 4).

In the second step, drivers and outcomes of each manifestation were identified across various geographic scales—household, building, neighbourhood, regional, and national (see chapter 5). These results informed the development of an analytical framework that incorporates both geographic scales and types of drivers and outcomes, namely norms and practices, material infrastructures, and policies, which may cut across scales. The framework further distinguishes between immutable structural vulnerability factors and modifiable household-level risk factors. The newly developed analytical framework was applied to the empirical findings of the case study to illustrate pathways of housing inequality (see chapter 6).

The main argument of this deliverable suggests that housing inequality is diverse and observable through manifestations of such inequalities. These manifestations and their associated drivers operate across geographic scales and are deeply interlinked. Policymakers must understand both the multiscalar causes of housing inequality and the specific characteristics of these causes to design effective solutions. Pathways of housing inequality can serve as a valuable policy tool, guiding the formulation of targeted, context-sensitive interventions by emphasising alignment between the level of governance and the type of driver addressed.

The findings provide key input for subsequent tasks in WP5, which aim to further analyse the role of geographic scale in local-level policy interventions. Additionally, they offer significant input for WP6 in formulating innovative, scalable solutions to housing inequality across different contexts. Finally, this deliverable is a major input for WP7 and the development of high-quality policy recommendations. For this purpose, its empirical findings will be triangulated with results from WP3 and WP4.

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