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**The socio-economic impacts of urban regeneration programmes as a tool of housing in
post-socialist era: a comparison of Hungarian case studies**

Ph.D. Dissertation

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Supervisor: Dr. Szabolcs Fabula



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Dedication

To the **Black** child,

We are coming for everything they said we will never have: so chin up, Black child, it is time!

Declaration

The research described in this Ph.D. dissertation is the result of own research investigations, under the supervision of Dr Szabolcs Fabula. The research has not been submitted in any form for any other degree or diploma, to any other University. Where the work of others has been used, it has been duly acknowledged in the text and in the reference list.

Szeged, 21 March 2022

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(Ntombifuthi Nzimande, candidate)

As the supervisor of *Ntombifuthi Precious Nzimande* I declare that the doctoral thesis entitled “*The socio-economic impacts of urban regeneration programmes as a tool of housing in post-socialist era: a comparison of Hungarian case studies*” is based on the independent work of the candidate. She had a significant role in achieving the research results presented in the thesis. The content of the dissertation is scientifically sound; thus, I propose to accept the thesis.

Szeged, 21 March 2022

.....

(Dr Szabolcs Fabula, supervisor)

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1. Introduction

1.1 Study background

1.1.1 Global housing crisis

Since the 1900s, the world has experienced several housing crises. However, it is only in the past few decades that politicians and other influential stakeholders have taken the issue of the housing crisis cognizance of. Politicians have often referred to housing as a crisis, an emergency, and a call to action from a political spectrum. However, contrary to popular belief, the housing crisis is not a universal concept as leading housing stakeholders have created varied narratives. This is what Heslop and Ormerod (2020) refer to as the ‘dominant narratives’ of the housing crisis, whereby the crisis is a basis for specific interventions through the lens of the discursive analysis. Still, the systemic transformation is often being dismissed, and it is the experiences of the poorest that are not reflected in the interpretation of the concept of the housing crisis. In simpler terms, the concept of the housing crisis has been used to create opportunities for new policies, which are often regressive and specific interventions that are often not challenging the neoliberal housing model. Thus, it is vital to understand that despite the notion that the housing crisis may seem to be temporary and departing from the standard norm of housing affordability and adequately, the housing crisis is quite a norm to those facing housing inequality, as it has been evident throughout the history of humankind (see, Engels, 1887). The notions of housing crisis have been used to refer to affordability (increase in rent in the private and public housing sectors), supply or demand; however, it is vital to understand housing as both a home and a financial investment. In unpacking the concept of ‘housing crisis’, various socio-economic implications also emerge, such as the continuous increase of intra-and-intergenerational inequity whereby the previous generation receives higher salaries, which means they can purchase homes and generate further wealth to acquire additional wealth properties. This means that rent and housing prices for the current generation is often too high unless inheritance or family support are granted to some young people to kick-start their adulthood. As expected, those in the low-income brackets and are younger are often excluded from acquiring wealth, thus increasing the state's burden to provide basic housing needs to these people (Morton, 2013; Flynn, 2020; Lutz, 2020). Therefore, this inequity is often evidenced between the rich and poor and between the young and old.

Noteworthy, countries have different characteristics and geographical dimensions that date their national housing crisis, which is often an ongoing concern for governments (see also Galster and Lee, 2021). For Australia, the housing crisis dates back to the early 1940s, when World War II was soon to pass. The housing crisis was characterised by the lack of housing units, the dilapidated state of existing dwellings, the unaffordability of housing and the understanding of housing as a spatial issue (Dufty-Jones, 2017). In this, the 1940s housing crisis was categorised into (1) adverse social outcomes due to the lack of dwellings and (2) adverse spatial outcomes due to city-rural migration (Ibid, 9). Almost a century later, Australia is facing yet another housing affordability crisis, and unlike before, this crisis is caused by spatial demand of housing, increased availability of mortgage loans, and increased price of land, amongst other factors (Yates, 2008). This is despite the steady recent decline in housing prices and rental fees. As Kelly (2019: n/d) argues succinctly, “governments and policymakers already have the key levers in their hands that shape housing markets: taxation, land policy, direct investment, mission-focused banking, tenancy regulation and individual assistance – they just lack the political will”. Another example of a national housing crisis is that of South Africa, where the housing crisis can be traced during the apartheid era in the early 1940s when Blacks, Indians and Coloureds were racially segregated. This institutionalised segregation meant that Black people were forcibly removed from their land and placed into segregated neighbourhoods across the country. Although South Africa has progressed in the distribution of free housing, 27 years later, the housing crisis is still pervasive and ongoing, with a high surge of informal settlements and illegal land occupations (Levenson, 2017; Marutlulle, 2021).

During the mid-1990s, the housing bubble (both ownership and rental) of the United States was directly proportional to the stock bubble as the more wealth people had, the more money they spent, which induced the consumption boom. One of the ways in which people spent this money was on housing. This increase in demand meant the housing prices to be substantially increased, which was later integrated into expectations, i.e. people expected to pay high costs even though they would not have done so before (Baker, 2008). The collapse of the stock market in 2001 caused a deep recession which, ironically enough, positively affected the housing bubble where people chose to invest in property (Akyüz, 2011). To escalate the recovery from the 2001 recession, the Federal Reserve Board introduced a low-interest rate of 1.0 %, with the mortgage rates also reduced to 5.25 %, both rates having a 50-year low (Baker, 2008). These low-interest rates spiked the building construction of new housing and subsequent housing prices. The so-called housing bubble started to pop in 2007 when the supply far exceeded the demand and as Baker (2008) argues, homeowners, voluntary and involuntary, chose foreclosure, which sharply brought down the housing prices and increased the housing supply. Furthermore, Wisman (2013) argued that accounts of the financial crisis, which focus on interest rates and deregulation, seem to ‘scratch the surface’ as more profound issues of wage stagnation and heightened inequality in the United States have often been ignored. He posits that these two issues produced three dynamics that contributed to the dysfunction of the economy: consumption was constrained, consumption externalities were created, and the wealthier could influence politics and welfare policies (Akyüz, 2011). In this, it is important to note that the housing market is volatile and thus difficult to plan due to several, different and partially opposite effects.

As per the preceding paragraph, the failure of the housing system (i.e., reduced housing prices) triggered a global financial crisis (GFC) in the middle of 2007, which, in turn, had severe consequences on housing policies across the globe. It is from the 2007 credit crunch that this dissertation refers to as the latest housing crisis. The GFC and widespread housing recession exacerbated already existing social and economic inequalities. In the United States, vulnerable neighbourhoods with a high number of minority groups and low-income groups were significantly affected by the housing recession compared to white households due to the high-risk lending (Dong and Hansz, 2015). Similarly, a reduction in public expenditure, sovereignty crisis, and a tax increase were all outcomes of the GFC in the Italian political system, with the housing allowance scheme (*Fondo sociale per l'affitto*), part-financed by the three levels of government (national, regional, municipal), being greatly affected by public spending (Baldini and Poggio, 2013). Although some Italian municipalities continued to finance this scheme without the government's financial support, it has been on a much smaller scale, with young households and immigrants being heavily burdened with no end in sight due to the discriminatory criteria on credit (ibid).

The coronavirus pandemic, or COVID-19, has been reported to sprout another ‘housing crisis’: this time, the societies’ most vulnerable groups are especially burdened by this. Governments across the world have introduced different lockdown restrictions to contain the spread of the fatal COVID-19. These restrictions range from halting economic activities to prohibiting social gatherings and restricting international or even interprovincial travel. In the United Kingdom, the national government has introduced several fiscal stimuli in response to the current pandemic targeted at businesses and employees. Similar discretionary fiscal responses have been recorded in other European countries such as Hungary, Greece, and France (Anderson *et al.*, 2020). One of the main mantras of keeping safe during this pandemic was ‘stay at home’; however, with over a billion people living in informal settlements across the globe (Zerbo *et al.*, 2020), social distancing is unattainable with inadequate healthcare and sanitation measures often impossible. In South Africa, local municipalities were mandated to provide temporary shelters for those experiencing homelessness and prohibited the eviction of people to reduce infection (Republic of South Africa, 2020).

Furthermore, although there was a ban on evictions of people from public land in South Africa, local municipalities have been accused of forcibly evicting citizens in informal settlements (Nzimande, in-press). Similarly, according to the amended constitution of Hungary, homelessness or “rough sleeping” is prohibited and could be punishable by law. The Hungarian government argued that this law does not infringe upon the right to human dignity because, according to the Constitutional Court, poverty is not a

result of social exclusion, rather a choice (Hungarian Civil Liberties Union, 2019). Forced evictions, homelessness, a high number of low-quality homes, the exorbitant cost of housing – especially at a time where social movements are restricted– are all part and parcel of gross violations of human rights.

With more than half of the world’s population currently living in urban areas, which is projected to reach 68% by 2050 (United Nations, 2018), governments globally are under immense pressure to provide more infrastructure (e.g., public goods, utilities, housing) either by building new properties or through regenerating urban spaces. Despite this, it was only in the 1980s that key stakeholders realized a need for innovative strategies that will reduce the urban blight, house the poor, and promote social integration between people of different ethnicity, class, status, race and other socio-economic backgrounds. Noteworthy, urban regeneration was a recurring theme over the 20th century, but it had a different content and organisational background from decade to decade. Urban regeneration has been one of the approaches used to meet socio-economic objectives, repair urban decay, and improve social networks primarily by integrating previously segregated vulnerable groups (Zheng *et al.*, 2014). In the report titled ‘Guidelines for the implementation on the right to housing’, Farha (2020) postulates that the current housing crisis is associated with shifting housing as a fundamental human right to a commodity that widens socio-economic inequalities. The report draws attention to 16 critical areas, such as climate change and the unaffordability of housing, that states should focus on to address the housing crisis. In many urban areas, this crisis is caused by an increased rental fee and household-related expenses. The 2007 global financial crisis has had immense impacts on developing and developed countries, with ripple effects still experienced more than a decade later. The intensity and scale of these impacts have greatly varied across time and space, with governments implementing different strategies to cushion the effects caused by the crisis. However, great attention has been on homeownership and mortgage products, with little attention given to tenants. Hence, the need for geographical, empirical and theoretical research that can support and encourage the development of housing systems that provide affordable and accessible housing for those in the low-to-middle income brackets. Of course, living in a world where capitalism seems to be controlling the state in lieu of the state controlling the economic and political system (Jacobs and Manzi, 2014), realising affordable and easily accessible housing in urban areas will not be easy but is also not an impossible, gargantuan task.

1.1.2 Affordability of housing

Due to the persisting global issues that were not adequately addressed with the Millennium Development Goals, the United Nations Sustainable Development Summit launched a framework for 2015-2030 titled ‘Transforming our world: the 2030 Agenda for sustainable development’. This document contains 16 Sustainable Development Goals (SDGs) with 169 targets to address the social, economic and environmental issues that the world is currently experiencing. Most related to this dissertation is SDG 11, which aims to achieve inclusive, safe, sustainable, and affordable housing for everyone. Despite this goal and the right to adequate housing that is enshrined in the Universal Declaration of Human Rights, the current global housing crisis is still within. This is primarily attributed to the unprecedented growing speed of urbanisation, privatisation and financialisation of public property and land, the commodity of housing, and the unaffordability and inaccessibility of adequate housing. In this, the United Nations (1996:1) definition of adequate housing is adopted, which refers to “adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting, heating and ventilation; adequate basic infrastructure, such as water supply, sanitation and waste management facilities; suitable environmental quality and health-related factors; and adequate and accessible location concerning work and basic facilities: all of which should be available at an affordable cost”. In this, adequate housing not only pertains to four walls and a roof but goes much further than that.

Coupled with the need for adequate housing is the need for affordable housing. It is important to note that the affordability of a house does not only refer to being able to afford the rent and maintenance but also

includes the affordability (or lack) of transport and services. Affordable housing is important for a just housing system; therefore, it is crucial to understand that it also has geographical implications with housing markets affected by several factors such as socio-political factors. Consequently, it is vital to understand the spatial inequalities of housing affordability within urban regions as those living in the peripherals of the cities or rural areas often take a longer time to improve their housing affordability (Bunting *et al.*, 2004). This is primarily due to the socio-economic and socio-demographic disparities between low-income and high-income regions. The increase in living costs, exacerbated by the less regulated free market, has significantly increased socio-spatial polarisation highlighting the lack of government policies on housing affordability in specific social, geographical regions (Bangura and Lee, 2019). Countries such as Hungary have witnessed increased advocacy for affordable housing from research institutions, lobby groups and non-governmental organisations. In the same vein, housing affordability is affected by several challenges. An insightful report published by the World Economic Forum (2019) explores several supply-side and demand-side challenges different stakeholders experience for achieving affordable housing. The first challenge looks at land acquisition and tilting, which is a complicated process that includes the confirmation of land ownership where the state acquires a piece of land for the sole purpose of developing infrastructure (*ibid*). There are three common policies used in this process with applicability, mechanism of acquisition, medium of exchange, benefits, and limitations varying: land pooling, negotiated settlements, and formal acquisition. An example of this is the Certificate of Rights (COR) implemented in Botswana to curtail squatting by the urban poor. The state wholly owned the plot of land while the allocated candidate had usufruct to it. This type of land tenure regime is successful in that more than half of Gaborone's housing stock constitutes COR with the possibility of conversion to a Fixed Period State Grant, and it is laying the foundation for the self-help housing programme (Nkwae and Dumba, 2010).

Secondly, urban land use is often greenfield or brownfield developments. According to the World Economic Forum (2019), urban governments use either zoning or regulations to control the housing products through increasing or decreasing housing prices depending on the housing type. An example of this is the social housing programme in South Africa, where the development of these flats was for low-income households and restricted to 'restructuring zones' based on the proximity to goods and services in the urban areas (SAPOA, 2018). Public-private partnerships played an essential role in the inclusionary housing approach, with over 40,000 rental flats owned by the not-for-profit Social Housing Regulatory Authority across South Africa. Furthermore, despite the increased housing affordability caused by combining mixed land-use and inclusionary zoning, social housing-led regeneration is an approach that aims to introduce new affluent residents to a deprived area instead of addressing the current economic and social problems in the existing community. High rise developments have significantly been critiqued for causing forced integration and widespread hostility between the affluent residents and their counterparts (Watt, 2017).

Next, securing affordable housing funding when markets are concerned with profiting from housing is vital (World Economic Forum, 2019). The sources of these finances vary geographically by usually including funding from the government, real estate investment trusts and institutional investors. For instance, Habitat for Humanity's MicroBuild Fund lends capital to microfinance institutions in 30 countries, offering small loans to support low-income families in renovating or building their homes. Financial education is also provided to the households. Over 130,000 households have been able to access better housing through the support of MicroBuild India (Habitat for Humanity, undated). The last of the supply-side challenges analyses costs associated with the design and construction of affordable housing. These include hard costs such as landscaping, labour and building material costs, and soft costs, including professional services, taxes, and other service fees. The World Economic Forum (2019) lists four approaches that can be used to minimise costs and positively impact the three spheres of sustainability: environment, social, and economical. These are reducing bureaucracy, using artificial intelligence and other emerging construction technologies, using different construction materials, and encouraging public-private partnerships. An example of this is the sustainable public housing, Via Verde–The Green Way, that was developed in New

York. Via Verde had photovoltaic panels which supplied energy to the common space and outside lights, rainwater collectors, encouraged social cohesion through several community areas (Wener *et al.*, 2013).

The demand-side challenges are concerned with the ability of a resident to access affordable housing products such as eligibility and tenure systems (possibility of homeownership). Regarding eligibility, countries follow different eligibility criteria for their affordable housing systems. This may target income status, minimum age, marital status and number of people in the household, while some countries may provide affordable housing to their citizens. In 2017, the Dupnitsa Municipality in Bulgaria built 150 social housing flats for vulnerable families with the requirements being: must be a Bulgarian citizen, have lived for five years in the municipal area, do not own any property which exceeds the market price of a dwelling in Dupnitsa, do not own properties for permanent stay and lastly, “one-quarter of the total annual income of the household should be less than the cost of a market rental price for a home corresponding to the needs of the household”, (Tosics, 2019: n/d). Secondly, there is a need to evaluate the different purchase models: renting or owning with both options offering varying degrees of pros and cons. Another example, the Melbourne Apartments Project is a privately funded and developed scheme that sold 28 of its 34 apartments to the social housing tenants through a deferred second mortgage while the rest of the apartments were sold at a market value due to subsidising the 28 apartments (Raynor *et al.*, 2018).

However, affordable housing is not without its criticism. Firstly, large-scale housing estates have been associated with widespread poverty and impoverished facilities. In a study by Holloway *et al.* (1998), it was found that (1) public housing in Columbus increased poverty in the 1980s, (2) black people were much more influenced by poverty as compared to their white counterparts and, (3) poverty in these public housing was prevalent because of the at-risk population living in these neighbourhoods. Secondly, social stigma due to territorial stigmatisation has been recorded in social housing (Jacobs *et al.*, 2011). Thirdly, Baratz (1953) posits that social housing seems to be available for households that can otherwise afford to live in private housing. Social housing has often been accused of being constructed on less-preferred land such as mountainous areas or next to railways (Suh *et al.*, 2004 cited in Jun and Jeong, 2018).

Relatedly, the construction of large-scale social housing estates in Europe was predominant during the post-war period to address the housing shortage after World War II. Although these were similar in both construction methods and urban design, with more emphasis on quantity instead of the quality of the flats, moving into these estates was an upgrade for those who have lived in the deteriorated inner city (Bolt, 2018). The large-scale housing estates were perceived as the “modernist urban and social utopias” (Hess *et al.*, 2018: 7), however almost two decades later, many of these estates were continually associated with prostitution, drug abuse, crime and grime, and other social problems such as massive unemployment and widespread poverty. However, from the onset, it is essential to note that despite the similar goal for constructing housing estates across Europe, these housing systems are quite diverse, which means that the state-subsidised housing schemes in this continent also show utmost heterogeneity. For instance, housing estates in Northern and Western Europe were built between the 1950s and 1970s to provide affordable housing to low-income groups (excluding the poorest of the poor). In Central-Eastern Europe, housing estates were also built in similar periods but were more prominent in the 1980s and 1990s and targeted at middle-to-high income groups and those deemed deserving of the flats or plainly ‘the cream of the crop’ (Dekker *et al.*, 2005).

The historical (both political and economic) systems that were in place in several of these countries meant that many high-rise housing developments were constructed in the outskirts of the city. Of course, newer housing estates were built closer to socialist industries, with the Eastern European estates much bigger than the West (Ibid). The dramatic change in economic, social and political systems meant most of these estates became unpopular and were relegated to the ‘bottom of the housing hierarchy’. Caused by the ever-increasing construction of newer housing in the peripheral areas of the cities, more and more poor people were allocated to the now deteriorating housing estates. Mainly in Northern and Western Europe, many housing estates had similar problems such as varying degrees of building decay, untidiness in public spaces,

increased drug and alcohol abuse, reduced social cohesion and racial tensions, amongst others (Dekker *et al.*, 2005; Evans, 1998). Despite this, not all housing estates were dysfunctional and socially fragmented, especially when one looks at the estates in Eastern Europe (Dekker *et al.*, 2005). The problems associated with obsolescence and degradation led to three ways in which key stakeholders handled the issues (Hess *et al.*, 2018): (1) through the destruction and replacement of housing estates with newer ones; (2) through privatisation by housing market given free rein with little public involvement and; (3) through the combination of the first two which yielded urban regeneration programmes (URPs). This was reiterated by Watson and Turkington (2015), who argued that housing production has three fundamental elements that are interrelated and equally important: demolition, construction, and renewal. With countries now faced with the deteriorated housing estates predicament, sustainable social housing started to be the new focus hence the need for new, innovative ways to address massive urbanisation. It is this last pathway that this dissertation is focused on where deteriorated urban housing estates were physically and socially renovated. Noteworthy, due to several factors such as a steadily declining population, Hungary is not necessarily characterised by massive urbanisation as a result of a slower paced rural-to-urban migration.

Both urban regeneration and urban restructuring processes are geographical phenomena used to prevent further socio-economic decline and the physical degradation of the buildings. Area-based urban policies, strategies and funding projects have focused on problematic housing estates. Historically, urban renewal is referred to as removing slums in urban areas to redevelop the area (Ball and Maginn, 2005). This term has been used interchangeably with urban regeneration, urban rehabilitation and urban development, depending on which country one is in (Lichfield, 1992). However, these terms are an approach to meeting socio-economic objectives, repairing urban decay, and improving social networks, especially through integrating previously segregated vulnerable groups (Zheng *et al.*, 2014). Since the 19th century, urban renewal programmes have been embraced in different countries and cities at different scales to rejuvenate urban areas.

The COVID-19 pandemic has shown the world that housing, specifically social housing, is part of the solution in ensuring healthcare centres are protected in the long run and that social inequality gaps do not continue to widen (Cibrario, 2020). As such, in states providing affordable housing flats to those who would not have been able to afford such dwellings, questions have turned to the quality of these developments and the social amenities that are available to those living in these developments. In addition to the affordability of these housing for those in the low-to-medium economic groups, the socio-spatial and environmental implications are of paramount importance. The provision of good quality and affordable housing developments in well-located areas that promote and encourage social cohesion, social integration and social capital through social, soft projects are the tenets of achieving social housing. Hence, the inclusion of public-private partnerships (PPP) into affordable housing projects has played a crucial component by providing financial and institutional support and opportunities. Furthermore, with social sustainability, decentralisation and subsidiarity as relatively new policy discourses, there is a need to understand public participation in general and residents' involvement in housing-led regeneration.

1.1.3 Residential satisfaction

One of the methods used to gauge the socio-economic impacts, both positive and negative, of housing development projects is residential satisfaction. Residential satisfaction is a relatively new concept and has significant geographical implications. It reflects the extent to which an individual or household is content with their place of stay and how this place of stay meets their expectations and needs. Notwithstanding, resident satisfaction has been an important topic in different fields such as psychology and geography (Fleury-Bahi *et al.*, 2008). This concept arose due to the weaknesses found in other housing evaluative criteria that failed to incorporate the actual residents' perceptions, aspirations and needs of housing developments (Savasdisara, 1988). Residential satisfaction has been theoretically linked to an individual's wellbeing and quality of life (Smith, 2011). Apart from residential satisfaction being used to measure the

relationship between the objective conditions of the physical environment, the subjective behaviour and extent of the household's satisfaction with the entire housing features post-occupancy, it is also used to examine residential mobility, or rather, the ability to move (Krūmiņš *et al.*, 2018; Speare, 1974).

In Hungary, housing quality has dramatically improved in the past few years, and this has primarily been attributed to the widespread urban regeneration programmes (URP) that have been implemented through different avenues of funding together with the housing policies of the Fidesz-government (e.g., the CSOK or the decrease of VAT on new housing) and the EU funding (see Pósfai and Jelinek, 2019). These projects have been driven due to the deterioration of public housing, lack of an inviting public space and arising stigmatisation and social ills experienced by the tenants of the municipal-owned flats, and the overall focus on sustainable urban planning. As previously mentioned, affordable housing can address the housing affordability and accessibility issues by providing housing to low-to-middle income households. Therefore, there exists a need to understand the different factors that positively and negatively influence residents' satisfaction with their residential environment (Lu, 1999).

Social regeneration programmes that include the revitalisation of social housing tend to suggest that regenerated social housing projects improve the lives of the residents through the renovated public spaces and thereafter improve social cohesion. This has also seen the increase of socially mixed policies as a destigmatisation strategy (Dunn, 2012), where the marginalisation and residualisation of affordable housing have led to increased social exclusion. As such, several studies have found that integrating social housing tenants with private housing greatly increases social contact (Bolt *et al.*, 2010) and increases residential satisfaction (Jun and Jeong, 2018). Conversely, studies by various researchers have found that tenants living in social housing found in mixed social neighbourhoods experience social stigma from other 'higher' tenants (McCormick *et al.*, 2012), weakens social networks (van Ham and Manley, 2009) and that there is a general loss of public land through mixed tenure system (Bricocoli and Cucca, 2016).

Multiple determinants of residential satisfaction have been identified throughout the literature. These are usually divided into two categories: subjective and objective. They include socio-demographic characteristics (Kshetrimayum *et al.*, 2020), neighbourhood features, housing support services (Adewale *et al.*, 2019), dwelling unit features, social environment (Mohit *et al.*, 2010), environmental satisfaction (Chen *et al.*, 2019) and economic sustainability (Daroudi *et al.*, 2016), amongst others. If these determinants are inconsistent with the residents' needs and aspirations, it will result in residential dissatisfaction. Due to the studies on residential satisfaction providing valuable information of the behavioural, affective and cognitive characteristics of residents, in respect to the residential environment features, such studies can inform policy-makers, architects, planners and developers of the most important features that indicate a positive satisfaction with the residents and thereafter improve key housing policies. This understanding is a prerequisite for increasing social cohesion, reducing household mobility and creating environmentally conscious and socially sustainable communities. In the long run, this will assist in informing planning policies and understanding how the residents perceive the space around them and individuals own experience with housing.

1.2 Research problem and justification of study

1.2.1 Research problem one

The appearance of market forces on the housing market after 1990 triggered new residential mobility processes in post-socialist cities like Budapest. In inner-city districts, the intensifying privatization led higher-status residents left to peri-urban and suburban areas while several problems concentrated in these neighbourhoods: for example, poverty, homelessness and crime with some elements of the slum- or even ghetto-formation (Kovács, 1998; Kovács *et al.*, 2013). This seemed to have perpetuated the rate of deteriorated houses and social erosion, especially in relatively poor areas (Kovács, 2009). In Hungary, housing markets have been extensively researched, with a large percentage of these studies focusing on the

privatisation of municipal-owned stock (Günther, 2002), housing policies (Hegedüs, 2017), and the financialization of housing (Pósfai *et al.*, 2017).

The social, environmental and economic pressures that cities have experienced in the past few decades have had an immense impact on the urban neighbourhood. Tackling these urban issues has required a new take on URPs through incorporating social sustainability. Various stakeholders and residents have been involved in achieving sustainable communities in Hungary; however, published research focused on housing concerning space has looked at issues concerning segregation and gentrification. Still, many of these studies have primarily relied on quantitative data to back up their findings (some exceptions include Olt *et al.*, 2019). Furthermore, studies that have investigated the impacts of urban regeneration in Budapest have focused mainly on the economic and physical benefits of the programmes with a few exceptions, such as Keresztély and Scott (2012). These studies have extensively contributed to the growing knowledge of the development and history of housing studies; however, further investigation from the perspectives of the stakeholders and residents is required.

1.2.2 Research problem two

Residential satisfaction studies have been used to determine the factors contributing to a resident being either satisfied or dissatisfied with their overall residential environment. As a tool, residential satisfaction has also been used to evaluate the extent to which the programmes delivered and met their set objectives. However, the type of determinants chosen to evaluate satisfaction are often tailored made to the specific case study, researcher and overall aim of the research as this concept is based on perception. Criticism of these questionnaires have centred around issues: (1) lack of validated questionnaires, (2) scant information of psychometric variables, (3) lack of questionnaires that have integrated the interrelated three levels of the residential environment (dwelling, neighbourhood and social), (4) easily adoption to similar context (i.e. Smrke *et al.* 2018). However, as succinctly summarised by Ukoha and Beamish (1997: 446), “residents' satisfaction is not absolute, and housing conditions are not static; thus, the housing condition or residents' satisfaction with these conditions at any given time can be measured only in relative terms”.

Moreover, developing new questionnaires to fit specific settings is not discouraged; however, experts in the field have encouraged authors to adapt existing models to contribute to the knowledge of psychometric data. Specifically, within the context of Hungary, residential satisfaction research in housing estates has received scant attention in Hungary with the few exceptions exist such as Tosics *et al.* (2005), Kovács and Herfert (2012), Herfert *et al.* (2012), who all looked at housing satisfaction in Havanna (Budapest); however, this data was collected nearly 20 years ago. Thus, there exist a gap in the literature with current studies of residential satisfaction as the theory of residential satisfaction is continually evolving and improving. Therefore, it is worthwhile to conduct such studies to investigate residential satisfaction with a more applicable theoretical basis and a more comprehensive range of attributes. Finally, the current research develops a conceptual framework that has been adopted and altered from existing questionnaires of residential satisfaction. Due to no known recent published questionnaire and model suitable for studying residential satisfaction in ex-post housing-led urban regeneration programmes in post-socialist cities, this research attempts to fill this gap.

1.3 Research aim, objectives and questions

The overall aim of the PhD research was to model the extent to which dwelling unit features, neighbourhood features, housing support services, housing conditions, residents' participation, social features, and environmental awareness features predict residents' residential satisfaction. Most importantly, this research is centrally focused on the importance of resident perception of social housing-led social regeneration and their level of participation (or lack of) in the entire process. In this research, the community's role and opinions on the housing projects take centre stage as through the examination of their participation, the needs of the community can be better understood.

This aim was achieved through the following objectives:

Theoretical objectives:

- i. To reveal how governance practices and structures influence social sustainability in different geographical contexts
- ii. To improve the concept of residential satisfaction by building on empirical findings.

Methodological objectives:

- iii. To investigate the role, perception, and participation of stakeholders in promoting community engagement in affordable housing projects
- iv. To assess the socio-economic impacts of affordable housing based on the residents' perceptions and conditions before and after urban regeneration programmes
- v. To develop and test a model to determine residential satisfaction in housing estates

Practical objectives:

- vi. To identify the best practice initiatives implemented in the communities in major urban regeneration programmes and provide relevant recommendations that can be adopted for other similar programmes

Informed by the research gaps found in the literature and based on the research objectives, the purpose of the research is to answer the following main research question:

Did the urban regeneration programmes alleviate or exacerbate the socio-economic challenges experienced by the residents?

In order to answer the main research question, a few research sub-questions emerged:

- i. What are the conceptual frameworks of urban regeneration, affordable housing, social sustainability, and residential satisfaction?
- ii. What role do stakeholders play in promoting community participation in housing projects?
- iii. What are the residents' perceptions and expectations in regard to the urban regeneration programmes in their neighbourhood?
- iv. Which factors influence the residents' residential satisfaction in housing estates of Budapest?

1.4 Outline of dissertation

This dissertation consists of six chapters, which are briefly described below (Figure 1.1):

Chapter 1 presented the general introduction to the study, focusing on the need to learn the socio-economic impacts of affordable housing projects from the community perceptions in Budapest, Hungary. Subsequently, the background, objectives and justification of the study were included.

Chapter 2 provides the conceptual framework of residential satisfaction by critically reviewing the origin, concepts, models, and factors included in residential satisfaction studies and the theoretical framework on which this dissertation is based.

Chapter 3 looks at the theoretical framework guiding this research and the literature review.

Chapter 4 briefly examines the research design and methods utilized in this study by justifying the sampling strategies, case studies, and data collection and analysis methods used.

Chapters 5, 6 and 7 provide the findings, data analysis and interpretation of the entire research.

Chapter 8 consists of the recommendations to the relevant stakeholders planning to implement similar URPs in Hungary. This chapter will also provide an overall conclusion of the research by reviewing the research's aim and objectives.

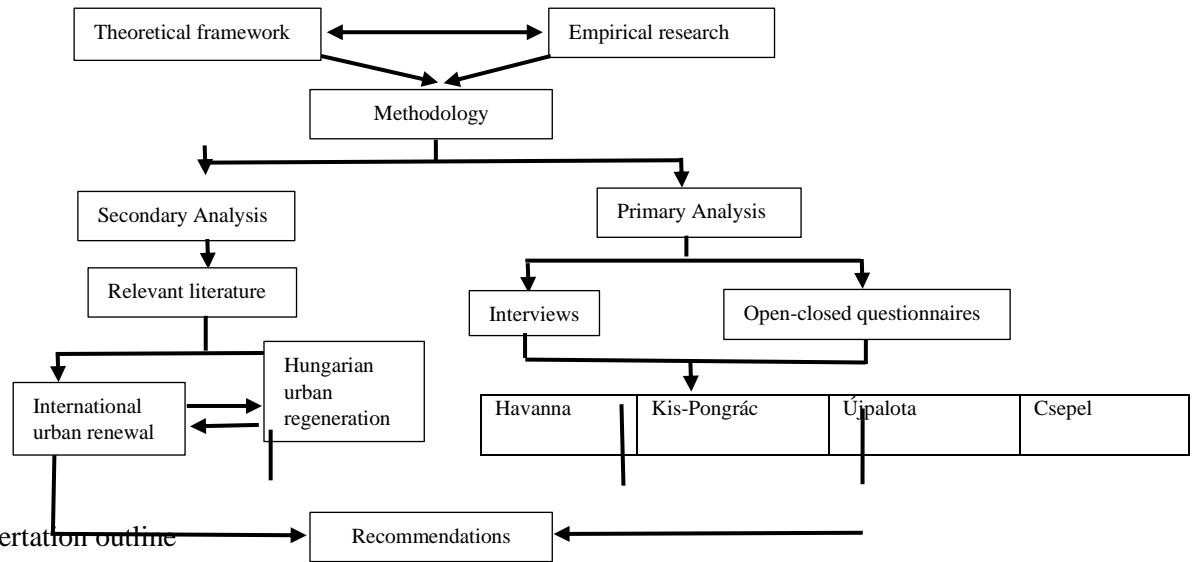


Figure 1.1: Dissertation outline

2. Theoretical groundings

2.1 Introduction

The concept of housing does not only lie in the individual's dwelling as the exterior structure of the building but also in non-physical elements, such as neighbourhood interactions and social environment. As such, this research did not only focus on the physical regeneration of the programmes but most importantly, on how the residents perceive their environment and how satisfied (or unsatisfied) they feel towards the establishment. Notably, this chapter explores the literature groundings of this research. Firstly, it provides a literature review concerning urban regeneration. Secondly, Hungary's historical and current urban housing provision is critically discussed. Thirdly, the theoretical framework guiding this research is outlined. And lastly, a chapter summary is included.

2.2 Literature review

2.2.1 Tracking urban development

For this research study, urban reconstruction, revitalisation, renewal, redevelopment, rehabilitation, and regeneration have different meanings. As such, this definitional diversity of approaches will be revealed through historicizing the origin and progress of these concepts. These concepts have been succinctly summarised in Table 2.1. The reconstruction period was after the end of WWII when effort was made by national governments to repair the damages caused by the war (Diefendorf, 1989). Besides improving buildings, the rapid transformation of cities stimulated economic growth and bought on a feeling of optimism (Tallon, 2013). Reconstruction was also critical with respect to sustainability because new functions appeared in formerly dilapidated urban areas (e.g., parks). Also, at this time, large housing estates were constructed with industrial technology in both capitalist and state-socialist European countries. Predictably, the construction and refurbishment of housing in Hungary received scant attention from the central government, resulting in a higher demand for housing due to the general population increase and the particular rural-urban migration (Kovács *et al.*, 2018). It is important to note here that despite the positive role these housing estates had in improving people's lives, poverty still existed during this time, albeit covered. This has also been recorded in other countries like the UK (see Atkinson and Moon, 1994).

Second, urban revitalisation was the buzzword in the 1960s, which was concerned with reorganising the city's urban environment (Ramlee *et al.*, 2015). These projects often occurred in neighbourhoods that were experiencing an economic or social decline to attract investors and to also make the area vibrant. Noteworthy, in the period of revitalisation, slum clearance (bulldozer reconstruction) was replaced in many cities by the renovation of old buildings, quite often through supporting local initiatives. In the same decade, urban rehabilitation was 'introduced'. Urban rehabilitation is a large-scale process of reinstating old, pre-existing buildings back into their former glory. Rehabilitation is concerned with renovating dilapidated building stock while preserving and conserving original architecture and upgrading the other technical facilities (Duzcu, 2006). This period was important because cities are complex systems and therefore require interventions that consider the economic, physical and social aspects of sustainability. In Hungarian cities, the construction of 9-10 storey high housing estates was predominately in the 1970s and 1980s rather than the 1960s, thanks to the increased partnership between the public and private sectors.

Urban renewal dates back to the mid-19th century when urban industrial societies in major metropolitan cities in Europe were transformed through large-scale demolitions and reconstructions. Majority of these cities suffered from economic decline, social neglect, and environmental degradation, which drove the need for redevelopment in these areas. Urban renewal is related to revitalising a particular part or neighbourhood of a city and is often regarded as a tool of urban public policy (Keresztély, 2016). Although historic settlements were continuously transforming and reconstructing, urban renewal is different from this in that private-public partnerships, or rather coordinated efforts, arose to curb the physical decline of the cities.

Table 2.1: Evolution of urban policy. Source: Roberts (2000: 19-20)

Policy type	1950s Reconstruction	1960s Revitalisation and Rehabilitation	1970s Renewal	1980s Redevelopment	1990s Regeneration
Major Strategy and orientation	Reconstruction and extension of older areas and towns and cities based on master-plan suburban growth	Continuation of 1950s theme; suburban and peripheral growth; some early attempts at rehabilitation	Focus on in situ renewal and neighbourhood schemes; still development at periphery	Many major schemes of development and redevelopment; flagship projects; out of town projects	Move towards a more comprehensive form of policy and practice; more emphasis on integrated treatments.
Key actors and stakeholders	National and local government; private sector developers and contractors	Move towards a greater balance between public and private sectors.	Growing role of private sector and decentralisation in local government	Emphasis on private sector and special agencies; growth of partnerships.	Partnership the dominant approach.
Spatial level of activities	Emphasis of local and site level	Regional level of activity emerged	Regional and local levels initially; later more local emphasis	In the early 1980s focus on site; later emphasis on local level	Reintroduction of strategic perspective; growth of regional activity
Economic focus	Public sector investment with some private sector involvement	Continuing from 1950s with growing influence of private investment	Resource constraints in public sector and growth of private investment	Private sector dominant with selective public funds	Greater balance between public, private and voluntary funding
Social content	Improvement of housing and living standards	Social and welfare improvement	Community based action and greater empowerment	Community self-help with very selective state support	Emphasis on the role of community
Physical emphasis	Replacement of inner areas and peripheral development	Some continuation from 1950s with parallel rehabilitation of existing areas	More extensive renewal of older urban areas	Major schemes of replacement and new development flagship schemes	More modest than 1980s heritage and retention
Environmental approach	Landscape and some greening	Selective improvement	Environmental improvement with some innovation	Growth of concern of wider approach to environment	Introduction of broader idea of environmental sustainability

Moreover, during this period, urban management was fundamentally transformed in that cities' competitiveness and their ability to attract investments became essential aspects for national and local governments. In many cases, urban renewal interventions were also designed following the neoliberal logic. Urban growth coalitions and specialised agencies played an essential role in such programmes as background institutions (Molotch, 1976). Despite the positive role these policies played in rejuvenating the urban economy, several negative impacts have been felt in communities, such as the marginalisation of people with low purchasing power.

Fourth, urban redevelopment is concerned with the demolition of existing, deteriorated buildings to change the land use type. Like land readjustment, the government often rezones areas where the buildings have no preservation status (Bakır, 2016). The urban redevelopment projects were primarily implemented in the 1980s. Whereas the previous processes were focused on the core of the city, redevelopment draws attention

to the development in the peripherals of the city. In other words, local agencies such as community members play a vital role in planning a comprehensive programme to address area-based blight.

The most current intervention that has targeted urban areas has been largely focused on sustainable urban development. The late 1980s and early 1990s saw the emergence of the concept of urban regeneration, which refers to the long-term strategic plans implemented in dilapidated areas to improve the city's environmental, social, and economic aspects. One of the most commonly accepted definitions of urban regeneration is by Roberts (2000: 17), where urban regeneration is a “comprehensive and integrated vision and action which seeks to resolve urban problems and bring about a lasting improvement in the economic, physical, social and environmental condition of an area that has been subject to change or offers opportunities for improvement”. From this definition, several principles were then provided of what urban regeneration should entail: (1) be based upon a detailed analysis of the condition of an urban area; (2) be aimed at the simultaneous adaptation of the physical fabric, social structures, economic base and environmental condition of an urban area; (3) attempt to achieve this task of simultaneous adaptation through the generation and implementation of a comprehensive and integrated strategy that deals with the resolution of problems in a balanced, ordered and positive manner; (4) ensure that a strategy and the resulting programmes of implementation are developed in accord with the aims of sustainable development; (5) align the regeneration strategy to other initiatives in a local area, such as health and well-being activities; (6) set clear operational objectives which should, wherever possible, be quantified; (7) make the best possible use of natural, economic, human and other resources, including land and existing features of the built environment; (8) seek to ensure consensus through the fullest possible participation and co-operation of all stakeholders with a legitimate interest in the regeneration of an urban area; (9) this may be achieved through partnership or other modes of working and through the active engagement of residents; (10) recognise the importance of measuring the progress of strategy towards the achievement of specified objectives and monitoring the changing nature and influence of the internal and external forces which act upon urban areas; (11) accept the likelihood that initial programmes of implementation will need to be revised in-line with such changes as occur (Roberts, 2000: 21).

Roberts (2000) further postulates that urban regeneration objectives often link well with sustainable development objectives in that urban regeneration projects enhance the economic aspect of the city through attracting foreign and local investment and thereby creating employment opportunities, encouraging and improving social cohesion and networks through providing opportunities for local participation, and through developing and improving the physical environment by renovating deteriorated buildings (see, Figure 2.1). These projects carry a geography of hope that has a sense of “bringing back the good old days” while promising the creation of something new in places that resulted from uneven development. Therefore, the concept of urban regeneration clearly emphasizes sustainability in most of its dealings. Due to the intricate dynamics of urban regeneration, projects of this kind are often complex, time-consuming and involve high cooperation and participation between stakeholders.

However, it would be remiss to ignore the several adverse effects that urban regeneration interventions have on social sustainability. Social exclusion is not a new concept as, since the beginning of time, someone or something has tended to push certain people out of mainstream society. Urban regeneration interventions are famous for attracting local and foreign investment opportunities in cities to improve the community; however, the continual increase of these interventions has been recorded to increase gentrification and the displacement of minority groups. Without meaning to be exhaustive, several authors have looked at these consequences: the increase of property value and therefore the cost of living (Granger, 2010), increase in traffic and air pollution (Egercioglu and Ozcan, 2016), displacement of marginalised groups (Çağlar and Glick Schiller, 2018).

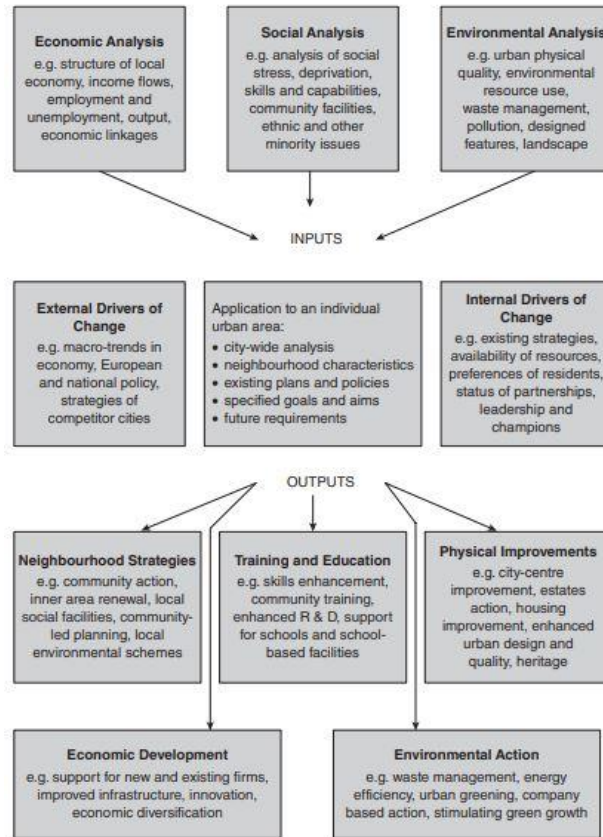


Figure 2.1: The urban regeneration process. Source: Roberts (2000: 21)

Other terms that have also been used interchangeably with the ones already discussed include urban refurbishment, conservation, restoration, and renaissance. Despite the extensive literature and research on these terms, there still exists a high level of inconsistency and uncertainty among Hungarian scholars (e.g. Jelinek, 2017) and the interchangeably use of the word in the national contexts. As such, the concept of urban regeneration will be used throughout this dissertation as urban projects in Hungary refer to “rehabilitation”, “renewal”, and “regeneration” projects to refer to dilapidated areas, even though they all have similar objectives.

2.2.2 Housing systems and welfare regimes

Although there are several other policy change theories (see, for example, Cerna, 2013), there are predominantly two main directions in which policy formation may take: path dependency and policy diffusion. As van der Heijden (2013: 6) puts it succinctly: “the relevance of the past as an explanatory factor for the state of the current housing system and its possible development in the future is expressed in the concept of “path dependency”. Various definitions of path dependency have been supplied to describe the historical economic, social, and political processes. Defined broadly, path dependence implies that “current and future states, actions, or decisions depend on the path of previous states, actions, or decisions” (Page, 2006: 88). Another definition has been offered by David (2007: 97) to refer to the “relationship between the system’s process dynamics and the limiting configuration(s) that it ultimately takes on. This is one of two mutually compatible conceptualizations, and it is most straightforwardly employed when a deterministic process is said to have ‘led to a path-dependent outcome’, i.e., a particular equilibrium among a number of potentially attainable limiting states”. To encapsulate path dependency, Levi (1997: 28) uses the example of a tree to explain this concept “from the same trunk there are many different branches and

smaller branches. Although it is possible to turn around or climb from one to the other – and essential if the chosen branch dies – the branch on which a climber begins is the one she tends to follow”. Relating path dependence to the increasing returns process, Pierson (2004) argues that because of the increasing benefits of a certain act that follows the same path, changing to a new path may result in a negative feedback process. In this, there are four characteristics of the increasing returns processes: unpredictability, inflexibility, nonergodicity, and potential path inefficiency (see Arthur, 1994 for a detailed account). In other words, once a country chooses a welfare regime, it is difficult (but not impossible) to change into a new regime as past events may have benefited countries. As will be discussed later, the Esping-Andersen welfare classification was originally for Western European countries; however, with the expansion and ascension of Central Eastern European (CEE) states, the welfare classification required reconsideration. Ironically, based on the history of CEE countries, it would be expected that the socialist legacy left a distinct pathway to development; however, this is not the case as these countries have chosen different developmental paths.

To explain policy formations unrelated to path dependency, scholars have turned towards diffusion theories. Braun and Gilardi (2006: 299) define the policy diffusion process “as where choices are interdependent, that is, where the choice of a government influences the choices made by others and, conversely, the choice of a government is influenced by the choices made by others”. When a government embarks on creating a new policy, the impetus of this policy may be from different reasons and sources. Several authors have suggested mechanisms that drive policy diffusion. In their paper, Braun and Gilardi (2006) focused on learning, competitive and cooperative interdependence, coercion, common norms, taken-for-grantedness, and symbolic imitation. Similarly, in examining three types of antismoking policy choices by the 675 largest U.S. cities between 1975 and 2000, Shipan and Volden (2008) discovered four mechanisms: learning, economic competition, imitation, and coercion. Maggetti and Gilardi (2016) grouped these mechanisms into emulation, learning, and competition in their fuzzy-set qualitative comparative analysis. These authors rejected coercion as countries should independently coordinate their policies (exceptions being EU and IMF, for example). However, for post-socialist countries, government/organisation A may influence government/organisation B through specific supranational organisations such as World Bank, EU, and IMF utilising a carrot-and-stick approach. For example, the privatisation of the four pillars of a regime system has been “encouraged” by the IMF in social security (Ebbinghaus and Gronwald, 2009), housing (Pichler-Milanović, 1999), healthcare (Sobhani, 2019) and education (Rowden, 2011). Through the structural adjustment lendings and the transfer of ideas through the different policy diffusion mechanisms, most of the post-socialist countries moved in a liberal direction (according to Esping-Andersen’s classification) after 1990.

The concept of the housing system has been defined from different perspectives. Bourne (1981: 12) broadly defines a housing system as “a typically vague but convenient shorthand expression to encompass full range of interrelationships between all the actors (individual and corporate), housing units, and institutions involved in the production, consumption, and regulation of housing. It is thus much broader than housing market or housing sector”. Adding onto this, Priemus (1983: 5) says it is “the complex of actors, including their many relationships and interactions, that are involved in housing...particularly the economic, demographic, political and spatial factors which influence the system and are themselves influenced by the housing system in turn”. Boelhouwer and van der Heijden (1992) then distinguished between the organisation of the housing market, the actors and the housing policy which then interact with exogenic factors such as demographic to determine the objective characteristics of housing the housing system. In other words, “two elements are important: the interaction between the actors and the institutions “within” the housing system and the interaction between the housing system and the context” (van der Heijden, 2012). Because these definitions of the housing system are all similar to those provided by Bourne (1981), it is the definition that this dissertation adopts.

There exists a plethora of literature on the convergence (such as Esping-Andersen) and divergence (such as Kemeny) theories for international comparative analysis. Although these provide excellent foundation and application of the different regimes, it is not the purpose of this dissertation to provide an in-depth analysis

of the relationship between the housing systems and the welfare state. Noteworthy, three fundamental schools have been developed regarding comparative housing research. The first is the convergence theories which believe that all countries are moving towards the same direction (universalist approach). The second school takes a particularistic approach whereby generalisation is avoided even through the juxtaposition of housing systems of different countries, i.e. juxtapositional perspective. This school is outside the scope of the dissertation; hence it will not be discussed. The last school is termed the divergence or rather the middle range where housing systems typologies are “derived from cultural, ideological, political dominance or other theories as to the basis for understanding differences between groups of societies” (Kemeny and Lowe, 1998: 162).

Intricately linked to the housing system is the welfare regime system. A welfare state typically involves state responsibility for securing some basic modicum of welfare for its citizens. But this definition does not seem to touch on the emancipatory policies (or lack of) or even explain what constitutes basic welfare (and what does not). Different scholars have attempted to define a welfare state (see Therborn, 1983; Isakjee, 2017; Hudson, 2013). Despite the varied definitions, the welfare state generally refers to expenditures that a government allocates towards the social policy. Bryson (1992: 36) argues that a country is classified as a welfare state if it provides “at least a minimum level of institutionalized provisions for meeting its citizens' basic economic and social requirements”. Similarly, welfare state definitions have ranged from limited such as Cochrane and Clarke (1993: 4), where the welfare state is “the involvement of the state in social security and social services” to broad definitions where the welfare state is referred to as “a state in which organized power is deliberately used in an effort to modify the play of market forces in at least three directions – first by guaranteeing individuals and families to meet a minimum income; second, by enabling individuals and families to meet certain social contingencies which lead otherwise to individual and family crises; and third by ensuring all citizens the best standards available with a certain agreed range of social services” (Briggs, 1961: 228). Noteworthy, there is no consensus of the definition of welfare-state.

Dubbed the father of social policy, Richard Titmuss (1958) had categorised welfare states as residual or institutional, the former referring to systems in place for when private markets or family fails but it is limited to disadvantaged groups in society; the latter existing as an institutional system that caters to citizens. He concurred with Marshall (1950) that the welfare state should seek its commitments to marginal and deserving social groups and address the entire population, i.e. social citizenship. Inspired by the work of both Titmuss and Marshall, Esping-Andersen (1990) defined a welfare state as “the institutional arrangements, rules and understandings that guide and shape concurrent social policy decisions, expenditure developments, problem definitions, and even the respond-and-demand structure of citizens and welfare consumers. The existence of policy regimes reflects the circumstance that short term policies, reforms, debates, and decision-making occur within frameworks of historical institutionalization that differ qualitatively between countries”. In this, he introduced three indicators to understand and judge welfare states. First, decommodification refers to the degree to which social service is being rendered to the country's people as a matter of right and to the degree to which a person can maintain their livelihood without relying on the market. Different typologies of the welfare state have different degrees of decommodification that is offered to its people; however, social assistance and insurance do not necessarily ensure decommodification. The level of this indicator can be measured by three sets of dimensions which are the rules that govern people's eligibility to welfare benefits, level of income replacement for those on benefits and the range of entitlements provided. Second, social stratification is the degree to which the welfare state differentiates between different social groups based on socio-economic factors, for instance, on the basis of professional status or gender. Lastly, the social citizenship indicator looks at the relationship and role between the private market, government, and family. He emphasised that the mere presence of social insurance policies does not mean progress towards decommodification.

Esping-Andersen (1999) stated that welfare states could be divided into three different ideal welfare regime typologies. These are the liberal regime, conservative regime and finally, the social-democratic regime type. This is because comparing welfare states on different scales will yield highly misleading results. First, the

liberal regime state is characterised by means-tested social benefits which are aimed at assisting the most vulnerable, such as those unable to participate in the labour market or who are not supported by private transfers of income within households. This welfare state model created strict entitlement rules and is often associated with stigma, although the benefits are generally modest. For this reason, the state will then encourage the market to guarantee and subsidise private welfare schemes. Due to the private schemes that predominate, this regime minimises the decommodification effect while encouraging an order of stratification where the role of state, market, and family in welfare provision is marginal and central, respectively. Furthermore, modest social insurance plans and benefits are limited to the low-income, state-dependent group. The United States and the United Kingdom are some examples of this regime.

The second welfare regime identified by Esping-Andersen is the conservative-corporatist welfare state regime where a blend of the historical legacy of Catholic social policy and corporatism resulted in: (1) state plays a more significant role by relatively providing more generous benefits based upon principles of insurance contributions; (2) labour market participation by married women is strongly discouraged; (3) state will only intervene when a family's capacity is exhausted (Church influence). Compared to the previous regime, the conservative welfare regime has a higher degree of stratification. An example of this regime is Germany, where the welfare for the people is based on their occupational scheme and is funded through their personal contribution. However, the principle of the male breadwinner model is heavily practised, which means due to this oppression, gender inequality is remarkably high in Germany, particularly in terms of income as women usually perform unpaid labour work such as childcare (see Palier, 2006; Sainsbury, 2012).

The social-democratic is the last welfare capitalism where the level of decommodification is high, and the social-democratic principle of stratification is directed towards achieving a system of generous universal and highly distributive benefits that are not dependent on any individual contributions; thus, the degree of social stratification is ideally low as the principle of universalism is much more potent (Arts and Gelissen, 2002). Unlike the previous regime, women, regardless of whether having to provide childcare or not, are encouraged to participate in the labour market, especially in the public sector. For instance, Sweden has one of the most generous public redistribution systems, comparatively with particular emphasis on the concept of universality and participation of its citizen, unlike the liberal and conservative models.

Despite the wide application of Esping-Andersen's typology and not to be exhaustive (Hoekstra, 2003; Noyoo, 2017; Fetahu, 2017), Esping-Andersen's work has been expectedly and strongly criticised due to several reasons such as that of the narrow sample of countries used to explain the robust model. As such, several welfare state regime typologies have since been introduced. One of these critics, Ferrera, based his work on Esping-Andersen but focused on Mediterranean states (excluded in Esping-Andersen's work). Ferrera (1996) established an additional, separate regime called the Southern-European type. In this, Ferrera introduced four dimensions to group the states: the rules of access (eligibility rules), the conditions for benefits, the mechanisms regulating social protections, and the management of several social security schemes (see Campa, 2015). Other scholars have also published their own classifications, such as Castles and Mitchell (1991), who proposed the Liberal, Conservative, Non-Right Hegemony and Radical to include Australia; Franzoni (2008) offered Latin American welfare states protectionist and productivist together with non-state familiarist; and lastly, Fenger (2007) differentiated between six different welfare regimes in CEE: conservative-corporatist, social-democratic, liberal, former-USSR, post-communist European type and developing welfare states.

Historically, welfare regimes had not adequately included housing as an essential part of a welfare state. It was the work of Jim Kemeny that first linked Esping-Andersen's welfare state regimes with that of housing systems. Since then, many other researchers have added to this knowledge (Hoekstra, 2003 for the Netherlands; Venter *et al.*, 2015 for South Africa, among others). Translating the three criteria of Esping-Andersen (decommodification, stratification, and the relationship between state, households, and markets) into four housing aspects, Hoekstra (2003: 60) defines decommodification as "the extent to which

households can provide their housing, independent of the income they acquire on the labour market”. In other words, although the private market often provides housing, housing can be decommodified by the state through the shifting of the housing provision from the private markets, housing policies, price regulation and housing subsidies (Balmer and Bernet, 2015). With regards to stratification, Hoekstra distinguishes between economic stratification (income distribution) and social stratification (allocation of people according to their ranks) to relate to the housing allocation process by the government (see later in the sub-section for details). Lastly, it is not only the government that can provide welfare services as the family, NGOs and market often have a role, with the differences between these three being centres around the decision-making coordination.

One of the most prominent works in the divergence theory was that by Kemeny (inter alia 1992). Housing, as postulated by Torgersen (1987: 116), is the “wobbly pillar of the welfare state”, with large government expenditures being spent on healthcare, education and social security compared to housing. This may be attributed to the fact that housing provision has been restricted to low-income groups (see Kemeny, 2001). In his book titled “Housing and Social Theory”, Kemeny (1992: 112) developed a theoretical framework where he argued that “welfare states are the political result of collective ideologies which have obtained political dominance” thus the separation and evolution of collectivism (social rental) and privatism (homeownership) ideologies in the welfare state. An evolution of rental markets typologies, as Kemeny illustrates, is provided (Figure 2.2). These ideologies are primarily aligned with the housing system of a specific state.

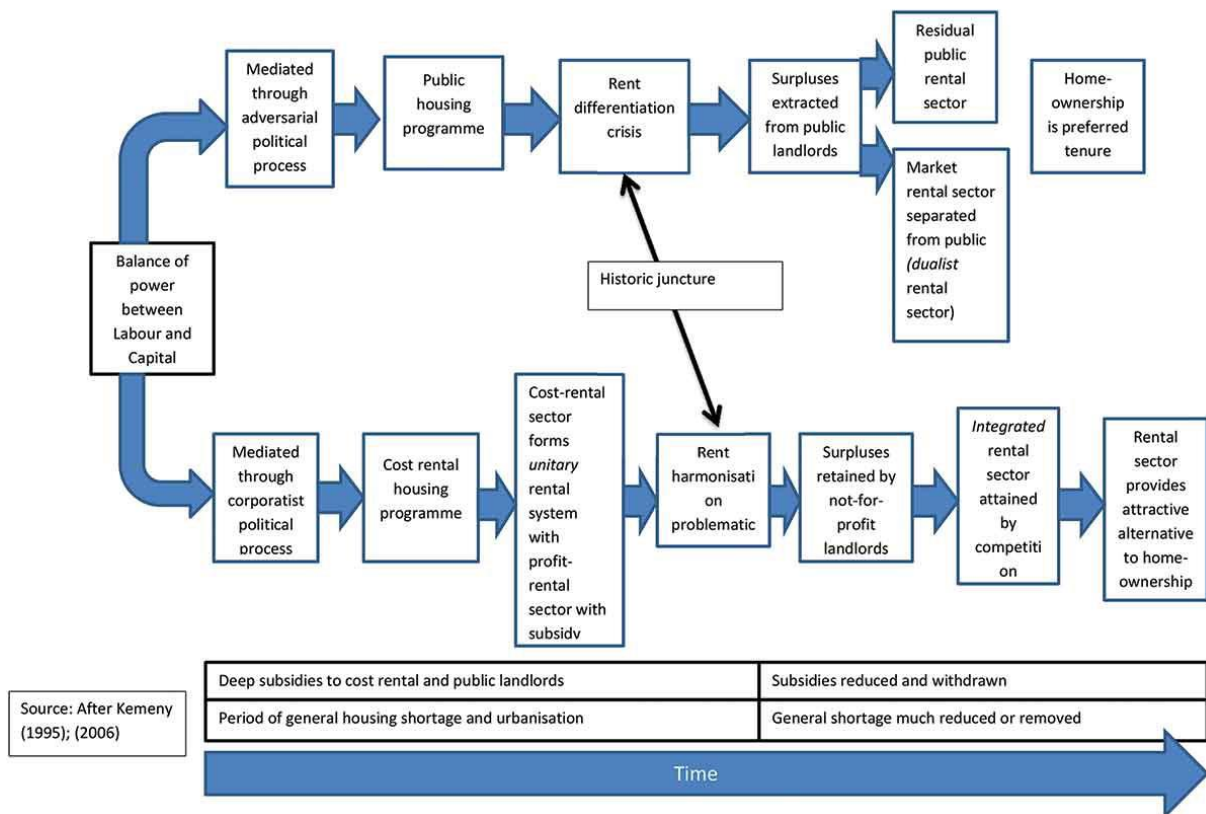


Figure 2.2: The evolution of the two rental systems (Source: Stephens, 2020)

In contrast to Esping-Andersen’s three welfare regimes, Kemeny *et al.* (2005) introduced two welfare regimes (liberal and corporatist) and then made a distinction between unitary (collectivist) and dualist (privatist) rental systems (see Table 2.2). Although often used interchangeably, Kemeny *et al.* (2005: 855)

made a distinction between the terms unitary and integrated rental system where the former are “markets in which barriers to non-profit providers competing on the rental market are removed” and the latter is used to define “markets in which non-profit providers are sufficiently developed to be able to compete without the need for invasive regulation”. Despite this distinction, the term unitary rental system is used in this dissertation.

Table 2.2: Differences between the dualist and unitary rental system. (Adopted from Hoekstra, 2010: 15)

	Dualist rental system	Unitary rental system
Political structure	Non-corporatist	Corporatist
Ideology	Privatist	Collectivist
Size of the rental sector	Relatively small	Relatively large
Competition between social rental sector and market rental sector	No direct competition between the two rental sectors	Direct competition between the two rental sectors
Rent levels	Large differences in rent level between market rental dwellings (relatively expensive) and social rental dwellings (relatively cheap)	Relatively limited differences in rent level between social rental dwellings and market rental dwellings (rents are moderate in both sectors)
Function of social rental sector	Safety net	Housing for broad segments of the population
Subsidies and regulation	Large differences between a strongly subsidized and heavily regulated social rental sector and a market rental sector with few or no subsidies and regulation	Relatively limited differences in regulation and subsidies between the social rental sector and the market rental sector
European countries	Norway, Belgium, Finland, Ireland, Italy, United Kingdom	Austria, Sweden, the Netherlands, Denmark, Switzerland, Germany, France

Both the theories of Esping-Andersen and Kemeny have been extensively used in international housing studies (e.g., Alves, 2017). These have either taken the divergence or convergence perspective. However, unique to this is the East European and former USSR countries which seem to lie on a “test-bed” (Kemeny and Lowe, 1998: 168). Termed the “East European Housing Model (EEHM)” by Hegedüs and Tosics (1992), this model referred to both the property rights and the central planning system on which East European countries had adopted. Due to the shared (at least from the late 1940s) history of Eastern European countries, scholars such as Renaud (1995) had predicted that the transition period, with a shift from public to private markets, will mean these countries will all converge towards one direction: privatisation. That is, towards a private housing system and market-based economies. Thus, these works suggest a convergence approach. In contrast, Lowe (1994) criticised the EEHM and the convergence approach to the housing system by arguing that if these countries had the same history, they would surely have a similar Anglo-Saxon residual model in the future. He proposes two implicit reasons why this model fails: (1) it argues that countries are all “unilineally” having a similar goal, and (2) the model is non-statist in that it does not consider autonomy actions of countries. Furthermore, Lowe (1994) posits that these countries are not homogenous and thus have taken different paths to solve their housing problems, as initially alluded by Hegedüs and Tosics. Using Hungary, Romania and Bulgaria as case studies, Lowe draws attention to the variations in the East European housing system to depict how diverging these countries are. For this reason, a model that seeks to explain a large geographical area of East Europe is misleading as “it is clear that the social meaning and economic logic attached to homeownership is not ubiquitous but is itself very diverse in structure and social impact” (Lowe, 1994: 116). Hence, the range and level of privatisation and state housing in this region are quite diverse due to several reasons such as restitution laws and lack of funds and motivation from local municipalities to maintain buildings. This was further supported by Stephens *et al.* (2015: 1230), who postulated that due to the unevenness of privatisation in post-socialist states that was caused by the neoliberal ideology, the markets and households had played a significant role in structuring a default housing system in that “their distinctive characteristics will remain a peculiar marriage of **state**

legacy welfare, very high levels of **intergenerational support** and (at least in some countries) **anti-state welfare**” (emphasis added).

With respect to Hungary, there is a very high share of homeownership as compared to social housing, particularly after 1990. Based on Kemeny’s model, Hungary follows a dualist rental system where the government allows for a rental market even though there is a distinction between non-profit landlords and private landlords. Because there are still some Hungarians who cannot have their housing needs met through the market, the government (national and/or local) provides residualised housing. This housing provision is made through an allocation process to determine the need and affordability of residents. It is important to note here that even though typologies are important in providing valuable information about rental markets, they are often inflexible in their account of states despite the ever-changing housing policies of countries (see O’Sullivan and Dekker, 2007).

2.2.3 Forms and types of housing affordability

Several definitions of housing affordability exist. Generally, affordability is the ability of a household to afford other non-housing needs after paying housing costs. With the phrase housing affordability having replaced that of housing needs, there has been a surge of literature on the topic (Stone, 2006; Wetzstein, 2017; Anacker, 2019). However, as Linneman and Megbolugbe (1992: 371) aptly argues, “talk of housing affordability is plentiful, but the precise definition of housing affordability is at best ambiguous”. Bramley (1990: 16) defined housing affordability as “households should be able to occupy housing that meets well established (social housing) norms of adequacy (given household type and size) at a net rent which leaves them enough income to live on without falling below some poverty standard”. Several scholars have defined “affordability” in affordable housing from the basis of a “ratio” where the differences in the household costs are measured against the total housing income (Bogdon and Can, 1997; Aribigbola, 2008; Shaqra’a *et al.*, 2015). For instance, according to Hegedüs *et al.* (2017), the housing cost ratio is influenced by the local housing rental market, price of the house or interest rate of the home loan, and the local income levels and pension system. Threshold percentages have often been suggested of housing expenditures-to-income ratio and thus considered as indicators and normative standards of housing affordability. Once households exceed the set ratio, they are said to experience housing unaffordability.

Despite the wide acceptance of these normative thresholds, they have also significantly been critiqued in literature. First, housing affordability is influenced by several factors such as fiscal constraints and such, the ratio approach does not take into account these changes over a period of time (Stone, 2006). Second, distinguishing between an indicator (measures relationship between housing expenditures and income) and standard (explicitly mentions the value an indicator should be set to), Baer (1976: 383) argued that “given the variety of circumstances facing different households, rules of thumb about the percent of income to be devoted to housing can be extremely misleading in individual cases and therefore in aggregate data as well. Although generally recognized, the dilemma has largely defied attempts to establish appropriate housing standards”. Third, a chosen set of ratios as an indicator for housing affordability assumes that households are able to meet their non-housing needs based on their income without taking into consideration the unequal income distribution (see Paris, 2007). Fourth, taking North America as a case study, Hulchanski (1995) identified six uses of the housing costs-to-income ratios: (1) description; (2) analysis; (3) administration of subsidies; (4) definition of housing need; (5) prediction of the ability to pay; and (6) selection criteria. In this, Hulchanski argued that the “rule of thumb” of the housing expenditures-to-income is often misleading, an arbitrary indicator that often shifts from one ratio to another and thus calls for a scientific measure that will be tested for both validity and reliability, independent on individual’s beliefs.

Several indicators for the housing affordability standard arose in contrast to the housing costs-to-income ratio approach. Thalmann (1999) was one of these whose theoretical model measures housing unaffordability based on how much it would cost a household to acquire a basic house in a specific housing market. A housing consumption metric is then developed, which compares the apparent affordability issues

with the actual affordability issues (see also Lerman and Reeder, 1987). However, this model still used the “rule of thumb” and failed to take into account that even the set ratio may be too high for low-income groups. To bridge this gap, Kutty (2005) proposed a measurement of the housing-induced poverty where housing-induced poverty occurs when households, due to the high cost of housing, cannot afford non-housing needs, or rather if a household spends more than one-third of their income on housing, they will enter the poverty line. However, due to the use of the “poverty line”, this model has also been critiqued (for example, Rogers *et al.*, 1994; Gweshengwe, 2019). Nevertheless, the concept of housing poverty has been supported by other housing analysts such as Nunez (1994) and Armenoff (1998). This model falls under the residual income approach, also known as the market-basket approach. The residual income approach understands that housing costs take up a larger proportion of the household income (after tax), which means little money is left to cover the other essential expenditures. For this reason, the residual income model offers various methods to suit different household types (ownership and rental) with varying household income (for a detailed explanation of the different techniques, see Stone *et al.*, 2011). A further report of the same model and its appropriateness to social housing found that although some tenants (such as the older ones) would be in a more favourable position, not much could be said for the social housing agencies who will be receiving unsustainable rent (Burke *et al.*, 2011). If the household rent is based on the residual income model, it will cause inequalities among the tenants and financial unavailability for social housing agencies. To combat these issues, several countries have applied fixed rent for different types of households, the number of dependents on living in the household, geographic location, and housing type. Other types of measures for housing affordability have also been proposed, such as the housing affordability gap model and the quality-adjusted model (see Ndubueze, 2009). It is important to note that countries adopt different models of housing affordability policies, as illustrated in the following sub-sections.

State-subsidised housing is loosely defined as the payment transfers that is paid to either the producer or consumer of the housing as a form of housing allowance (Haffner and Oxley, 1999). The central government usually pays the money to the local municipal government to contribute towards the provision of housing. Although there are various housing subsidies such as land regulation, Haffner and Oxley (1999) focus on the fiscal and non-fiscal financial incentives, amongst other measures, of subsidisation. Housing allowances, sub-market interest rates, and rent regulations are grouped into non-fiscal financial subsidies, while income taxation is one of the examples of fiscal incentives. However, it is important to note that countries have their definition and application of housing provision, i.e. subsidised housing.

Public housing is a form of government-subsidized housing that does not have just one root. In the United States of America, it began when the Housing Act of 1937 was introduced during the New Deal (United States Housing Authority, 1937). The federal government became officially involved with public housing when this law was passed. The main goals of this act were to clear the unsanitary housing conditions and reduce the shortage of decent housing for low-income families who could not afford to rent to private landlords. However, intense segregation was evident in public housing even in its premature beginning. Projects titled “public housing” were continuously negatively stigmatized due to the poor design, sloppy construction, inadequate property repairs and maintained and persistent crime. As such, developing this housing was deemed politically and socially taboo.

Social housing is a form of public housing with the difference being that social housing is usually government-funded but managed by non-profit organisations, which is also called community housing. The rental accommodation is generally close to social amenities, with the rent being affordable. Social housing is the cooperative, rental housing option for low-to-medium income households earning within the stipulated amount. Researchers and policymakers all provide their own definition of social housing, but all the definitions are similar to all the above concepts in that social housing are subsidised housing for households in the low-to-middle income brackets (for example, see Scanlon *et al.*, 2015; Priemus, 2002). What sets social housing different in the different countries are details such as land or property owners, lease agreements, and most importantly, who runs the social housing flats. To prevent mismanagement and misallocation of the social housing, different types of social housing institutions, often not for profit

organisations, in other countries have been used to serve multiple functions: to provide property management services for a fixed fee, and most of the time, the service collective tenant organisations; they develop, manage and own their rental accommodation without any intermediate associations, they deal with their tenants themselves; and the community members create some institutions as a way of owning and managing their housing. Although the housing delivery has somewhat increased in countries with these institutions, there exists a lack of management and governance in some of these institutions, with the continual rent increase causing rental defaults and then eviction. For instance, in Australia, social housing is defined by the income limits, enabling low to medium income households to apply for subsidisation. The government also regulates the rents to ensure that households do not pay more than 25% of their household income towards housing (OECD, 2019).

Housing provision is increasingly a private sector responsibility instead of the public, government sector, with the former failing due to numerous reasons such as shortage of lower-cost housing stock, the inability to increase supply consistent with household growth, and high housing cost stress. The privatisation of social housing led to the increase in the impoverishment of the social housing tenants in the European countries, with cuts in the social housing programme having severe impacts on the lower-income groups who could no longer afford housing and had no access to the housing market. This has caused the emergence of a marginal housing sector of households that are continuously forced to seek alternative inadequate, unstable and insecure living arrangements such as boarding houses and caravans. To address this need and more, several countries have different forms of housing support that differ in tenure, main stakeholders responsible for the provision, and policy target (or eligibility). Due to the overall direction of this dissertation, both the renting tenure and the homeownership are included. This is because social housing beneficiaries in Hungary are allocated housing flats across the housing estates so to promote social mix, minimise segregation, and create more balanced communities.

Furthermore, countries use different terms to describe their housing affordability policies, i.e. social housing, public housing, affordable housing, state-subsidised housing, and others use low-income housing (although this is hardly used anymore). Table 2.3 illustrates these differences in different Member States of the EU, while Figure 2.3 provides the percentage of social rental dwellings by type of provider, 2018 or latest year available. For instance, Hungary has no national social housing policy, yet similar policies do exist at local level where municipalities often own a few housing apartments and rent these out to low-to-medium income groups. Non-profit organisations such as Habitat for Humanity run small-scale projects to provide housing to those experiencing homelessness and/or facing evictions. Countries with a large social rental sector that is implemented through housing associations include Netherlands and Austria (amongst others). As such, due to the mixed tenure in housing estates in Hungary and the overall understanding that housing affordability also includes homeownership (instead of just tenants), the current research opts for the use of “affordable housing” to capture both the types of tenures that are found in most regenerated housing estates in Budapest.

Table 2.3: Housing affordability in certain EU Member States (Source: several literature)

Country	Term used				Key actor				Policy Target					
	<i>Affordable housing</i>	<i>Public housing</i>	<i>Social housing</i>	<i>State-subsidised</i>	<i>Government</i>	<i>Non-profit organisations</i>	<i>Housing associations</i>	<i>All market players</i>	<i>Low-income group</i>	<i>Homeless</i>	<i>Refugees</i>	<i>Migrants</i>	<i>Income criteria</i>	<i>Available to all</i>
<i>Central and Eastern Europe</i>														
Hungary			X		X	X			X	X				
Estonia			X	X	X				X					X
Romania			X		X								X	
Netherlands			X				X						X	
Germany			X	X				X	X					
<i>Western and Northern Europe</i>														
Ireland	X		X		X		X		X				X	
France			X		X	X	X		X	X				
Finland			X					X	X				X	
Luxembourg	X		X					X					X	
Sweden		X			X									X
<i>Southern Europe</i>														
Spain			X		X	X			X					
Italy			X					X					X	
Malta			X		X								X	
Cyprus			X		X				X		X			

When combining homeownership with and without completion of home loans and mortgage, it is evident that homeownership in the Member states is relatively high and common (see Figure 3.4). The Eurostat 2019 housing tenure illustrated that 69.8% had owner-occupied households while only 30.2% rented their living quarters. The highest owners-occupation countries include Romania and Hungary with 95.8% and 91.7%, respectively. Countries with one of the highest rented housing (both public and private) are Germany (48.9%) and France (35.9%). Figure 2.4 illustrates the housing tenure of 2019 in certain Member States. It is important to note that private landlords include rental price that is based on the current market, whilst affordable housing includes free and rent reduced housing.

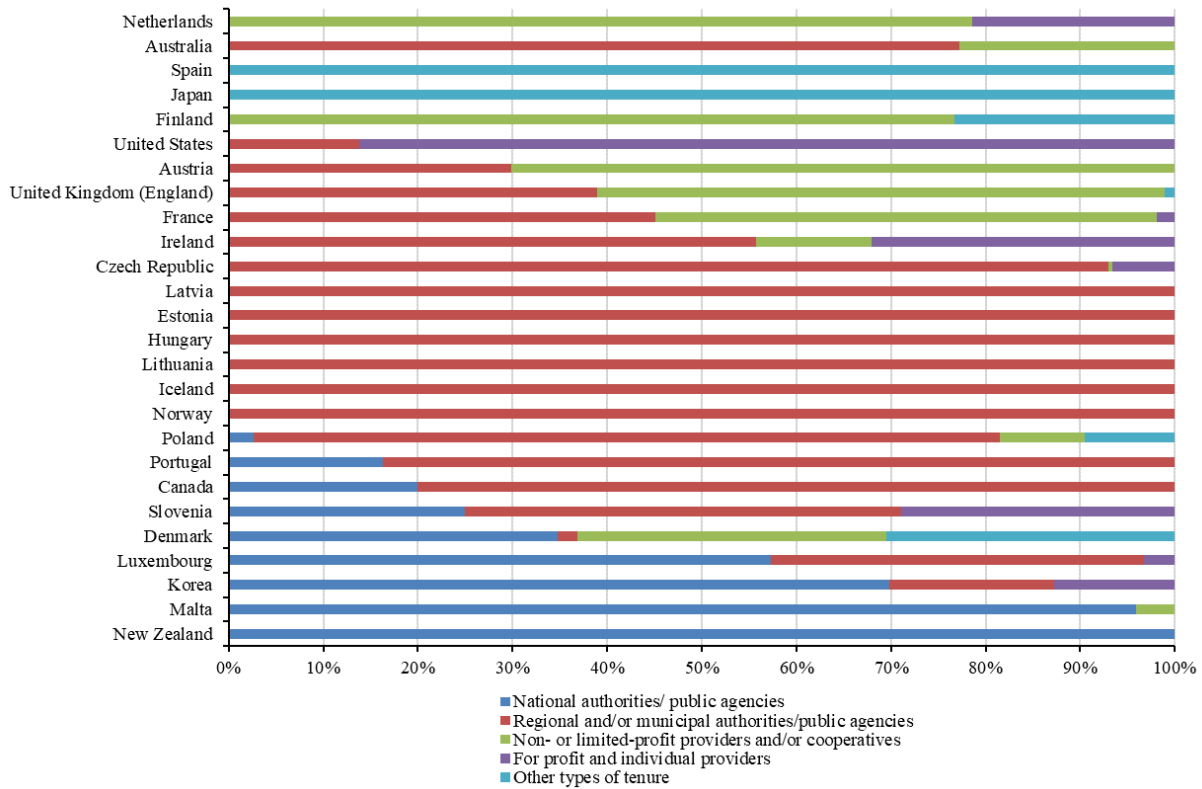


Figure 2.3: Providers of social rental housing in selected OECD countries for 2020 [1].

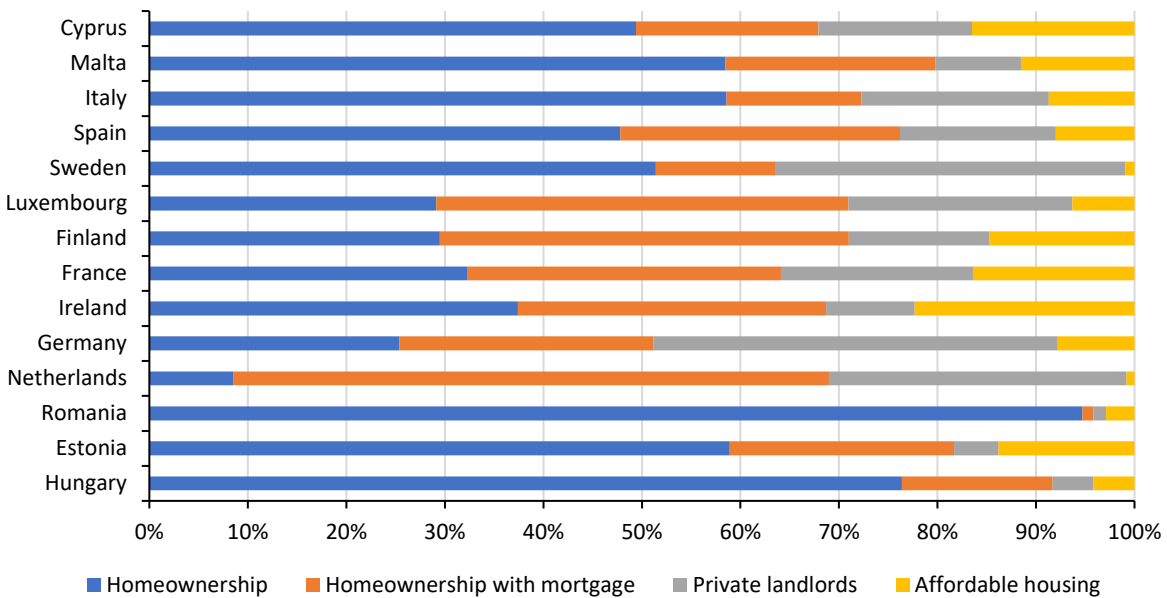


Figure 2.4 Housing tenure of 2019 in certain Member States [2]

2.2.4 Urban housing provision in Hungary

This sub-section is devoted to tracking the housing provision in Hungary from the end of World War II. Due to the unique and different way socialist countries experienced socialism, this subsection is specific to the historical, political and social transformations in Hungary. It is hoped that through this revisiting of the past, the reader may understand the events that led to the current housing problems in Hungary.

2.2.4.1 Socialist period

The end of WWII brought in a lull in Hungary where hopes for a democratic political system that would moderate social inequalities and the market elements remained manifested. This moment in History could be described as pseudo-capitalism due to the multi-party political system restored after WWII. However, this political system was later brought to an end by the Hungarian Working People's Party, which was the coalition of both the Hungarian Communist Party and the Social Democratic Party of Hungary coming into power in 1948. Hence, the start of the state socialism (often called communism), which Sýkora (2009) defines as the societal system whereby a range of theories advocate for the government ownership of all means of production and the equal administrative distribution of resources. Socialism was characterised by state ownership, a centrally-planned economy, regulated income, and low wages. In essence, the entire functionalities of urban societies were changed as this regime was concerned with overthrowing the capitalist system, which was accused of creating social and then spatial economies.

At a glance, the main aim of the state-socialist system was to create a classless society through the communal controlling of production (exact quota given to each factory by the government) and the maintaining of equality through the centralised allocation of resources (Fischer, 2008). States generally achieved this by controlling people's time through restrictive policies such as monitoring and surveillance. Verdery (1996) calls this etatisation which is the authorities' way to control people's time. Mechanisms of this include curfews to allow police officials to question and intimidate citizens who were "in the wrong place or time", rituals (there was no national remembrance of the Hungarian Revolution that transpired in 1956) and calendars with state holidays that people were almost obliged to attend public events or celebrations (Fischer, 2008). Of course, as with most systems, people often find glitches or loopholes. In this case, although the government required every healthy citizen to work and carry an identification card with an official stamp to show where one worked, it was common for people to either choose jobs with minimal work or have fake jobs (Fischer, 2008).

In regards to housing during this era, the socialist housing system was based on the following principles (Ratcliffe, 1989: 14): (1) housing should not be market merchandise; (2) rents should not be strictly related to housing quality and should be a modest item of household expenditure and; (3) families should have the right to healthy, modern and self-contained housing, which they should receive as distribution in kind, independent of their rent-paying capacity. Through these guidelines, housing will be allocated to families to meet their basic needs rather than for profit. Other scholars have also written about the systematic traits of housing in state socialism. For instance, Berey (1994: 86) offered 7 principles of the socialist housing policy: (1) "centralized planning in the field of housing policy too; (2) officially declared state responsibility for housing provision; (3) priority of the public over private property; (4) central redistribution of real personal incomes, based on low wage levels combined with heavily subsidized housing and social services; (5) concentration of infrastructure development first of all connected with the rapid industrialization of state housing construction to industrial centres and 'new socialist towns; (6) special support of private housing development in towns and cities and; (7) an overall abandonment of the development of rural infrastructure, exclusion of rural housing from the support system". In his article titled "Housing and the State in the Soviet Union and Eastern Europe", Tosics (2012: 355) listed 6 political-institutional factors that were vital for East European socialist urban and housing policies: (1) strong and direct state control over land use, leading to very specific land-use patterns expressing the preferences of the socialist state; (2) administrative limitation of housing consumption (one dwelling per family); (3) state control over the most important housing-policy factors; (4) control over the private housing market (private rents) and indirect regulation of the self-financed form of housing construction; (5) administrative limitation of the size and development (inflow of

population, industrial growth) of major cities and; (6) direct control over the financial resources of the cities, and control over the political decision-making process.

There exist three periods in which the housing system in Hungary since 1948 could be categorised (Ratcliffe, 1989). Noteworthy, these housing policies were in line with the major economic situations at the time. Firstly, the centrally-planned economy paved the way for state access to housing and land. As previously mentioned, socialism aimed at eradicating social inequalities caused by the capitalist system. One way in which these inequalities were addressed was through the redistributing of the housing stock, the controlling of the market to prevent price competition and thereafter rent increases, and the nationalisation of the construction industry. This industry, together with the massive industrialisation, resulted in a dualist housing system. As Berey (1994: 86) postulates, “the rented flats, concentrated in towns as council flats were heavily subsidized, distributed and administratively managed by state housing authorities. The other part of the housing sector, private housing was poorly or not subsidized at all, it was not controlled.” This exacerbated inequality among various social groups (e.g. based on tenure type) and increased unevenness between urban and rural settlements as state-subsidised housing was primarily concentrated in cities and towns. After 1956, housing construction became less concentrated in industrial centres, but with growing urbanisation, the housing shortage still increased. That was one of the main reasons for starting massive housing construction programmes from 1960.

The nationalisation of the construction industry meant that rents were kept low, with approximately 2.3% of the family’s income going towards rent (Baross, 1987). Although this was good in providing homes to the low-income groups, it meant the government had little to no capital to maintain and rehabilitate these housing flats. It was common for the government to replace old buildings rather than regenerate them with approximately 335,000 housing demolished between 1950 and 1975 (Hoffman, 1981 in Baross, 1987). The nationalisation of construction companies made it that much easier to replace dilapidated housing flats with user ones. Between the 1960s and 1980s, there was a 10.1% increase in the distribution of residential buildings built by the state (together with its joint co-ops). Of course, this was mostly due to the fact that the state had monopolised access to the economy, building materials and land (Ratcliffe, 1989).

Despite these socialist housing policies, the shady housing market was evolved. Firstly, renters were able to exchange dwellings with other renters in other districts or cities as long as the municipal housing agencies agreed. This usually involved the exchange of cash payments, which was 3-5 times higher than the annual rent, with different factors such as the location of the flat and level of flat comfort being taken into account. The second way in which this “black market” prevailed was through the process of sub-renting a flat due to the long queue of acquiring a flat. Although this rather expensive shady business was unregulated, original renters had to stay in the flat with the government “encouraged ‘voluntary’ reduction of space consumption” (Ibid: 165). From the late 1940s to the late 1950s, Budapest saw a high migration of people (30,000-50,000 per annum) due to the increased interest in industrial investment and agrarian policy. However, approximately 100,000 people left Budapest after the Hungarian Revolution – only for this trend to start again in the late 1950s. This prompted the Budapest municipal council to pass a decree in 1958 whereby public housing (private property added later) was only available to those staying or working in Budapest for a minimum of five years (Ratcliffe, 1989). This meant a decline in national housing construction, which was recorded to be 25 % in 1960 to 16-17 % in Budapest (Baross, 1987). The political transformation that occurred after 1956 also led to economic changes whereby the state understood the limitations of only focusing on industrialisation, hence the increased investment in infrastructure development. The state reduced its centralised control with the private sector given concessions. This meant an increase in wages and income, which drove the need for private property construction. The ratio of housing construction started growing much faster than the previous period, with the prices of the houses starting to reflect the actual value of the houses (Berey, 1994), Figure 2.5. Despite the growing housing market, the country was still experiencing housing shortages due to urban growth. Hence the introduction of the 15-year housing development programme in Hungary where one million council houses were planned to be constructed by the nationalised building industry in urban areas using state housing investments.

Although the private sector had limited access to suitable locations and building materials, private housing production exponentially grew, which changed the entire playing field of the state being solely responsible for the provision of housing. This programme resulted in the construction of 823,000 new housing stock, albeit many of them were built in the rural areas (which improved these areas) and were privately owned (Ibid, 87).

The second period was between 1969 and 1983 and János Kádár (then communist leader) introduced the major economic reform called the New Economic Mechanism (NEM). The main aim of NEM was to introduce new economic regulators through shifting the economy from centrally-planned into the broad market. This policy introduced a profit tax, indirect fiscal and price tools to encourage private enterprises to make their own decisions regarding sales and marketing. Five years after the conception of this programme, the economy improved in Hungary (Somogyi and Boote, 1991). In contrast to the decentralisation of the economy, the Housing Act of 1971 was introduced in a bid to address the ever-increasing housing shortage in the country due to urban growth. Moreover, besides recognising the private sector, NEM also offered different types of private housing construction with high subsidies to those in the high-income brackets and those living in the rural areas; and NEM clarified that public housing assistance is for low-to-middle income groups. Consequently, the private housing construction was officialised while the public subsidies for housing development declined due to macro-economic issues and the shrinking of the state budget (Berey, 1994). The new housing reform introduced several changes: (1) tenants had to pay a deposit before inhabiting the council flat; (2) rent increment to fit the quality of the social housing; (3) promotion of self-build housing through loan subsidies. Baross (1987:172) argues that in the 1970s, “the public sector housing programme absorbed 90-95% of government grants (non-recoverable investment) and 32% of loans provided for housing. However, it produced only 32% of all new dwellings in this period. In contrast, the private sector, which accounted for 48% of the new houses, received 1% grant and 32% of loans”. This is because the government abolished the free allocation of housing which decreased the state’s financial constraints but increased it onto the people. As such, an individual eligible for public housing needed to deposit 20,000 HUF, while for the private sector, an individual required 150,000 HUF (Ibid, 172). These inequalities resulted in two main issues (Baross, 1987). Firstly, competition for public housing is created with those with access to power, such as white collars, able to “pull some strings” compared to those who are not so privileged. Secondly, the public housing production became less efficient, hence the lengthy waiting time to receive a home.

Towards the end of this period, there was a growth in the second economy, and inevitably, this led to the increase of self-build housing. Self-building is the creation and construction of a house by the owner. In Hungary, this was mostly in rural areas as compared to urban areas and done through mutually beneficial relationships with friends and families (see Kováts, 2020). According to Hegedüs and Tosics (1992), these constructions were governed by local customs, with a mix of market, state assistance and reciprocative factors. The third period was from 1983, which saw the passing of the new Housing Act aimed at creating a market-oriented housing system with the majority of the programmes of the old Housing Act abolished. This included the discontinuation of large-scale housing projects that were funded by the government, which meant the private sector was more and more responsible for meeting housing demands. Instead of constructing new housing projects, housing subsidies and grants were provided for families in need. The rents together with the deposit for the occupying of the rental flat, increased by an average of 130% (Baross, 1987). Furthermore, tenants were now responsible for the maintenance of their apartments. The previous budgetary subsidies for state-provided housing were now available to self-builders with bank credit expanded to the private constructors. The central government had decentralised power to local municipalities and enterprises to solve the housing issues in their jurisdiction.

Local authorities were the primary decision-makers in allocating financial resources. One of these was through interest-free loans or rather large deposit grants in the form of local council grants (Hegedüs and Tosics, 1990). One of the main limitations of this Act was the reduced number of social housing due to increased privatisation which perpetuated inequalities in housing consumption.

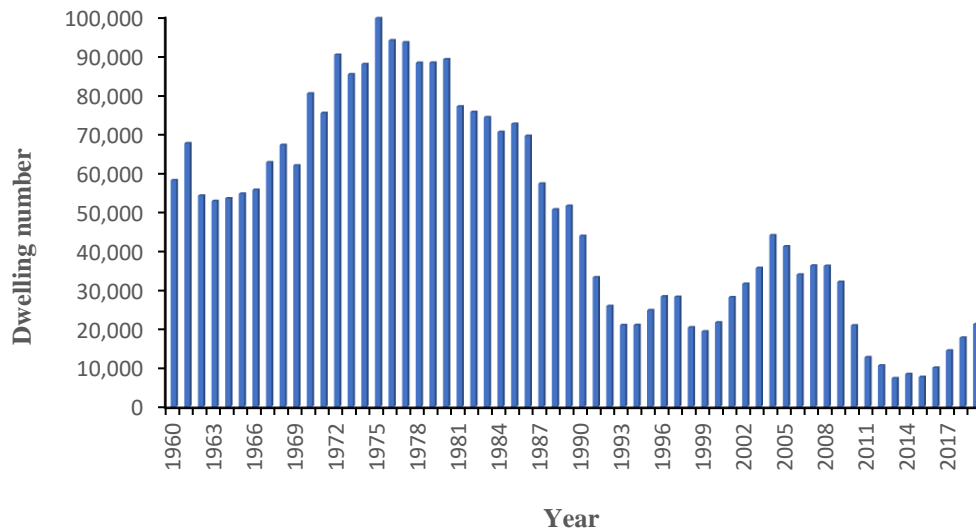


Figure 2.5: Construction of new dwellings in Hungary (1960-2019) [3]

The increase in land prices and building costs has caused a rise in housing prices, which has meant that the quality of privately built houses is much better than that of the state. Inevitably, through market freedom, middle-to-high income groups have emerged in Hungary, which acquires income from their second economy (Ratcliffe, 1989).

As a result of the changes in housing policy in Hungary, Kovács (2020) postulates five reasons why forms of socio-spatial inequality continued during socialism. Firstly, it takes decades for the physical and socio-spatial patterns of cities to change, which means that these patterns will occur at a snail pace. Secondly, despite the main objectives of the socialist government of making every citizen equal, people's goals, attitudes and aspirations did not altogether change as they still maintained their individual ideologies. Third, introducing the market elements into the economy led to a socialist "mixed-housing system" and "quasi-market elements", which inevitably widened the spatial segregation. Lastly, governments had a permanent shortage of goods, services, and housing despite egalitarian policies, which created inequalities. Additionally, 70% of households in Hungary had extra incomes from their "second economy", which further perpetuated socio-economic inequalities.

After decades of state socialism and Soviet influence, Hungary regained its independence in 1989. As Somogyi and Boote (1991: 34) summarise it succinctly, "the Hungarian Government elected in spring 1990 inherited an onerous legacy of excessive state intervention, environmental degradation, and large external debt. It also inherited a well-educated labour force and considerable progress in certain areas of reform".

2.2.4.2 Transition period

For Kornai (2005; cited in Timár *et al.* 2005), the period of political transition from state socialism to capitalism is marked by three fundamental characteristics: (1) new political ideologies and structure; (2) changes in ownership and; (3) market and administrative co-ordination mechanisms. The collapse of the socialist regime produced different political, social and economic changes. The political transition took a shorter duration and was characterised by the change in political ideology (communist totalitarian to the democratic regime). Majority of the post-socialist countries in transition held democratic elections within a few months of the collapse of the communist system, with the central power largely recentralised to local governments. For example, Hungary has three levels of governance: central, regional (county), and local. The decentralisation process was possible due to the passing of Act LXV on Local Governments 1990. From the 1980s, Hungary's political and economic changes played a leading role in the regime change.

Timár *et al.* (2005) highlighted two events that changed the geopolitical landscape. The first was the Pan-European Picnic in 1989, whereby a peace demonstration was organised at the Hungarian-Austrian border in the Hungarian town of Sopron to dismantle the iron curtain, which was a symbol of the politically demarcated Europe. This saw the East Germans moving into Austria via the Hungarian border. The exiting of Hungary in the Warsaw Pact, 1991, saw the departure of the Russian troops that were stationed in Hungary. This meant that Hungary was once again a sovereign state that formed a “grey” zone between the West and the East. Four years later, the Hungarian government invited the United States’ troops to create a North Atlantic Treaty Organization (NATO) base in Taszár in a bid to “support NATO’s implementation force peacekeeping operations in Bosnia” (Blinken, 1999: 109). Hungary’s offer was also an attempt to advance their NATO membership which was successful as Hungary quit the grey zone, became a member of NATO in 1999 and ascended into the European Union on May 1st 2004. It is important to note that Hungary first became a member of NATO before the EU because of the “new political-military situation and partly conflicting economic interests” (Hajdú, 2005: 41). Accession to other organisations also included the Council of Europe and OECD in 1990 and 1996, respectively. As such, all of these internal and external political transformations meant Hungary had successfully transitioned to a democratic state that had been legitimised by popular referendum. According to Tökés (1996), the political transition of Hungary was completed when the country successfully held its second post-socialist, democratic elections in 1994.

The democratic political system laid the foundation of the economic transition, characterised by privatisation, foreign trade, bank reforms, and financial aid, amongst others. One of the main aims of the dismantling of the capitalist system by the socialist regime was to eradicate private ownership of property with ownership only permitted to peasant households landownership as it breeds inequality (Kovács, 2020; Nagy, 2005). As such, housing became an essential element of the socialist era. However, the collapse of socialism resulted in the decentralisation of power to local governments (including public housing stock) and thereafter the denationalisation of the public stock where renters could purchase the flats below the market prices. This was done due to local governments being unable to keep up with the maintenance of the properties. This resulted in the drastic low rate of publicly owned housing stock in most post-socialist countries, such as Hungary. In the initial years of privatisation, the housing sector had not developed into real housing markets (Tosics, 2012).

Between 1990 and 1993, the economic foundation of the socialist system collapsed, with Hungary’s GDP decreasing by 19% and over 1.5 million of the working population being unemployed (Figure 2.6). According to Tomkiewicz (2003), these macroeconomic imbalances repelled foreign investors from post-socialist countries. Furthermore, the transition from the centrally planned market to the free, liberal market in Hungary took a gradualist approach rather than the shock treatment adopted by other countries such as Poland. Hungary was the first country in transition to introduce a system of taxation that was in line with the then market economy. A value-added tax with three rates was passed in 1988, with a uniform parametric tax on enterprise profits introduced the following year (Marrese *et al.*, 1995). To address the various economic and social issues that arose at the end of the socialist era, the first post-socialism elected government introduced the Kupa programme, a four-year plan for structural and macroeconomic reforms. Trade liberalisation, price liberalisation, dropping of inflation to a single-digit number, fiscal reforms, labour market reforms formed part of the detailed plan with the goals, responsibilities of government, forms of remedy that the Kupa plan included (see Marrese *et al.*, 1995). Despite the progress that the Hungarian government had made in turning the economy around, a deep recession was inevitable, even though this was more cushioned than Poland (Adam, 1995).

For most Hungarians, the dawn of democracy held a promise of job security and economic prosperity; however, the continuous diminishing unemployment, increase in social segregation and the ever-widening gap in income distribution has been a crisis in the transition era. Of course, social differentiation existed pre-transition; however, these were rather kept under the carpet. The political and economic transitions have brought on immense social transformations which have separated society into the “winners” and the “losers”. The winners, who mostly were from the higher income group and made up 12-15% of the total

population, could take advantage of the transition elements such as housing privatisation. When the state no longer controlled the economy and job market, the labour market collapsed, which led to one of the significant social impacts: poverty. The biggest losers in the regime change were (1) the skilled workers and labourers (69% and 72%, respectively) who were replaced with more minor labour-intensive operations; (2) those with the lowest rate of education (primary or vocational), which made up 70%; (3) the older people were more affected as compared to the younger ones (Bíró-Nagy *et al.*, 2016). Furthermore, the move from a generally homogenous to a competitive (white and blue-collar workers, managers and employees, private and public sectors) urban labour market further widened the income gaps between the working groups (Kovács, 2020).

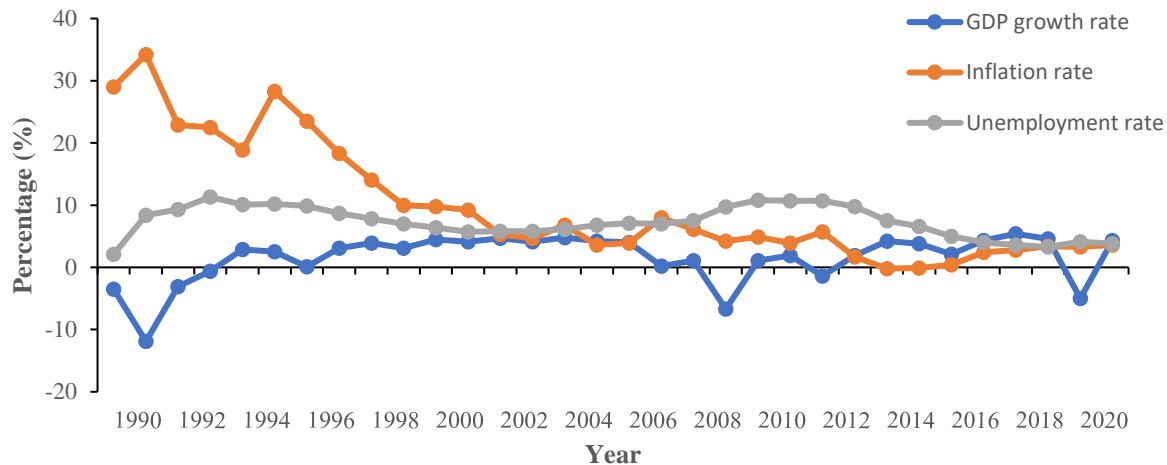


Figure 2.6: GDP growth, inflation and unemployment rate in Hungary (1990- Q1, 2021). [4]

In addition to the income and social inequalities, the transition in Hungary saw an emergence of spatial inequalities between the rural and urban areas. People living in poverty-stricken peripheral communities were often labelled as “anti-social” with “their own deviant behaviour was diagnosed as the sole cause of the plight” (Jász and Szoboszlai, 2005: 277). The regime change brought several socio-spatial issues. Firstly, because unemployment was not formally recognised during socialism, between 1990 and 1993, unemployment rates went from 50,000 to a shocking 700,000 with the low unemployment recorded in Budapest and the western border region; and high unemployment in the north-eastern part of the country and the southern Transdanubia (Kovács, 2004). Despite the economic transformation that had a positive impact on the country’s economy, those living in poverty (temporary and permanent) were largely neglected. In this, Jász and Szoboszlai (2005) distinguish between two groups: the first group being those poor because of the weakening of the social insurance services such as blue-collar workers and underpaid active workers; the second group’s state of poverty was caused generations ago, are cut off from society and usually compile of those living in illegal flats and dilapidated housing estates. Demographically, those experiencing permanent poverty are often 70+ pensioners and child-headed households with little to no education, with household expenditures being more significant than 50% on food, 20% on housing and excluded from educational opportunities to break the poverty cycle (Jász and Szoboszlai, 2005).

Spatial differences have also contributed to the spread of poverty during the transition period. The economic structuring processes largely affected regions that boosted heavy industries and a low agricultural sector. Four years after the first democratic elections, the poverty in villages was ten times higher than in Budapest (Jász and Szoboszlai, 2005). This was partly because of the foreign investment and companies that were concentrated in Budapest, and so the labour force in this region had a higher level of education and thus was hardly affected by the market economy as compared to their counterparts (Kovács, 2004). Despite education attainment and labour force participation being used to understand the spatial aspects of the

transition, two other factors have also been intricately linked with spatial inequality: ethnicity and gender (Ezcurra and Rodríguez-Pose, 2017). During the regime, the government implemented a “catching-up” policy to integrate the Roma population with the mainstream society access to education, housing, and professional training. However, this policy was terminated with the regime change, with an ever-increasing gap between Roma and non-Roma regarding access to social services (i.e. poverty for Roma’s ten times that of non-Roma) (Jász and Szoboszlai, 2005).

There existed significant gender disparities across Hungary. Women were primarily disadvantaged because of the family cycle, low education attainment, which equated to labour market disadvantages and their state of health (Váradi, 2005). In female-headed households, women are at a much higher poverty risk than their male counterparts. Research has shown that female Roma's participation in the labour market is 30-50% and 30-40% lower than non-Roma women and Roma men, respectively (Meusburger, 1997). Re-entry into the workplace by women has also been reported to be low due to discrimination towards women with young children, unequal income, and traditional roles that women need to bear children, stay at home and take care of the household while the men go out to look for work (Váradi, 2005). The change to a democratic country gave hope that more policies would be dedicated to women's emancipation in the workplace and elsewhere. Interestingly enough, 20.7% of the MPs were women in 1985; however, this dropped to 7.3% after the first democratic elections. Similarly, in the local governments, the rate of female councillors dropped from 27% to 16% in 1985 and 1990, respectively (Timár, 2005). Furthermore, the limitation of political participation by women is not only shown by the few women holding leadership positions in villages but also reflected in income disparity (see *Ibid*: 313). These statistics provide evidence that the political and economic transformation brought about unequal gender relations in the transition period. On the positive side, the continuous social differentiation has meant an introduction of new social agents such as local government that has been democratically elected, a move from a single-party to a multi-party system, and civil society organisations.

2.2.4.3 *Post-socialist period*

This subsection will highlight key housing policy frameworks that may have influenced urban regeneration in Budapest. This is because the selected neighbourhoods are found in Budapest, the capital city of Hungary. It is important to note here that housing policies in Hungary are incoherent; as such, the country has a rather dualistic housing system which contributes to the growing socio-spatial unevenness.

The year 2000 was a significant turning point of the Hungarian housing finance development as it was from that year, the then government introduced several comprehensive housing policies. The first of these policies was the launch of a new housing subsidy scheme that provided interest incentives for new housing construction. The main aim of this scheme was to encourage economic growth through the allocation of subsidised interest for mortgage loans. Three main programmes under this scheme were provided: (1) a borrower interest rate subsidy for new homes, (2) a mortgage bond subsidy, and (3) a personal income tax payment allowance for new construction (for a full account, see Csizmady *et al.* 2017). Although these programmes were mainly for owner-occupied housing, another programme launched in 2000 was the grant application that local municipalities could apply for to support the social rental sector. However, this scheme was dismantled in 2004 by the left-wing government (that came into power in 2002) due to the programme’s financial unsustainability and burden to the central budget. This caused a significant reduction in subsidised loans but a greater emphasis on down payments. Secondly, a rent allowance programme was introduced in 2005 where local municipalities were eligible to apply to the central government to support low-income families that rented privately and had children. The maximum rent allowance from the central government was 30% of the rent, with the local municipality required to contribute the minimum of what the central government paid. This programme failed as private rental landlords were not registered in the tax authority (a requirement) (Hegedűs and Teller, 2006). Similarly, a new subsidisation loan programme introduced in 2006 by the Hungarian Development Bank was also unsuccessful due to limited interest by local municipalities.

The cutting of the loan subsidies and the much-lower interests rate compared to the Eurozone and Switzerland caused an increase in household foreign currency borrowing. Apart from housing equity loans, the borrowing also extended to personal and vehicle loans with lending, including those creditworthy (Buszko and Krupa, 2015). When the GFC hit the country, it weakened the already frail economy that was initially caused by macroeconomic failure and ever-increasing debt. Similar to the impacts experienced in numerous countries, the GFC caused an increased interest rate, rising unemployment and income, and an alarming exchange rate. Furthermore, because of the conditions of the IMF loan that the interim government had received in 2009, the management of the fiscal deficit was highly encouraged, which caused a decline in public expenditures, including housing subsidies, health care institutions and farm subsidies (IMF, 2009). Several mortgage rescue programmes were implemented across the country, in a range of scales by different stakeholders (Table 2.4). These could be grouped into orthodox approaches, which are initiatives taken by the government (after the market-based solutions yield unsuccessful results) to negotiate with other key stakeholders to reach a consensus or unorthodox approaches which uses “blanket debt forgiveness schemes” (Csizmady and Hegedüs, 2016).

Table 2.4: Summary of mortgage rescue programmes in Hungary. Source: own

Name of programme	Description	Pros and cons
Early repayment scheme, 2011	Scheme allowed debtors to pay back mortgages at a reduced exchange rate of 180 HUF instead of 250 HUF to CHF	High amount of administration
Social Housing Construction Programme, 2011	State-owned housing was built in Ócsa for families owing a foreign-currency mortgage. 500 houses were planned, 80 were built, 41 have inhabitants	Location was in the outskirts and little chance of livelihood
National Asset Management Company, 2012	Buy-to-rent scheme where NAMC bought debtors' loans and then leased the debtor's home back to them. Debtor has the option to buy back the house from NAMC. Program targeted to vulnerable groups and was voluntary	People able to prevent eviction
FX loan rate cap scheme, 2012	Cap put on exchange rate on repayments	No basis for compensation
Forced conversion of FX loans, 2014	Government's decree forced banks to convert the FX mortgage loans into HUF at a current market-based FX	
Private bankruptcy law, 2015	Debtors can voluntarily file for bankruptcy under severe conditions	
Rent subsidy programmes	Private rent subsidies in certain municipalities where the cost of building own stock is higher than helping residents find apartments	Ensures low-to-middle income groups are able to get into the housing market
Social accommodation	To prevent the eviction of families living in high-quality but costly social housing, municipalities offer tenants lower quality, but afford flats instead	Decline of homelessness and evictions
Workers' accommodation, 2012	State supports those working more than 100km from home through rent subsidies	Subsidisation is costly
Not-for-profit organisations	Several NPOs in Hungary work in helping those evicted and experiencing homelessness, such as Halfway House	Affordable for those unable to get affordable housing

2.2.5 Spatial-temporal urban policies

Apart from the above described national housing programmes implemented in Hungary, several policies have played a major role in the urban research and housing policy related to urban regeneration. Thus, a spatial-temporal policy context for the selected case studies (as seen in the following chapter) must be provided (Table 2.5).

The Leipzig Charter on Sustainable European Cities 2007, named after the German city it was signed in, was developed and agreed upon by the EU ministers for urban development. The Charter emphasizes the

importance of integrated strategies and policies for urban development policy that consider the spatial, sectoral and temporal features of urban policy through the involvement of several stakeholders. Another aim of this Charter was to improve the quality of lives of people living in dilapidated urban neighbourhoods through reducing social inequalities and social exclusion with a special focus on vulnerable groups, improving the physical environments and strengthening the local economy (EU Ministers for Urban Development, 2007).

The European Regional Development Fund (ERDF) was initially introduced for a trial period of three years in 1975. It is one of the leading financial policy frameworks in the EU to readdress the disparities between the different development regions in Europe through providing financial assistance for countries to develop and improve their economy and enhance territorial cooperation with the EU (Commission of the European Communities, 2006). Furthermore, the ERDF action emphasises sustainable urban development through reducing social ills, environmental impacts and economic problems in urban areas. The ERDF runs in programming periods, with 2007-2013 being the most important for the current research as all the chosen projects received funding from this period. Projects that fell within the four key priorities (infrastructure investment; creating and enhancing local employment; technical assistance and; development of endogenous potential by measures which support regional and local development) were financed (Commission of the European Communities, 2006: 3).

Table 2.5: Major policies, strategies and plans that shape urban policies in Hungary. Source: own.

SUPRANATIONAL POLICIES AND STRATEGIES	NATIONAL POLICIES AND STRATEGIES	BUDAPEST REGIONAL POLICIES	JÓZSEFVÁROS PLANS AND STRATEGIES
European Union 2020 Strategy	Fundamental Law of Hungary	Integrated Urban Development Strategy	Integrated Urban Development Strategy
European Regional Development Fund	National Framework Strategy on Sustainable Development	Long-Term Urban Development Concept 2030	District Development Strategy
Leipzig Charter of 2007	National Strategic Reference Framework 2007-2013	Budapest Agglomeration Spatial Plan	Act LXXIV of 2016 on Townscape Protection
Territorial Agenda	Integrated Urban Development Framework		
	Competitive Central-Hungary Operational Programme 2014-2020		
	New Széchenyi Plan 2014-2020		
	National Development and Territorial Development Concept		

The Széchenyi Plan was introduced in 2001-2006 with the sole focus on economic reform. This development plan has a total of seven thematic programmes. Most specifically, the housing theme was allocated 69.9 billion HUF in 2001 and included four main objectives: (1) to increase the housing stock, (2) to renovate housing stock, (3) to enhance the mortgage system and, (4) to increase social rental housing for

low-income groups. After the 2002 parliamentary elections, the housing programme was integrated into the National Housing Programme, which aimed to ensure that housing stock was of quality, flexible with a just subsidy system, accessible through affordability, and sustainable housing stocks.

Operational Programme Central-Hungary (2007-2013) is a European Commission approved programme within the Regional Competitiveness and Employment Objective framework with an approximate budget of €1.73 billion (European Commission, n/d) and co-funded by the ERDF for the same period. This was developed due to the intermediate technological level of Central Hungary, which does not necessarily equal the high economic performance of the same region. As such, the main aim of this programme was to enhance the international competitiveness of Central Hungary while meeting the objectives of sustainable development. The programme had five main goals with six priority axis, which included strengthening the research and development and innovation activities; integrating regional roads into the international road networks; improving competitiveness for the region's tourism; increasing standards of education and health; raising the overall appeal of the living environment (European Commission, n/d). Most relevant to this research is priority axis five which focuses on the renewal of settlement areas with an approximately 14.2% budget. This priority axis emphasised enhancing the quality of life by developing dwellings and improving the environment. Hence, the introduction of social regeneration and urban regeneration projects focused on integrated action-based rehabilitation across Central Hungary.

The National Strategic Reference Framework, otherwise known as the New Hungary Development Plan, was adopted in 2007 for 2007-2013. This Cohesion Policy aimed to modernise the European region by advancing social cohesion and economic growth by decreasing the gaps between the development levels (European Union Regional Policy, 2008). Hungary received €25.3 billion in funds towards convergence (cohesion fund, convergence and phasing-out), regional competitiveness and employment (phasing-in and regional competitiveness and employment) and European territorial cooperation. This framework had six thematic and territorial priorities: social renewal, state reform, transport development, economic development, regional development, and environment and energy (European Union Regional Policy, 2008). The EU accession of Hungary played a crucial role in acquiring a vital source of investment (e.g. ERDF) for urban and regional development. Moreover, the local and regional governments and private investors (e.g. OTP) also played an important role. These grants and policies have given Hungary the edge to reduce the regional and economic disparities found between the country and the other Member States. Thus, these policies have significantly influenced the funding and implementation of urban regeneration projects.

2.3 Establishing a theoretical framework

2.3.1 Social sustainability

Since the Brundtland Commission Report in 1987, scholars, citizens and experts alike have been attempting to connect the three main dimensions of sustainability. Here, sustainable development is officially defined as “humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: 16). Sustainability emerged due to the increasing poor resource management caused by the degradation of natural resources. The work of ecologist and philosopher Garret Hardin (1968) titled the Tragedy of the Commons also emphasised communities working together to reduce the exhaustion of natural resources. However, the concepts of both sustainability and sustainable development have three issues. The first problem has to do with the vagueness of the definitions in that institutions can argue to support sustainable development when in fact, their actions may be against it (Jacobs, 1999). Secondly, the use of the term “future generations” can be interpreted differently. Thirdly, due to the sheer amount of steadily growing research on sustainable development, multiple definitions and methodological processes exist (Beckerman, 1994; Parris and Kates, 2003; Emas, 2015); hence no consensus exists in approaching sustainable development. Due to this, there has been a burgeoning of literature focused, arguably blurry, on sustainable development, hence the wide usage of this concept in several countries’ planning and urban policies.

In the triple bottom line, most attention has been paid towards the environment and then the economic dimensions, with little attention given to the social dimension despite its being an essential component of sustainable development (Nzimande and Fabula, 2020). Notwithstanding the social focus of the definition of sustainability, up until recently, little was known of social sustainability, especially in built environment disciplines. Thus, several scholars argue that the concept of social sustainability is underdeveloped and mainly reflects ideas from the Global North, which then compromises its utility in the Global South (see also Vallance *et al.*, 2011; Davidson, 2010). Apart from the theoretical challenges of social sustainability, Kohon's (2018) work has drawn attention to communities' contested challenges towards social sustainability. That is, if sexually oriented businesses and immigrants should also be inherently included in a socially sustainable community.

The social dimension of sustainability has been included in several policy frameworks, such as the European Unemployment Benefit Scheme. Despite these international progress, little is known about the social dimension of sustainability, its definitions, and conceptualisation. Furthermore, other concepts similar to social sustainability, such as social integration, sustainable city and social capital, have been more researched than social sustainability, with the definitions and even conceptualisation of these concepts being overlapped (Bramley and Power, 2009). However, these concepts are contested as they have not been consistently defined in the literature. Instead of bemoaning the vast array of these definitions, the multi-faceted definitions of social sustainability have been accepted as a natural process of the sustainability agenda. As such, the question of what constitutes social sustainability in urban areas is attempted to be answered through the review of social sustainability literature.

Before the definitions and indicators of social sustainability are dived into, Chiu's (2003) three typologies on which researchers perceive and interpret social sustainability are discussed. This typology has been selected due to its relevance to the current research as it takes a housing development perspective. The first typology links social sustainability with environmental sustainability whereby to achieve a socially sustainable activity; the said activity must either conserve or improve the social relations, values and structures already in place. This is due to the existence of social limits and restrains of development. If these social structures are not considered during developments, it will result in socially unsustainable activities. However, this first interpretation does not allow room for improving current social structures and seems to explain social sustainability through environmental sustainability. In essence, social sustainability appears to be used as a tool to further environmental sustainability goals. The environment-oriented typology is the second interpretation where Chiu (2003) refers to the social conditions vital for realising environmental sustainability. This interpretation addresses the first typology in that it argues that social structures and values could be altered to fit the needs of activities, as long as these are within the physical boundaries of the environment. The third typology is the people-oriented interpretation which argues for the just distribution of resources and minimising social injustice and inequity in order to improve the quality of life. Chiu's (2003) work on the social sustainability of Hong Kong's housing development used both the second and third typologies to determine the key components of sustainable housing development.

The Western Australian Council of Social Services (WACOSS) developed a Model of Social Sustainability in 2000 to understand the housing issues that low-income households were experiencing. Through extensive consultation with these households, a set of criteria were identified. Here, social sustainability is defined as the "impact of formal and informal systems, structures, processes and relationships on the current and future liveability and health of communities" (Barron and Gauntlett, 2002: n/d). Through this, socially sustainable communities are diverse, connected and democratic, equitable, and provide a good quality of life to their residents. This definition mentions three crucial features: the processes that support the capacity of the residents (conditions); this definition explains what socially sustainable communities are (measurements); it emphasises the importance of the present and future generations, which means it is also future-focused. Similarly, Stren and Polése's (2000:16-17) definition of social sustainability draws attention to the collective actions of the community to improve their quality of life; "development (and/or growth) that is compatible with the harmonious evolution of civil society, fostering an environment conducive to the

compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population”. McKenzie (2004: 12) offered a working definition where social sustainability is a “life-enhancing condition within communities, and a process within communities that can achieve that condition”. Here, the concept of social sustainability is seen as a process where specific indicators of the said condition have to be present to indicate a socially sustainable community.

Despite the definitions that researchers have provided, more often than not, researchers identify the main indicators of social sustainability (Table 2.6). For instance, Dempsey *et al.* (2011) listed non-physical contributory factors such as social justice, participation, social capital, mixed tenure, quality of life, education, social interaction, cultural traditions, residential stability, place attachment, fair distribution of income, amongst other features. WACOSS’s model also highlighted five principles of social sustainability: equity (fair and just distribution of resources), diversity (encouragement of diversity), interconnectedness (provision of systems to promote interconnectedness), quality of life (meeting the needs of the community) and, democracy and governance (promotion of democratic and governance structures). All the principles include several characteristics (Barron and Gauntlett, 2002).

Table 2.6: Indicators of social sustainability. Source: own

References	Security and safety	Education	Quality of life	Equity	Well-being	Community participation	Future focus	Satisfaction of human needs	Social innovation	Work (also voluntary)	Social capital	Place attachment	Personal disability	Social mixing	Democracy and governance	Social interaction	Affordable housing
Hans-Böckler-Foundation (2001)				✓				✓	✓	✓							
Magis and Shinn (2009)				✓	✓										✓		
Omann and Spangenberg (2002)		✓				✓				✓							
Baines and Morgan (2004)				✓		✓	✓	✓			✓		✓	✓			
Bramley and Power (2009)	✓					✓						✓				✓	
Littig and Griessler (2005)		✓	✓					✓		✓						✓	
Barron and Gauntlett (2002)			✓	✓										✓	✓	✓	
Chiu (2003)			✓	✓												✓	
Dempsey <i>et al.</i> (2011)	✓			✓		✓						✓				✓	
Bramley <i>et al.</i> (2009)	✓	✓				✓		✓	✓			✓				✓	✓

Literature has also associated physical features with social sustainability. For instance, Dempsey *et al.* (2011) provided a list of physical factors that have been discussed in various literature in connective to defining urban social sustainability. These include sustainable urban design, neighbourhood, walkable, pedestrian-friendly neighbourhood, attractive public realm, urbanity and proximity to basic amenities. Of course, physical features are essential for supporting social sustainability; however, autonomously studying them cannot create the capacities that communities need to become socially sustainable. However, as Eizenberg and Jabareen (2017) posit, social features are more challenging to account for, due to social structures being dynamic across space and time. In his work of reviewing the concepts of social

sustainability, Colantonio (2009) provided a chronological analysis of the shift from traditional themes such as social justice, basics, and equity to emerging, intangible concepts that include social capital, social mixing, and empowerment. The difference between these two types of indicators is threefold. Firstly, the emerging indicators are focused on multidimensional issues that influence social sustainability, while the traditional themes are static and mono-dimensional. This is because the conventional themes were concerned with using “the analysis of discrete issues accessible to specific methodologies related to individual themes that are linked to targets rather than objectives” (Colantonio *et al.*, 2009: 28). Secondly, the leading spatial space for achieving social sustainability has moved from regional to local.

The review of social sustainability literature has shown sustainability is not an absolute concept with well-defined indicators as researchers define and conceptualise it according to the time and place of research. Hence, the oversimplification and under-theorising of social sustainability in existing theories have meant that there is currently no universally accepted criteria for social sustainability with clear, coherent definitions (Colantonio *et al.*, 2009). Furthermore, the social sustainability indicators have clearly strong links with sustainability's economic and environmental dimensions. This means that this concept is dynamic, hence the continuous need for further investigation into the development of social sustainability. For the purpose of this research, the aspects of community participation, place attachment and well-being were prioritised as this is where the current literature made the strongest associations between residential satisfaction in the urban setting and the indicators of social sustainability. Despite the importance of both the physical building and social features of housing being equally important, residential satisfaction studies have often neglected social sustainability indicators.

2.3.2 Social justice

Although there have been debates about the concept of justice since the ancient ages, human right is a fairly new concept that is not more than 350 years old. First introduced in the 1800s by an Italian Catholic Priest Jesuit Luigi Tapparelli d’Azeglio, who based his work on Thomas Aquinas teachings, social justice was fundamentally based on the Christian doctrine where Jesus cared for the weak, sickly and overly less fortunate and such, all people should seek to do the right thing (Sadeghi and Price, 2007). Since then, the concept of social justice has been variously defined, cutting across different disciplines. This is primarily due to the historically dependent value system. Therefore, it is vital first to understand the rights people should or currently enjoy and how society could assist the less fortunate.

The term “justice” has been deliberated in several pieces of literature, with different types of justice presented. According to the Merriam Webster dictionary, justice is the “maintenance or administration of what is just especially by the impartial adjustment of conflicting claims or the assignment of merited rewards or punishments”. In other words, justice refers to the fair and just action in agreement with the legal process. There are predominantly two types of justice in explaining justice: distributive and procedural. Firstly, distributive justice, also known as economic justice, is concerned with the perceived fair distribution of resources and opportunities by people in an organisation. Here, distributive justice is connected to the equity and exchange principle, where people look at what they have received based on what they have contributed and then compare this with others in similar situations (Lambert, 2003; Lucas *et al.*, 2016). For instance, de Wet (1997) analyses South Africa’s land reform initiatives to correct the Apartheid injustices using the distributive justice lens. However, the process of the outcome matters as much as the outcome itself. On the other hand, procedural justice refers to organisations’ processes to arrive at decisions. These processes should be impartial and consistent to ensure unbiased outcomes which may reward or punish persons (Folger and Cropanzano, 1998). Leventhal (1980) compiled six-rules of land acquisition criteria, including consistency, bias-suppression, accuracy, representatives (public participation), ethics, and correctability.

Apart from these two salient dimensions of justice, other types do exist. Firstly, retributive justice is based on the retroactive approach and notion of desert and deterrence, where people have to be proportionally

punished to correct past injustices (Walen, 2020). These people often have an unfair advantage due to their behaviour, and as such, the punishment will balance them with other people (Maiese, 2003). Such conflicts that require punishment include war crimes, enslavement, genocide, among others. Findings from Carlsmith and Darley (2008) found that Americans are losing respect for the legal system that is based on retributive and utilitarian principles. The opposite is restorative justice which takes a community-based approach that “operates from a belief that the path to justice lies in problem-solving and healing rather than punitive isolation” (Conflict Solutions Center, 2016). Victims are healed, and criminal offenders understand their transgressions against the victim and community. Through the restorative process, offenders are restored into upstanding citizens via dialogue to reconcile. One example of this is the Truth and Reconciliation Commission that has been implemented in several countries such as Canada, where the TRC was provided to those affected by the Indian Residential School system (Government of Canada, 2019). Expectedly, critics argue that this was a “Kleenex Commission” that allowed many offenders to go unscathed (see Henderson, 2000; Ibhawoh, 2019).

Thirdly, interactional justice was first conceptualised by Bies and Moag (1986) to refer to the perceived treatment of people by their superiors during conflict resolution. This justice is characterised into two types: informational and interpersonal justice. The former refers to the quality of information regarding decisions and procedures affected parties receive from superiors with honest discussions. For example, in URP, communities expect to be timely informed of the social, environmental and economic impacts the project may have on their quality of life. The latter is concerned with the treatment of people by superiors and may include social sensitivity qualities such as politeness, respect and dignity while refraining from discrimination and prejudices (Blodgett *et al.*, 1997; Vu, 2011). And finally, in a world where there is an inequality of resources and opportunities, the (in)justice of recognition has evolved. This justice refers to the perceived injustice that people experience based on their standpoint. This could be related to race, disability, gender/sex, socio-economic and other factors. In this, Fraser (1995) argues for both redistribution and recognition for justice to prevail by drawing attention to two types of injustices: socio-economic (such as economic marginalisation) and cultural (such as non-recognition and cultural domination). This is further supported by Taylor (1992), who argued that giving recognition is a human need and not a courtesy. Furthermore, misrecognition of an individual is not merely rude but deprives them of full access and participation that other recognised groups enjoy (Giladi, 2017). Misrecognition is intricately linked with epistemic injustice whereby an individual is silenced, excluded and misrepresented by others in their community (Fricker, 2007) through testimonial injustice where a social group is persistently assigned lower credibility due to their social identity (Díaz and Almagro, 2019). Hermeneutical injustice is where a social group’s experiences are misunderstood due to the lack of interpretive frameworks put in place to understand that group’s experiences (Carel and Györffy, 2014). These injustices rob individuals of their self-esteem and power to become rational enquirers in their community.

Rawls (1999) produced one of the prominent theories of social justice, where he opposed the utilitarian view of the society working to achieve the greatest good for the largest number of societal members. This theory offers another variant of the social contract theory (see Grcic, 1985; Jos, 2006) that evolved in the Age of Enlightenment. The social contract theory argues that people must live together in society according to an agreement that establishes moral and political rules of behaviour. It is believed that if people live according to a social contract, they can live morally by their own choice and not because a divine being requires it. The Theory of Justice connects both freedom and equality in that all members of the society have equal rights and equal opportunities. Rawls (1999) introduced the Original Position to create a hypothetical scenario where members of the society have a social agreement on the equal distribution of resources. All members of the society are assumed to have a “blank slate” in that none know their social class, economic standing, strengths and weaknesses. This veil of ignorance (which blinded people to their characteristics such as income and race) would then produce fair principles of justice as bias would be eliminated where people think only for their betterment. These two principles are the principle of equal liberty, where all individuals have an equal right to basic liberties, and the principle of equality, which

means that social and economic inequalities should be addressed through two requirements. Firstly, all those with similar abilities must be given equal opportunities regardless of their race, ethnicity or income level. Secondly, the significantly disadvantaged must be given the greatest benefit (Rawls, 1999).

Despite the wide acceptance of Rawls's Theory of Justice, it is not without its shortcomings. Firstly, the principle of equal liberty has been criticised for objecting to natural liberty where people could suffer or benefit from circumstances that are not theirs (Sandel, 2005). Secondly, libertarians argue that the difference principle tends to infringe upon liberty in favour of satisfying a greater population (Sullivan and Pecorino, 2002). Thirdly, the original position and veil of ignorance have been accused of excluding certain moral details in favour of promoting rationality (Sullivan and Pecorino, 2002) and of abstraction as a method of inquiry (Matsuda, 1986) where a person is seen as devoid of any commitments and capacities (Baker, 1985). Fourthly, Rawls assumes, through his principles of justice, that everyone would choose these two principles behind the veil of ignorance. And finally, Young (2011) criticised Rawl's distributive justice for only focusing on the redistribution of goods while neglecting cultural factors and issues of oppression and domination.

In contrast to John Rawls' perspective of social justice, several theoretical approaches were introduced. The list is exhaustive but includes influential utilitarianism, libertarianism, and neoliberal thinkers. Firstly, utilitarianism, firmly associated with John Stuart Mill, is an ethical theory concerned with doing the greatest deed to achieve the greatest happiness for the greatest number. Due to the understanding that a person is a sentimental being who will avoid pain while maximising happiness, this theory is based on the doctrine of hedonism. The utility theory believes that state regulation and intervention are required to ensure that greatest happiness for the greatest number is achieved. Rawls (1999) had criticised utilitarianism for not protecting the basic rights of individuals. Utilitarian theories have been opposed for ignoring individual rights to achieve the maximum happiness for the greatest good (Vyas, n/d). Hence the work of Ronald Dworkin's Notion of Justice (2013) argues that infringement of individual rights results in severe injustice.

Secondly, libertarianism is a philosophical construct that aims to maximise individualism through autonomy and minimal state intervention. One of the most influential libertarian theories is that of Robert Nozick. He argues that the state's activities should be minimised to not infringe upon the right of citizens. Unlike Rawls's theory, Nozick (1974) introduced the entitlement theory where individuals are not a means to an end but an end in itself. This theory further argues that only once everyone concerned is in agreement can the resources be distributed. As such, three principles are introduced by Nozick: (1) the principle of justice in acquisition, (2) a principle of justice in transfer and, (3) a principle of rectification of injustice. Critiques of this theory include its exclusion of certain groups such as children and minorities (Bojer, 2000), its definition of just acquisition of property (Nnajifor and Ifeakor, 2016), the impracticability value of the entitlement theory (Vagas, 2009 in Nnajifor and Ifeakor, 2016) and the absolute adoption of Locke's theory of property and patterned principles (Psarras, 2010).

And thirdly, neoliberal thinkers have also provided their position on social justice. One of these was Friedrich Hayek, who, in his three volumes of *Law, Legislation and Liberty*, doped social justice several terms such as a "mirage", a "will-o-the-wisp" and a "quasi-religious belief with no content whatsoever" (Hayek, 1976). In summary, he argued that social justice is a vacuous concept that is impractical in the modern world (Hayek, 1976). Basically, Hayek postulated that the term "social" introduces ambiguity as it has been confused with more than 100 nouns which destroyed the actual meaning of the word. He argued that social justice is the giving out of economic rewards by the state; even though people's actions can be classified as just or unjust, the markets cannot be classified as such (Hayek, 1982). This is because someone else cannot predict markets and other circumstances. Thus, Hayek rejects the concept of social justice as distributive justice simply does not fit in with his definition of justice. As Su (2009: 403) puts it succinctly, "this claim of irreconcilability is in principle based on the belief that social justice means nothing more than distributing income or wealth in accordance with a certain principle or pattern". Suppose resources were to be distributed according to merit; in that case, a judge will have to be appointed who will be responsible

for the distribution process, which means the judge will inevitably influence people's activities and infringe upon the principle of liberty.

As evident, social justice has been defined and interpreted in several ways, cut crossing disciplines, with no single agreed-upon definition and principles. Nevertheless, for this dissertation, I define social justice as a philosophical concept used to refer to the fair relations between the individual and society so that equal opportunities allow people to participate in a sustainable social market economy. Specifically, the different forms of justice are combined in that everyone has the right and opportunity to have an affordable, reasonable and decent home (distributional), residents can participate in neighbourhood planning processes (procedural), the law recognises the different disadvantages that various groups, such as people with disability, might experience (recognition), and the quality relationship between residents and the key stakeholders (interactional). Individuals can participate in this economy if they are genuinely given equal opportunities for self-realisation and be empowered to pursue a self-determined course of life. Khechen (2013) focuses on four key terms that are valuable to social justice: equality, equity, rights, and participation. However, according to the Social Justice Index, social justice is composed of the following six dimensions: poverty prevention, access to education, labour market inclusion, social cohesion and non-discrimination, health, as well as intergenerational justice. Based on the 2019 EU and Organisation for Economic Co-operation and Development SJI, the five countries from northern Europe (Iceland, Norway, Denmark, Finland, and Sweden) ranked the highest amongst other countries, with Hungary being 21st (Hellmann *et al.*, 2019).

In the 21st century, social policy is the most “powerful tool to diffuse the values and attributes of social justice and ensure equity in the distribution of material and non-material goods in society” (Khechen, 2013: 6). Several countries have social policies that emphasize fundamental social justice principles; however, policies often fail to adequately address such goals in the implementation. This failure is primarily a result of piecemeal and disjointed economic and social policies. There are different social protection programmes and services that governments have implemented, and subsidies are one form of it.

2.3.3 Spatial justice

Earlier work on spatial justice could be traced back to Davies (1968), where he used the term territorial justice to refer to the distribution of services in geographical areas based on the needs of that community. However, resource allocation issues will persist even if territorial justice is achieved. These include the ecological fallacy of distribution of resources, the balance between local autonomy and territorial justice, the compromise between efficiency and equity, and lastly, absolute assurance of equality of the well-being of the community is still not promised even after the realisation of territorial justice (Boyne and Powell, 1991). In this, territorial justice is similar to social justice. Harvey (2010) furthers this concept by arguing that geographical areas differ based on their needs and offers three principles of territorial justice: need (being socio-economic and/or physical), merit (regarding environmental difficulty) and finally, the contribution to the common. It is worth noting that Harvey never used the term spatial justice in his writings because, for him, there is a distinction between relational, absolute, and relative (as compared to that of Lefebvre's distinction: material and conceptualised) space (Harvey *et al.*, 2011).

There exists a paucity of researchers attempting to define spatial justice. Perhaps this is due to the capricious way of spatial justice, that it cannot be easily achieved nor inalienable but should be treated as an ever-evolving emergence. Spatial justice operates in a system where one has to assess their situation and positionality constantly. To draw attention to spatial justice's spatial and temporal issue, Philippopoulos-Mihalopoulos (2019) defines this concept as the longing in which an individual would like to dwell in the same space at the exact time as another individual. Legally, spatial justice is treated as a concept where justice is continuously administered by the high law where issues resolved in a legal court reveal justice.

Work on spatial justice has also been published by critical geographers such as Pirie (1983: 471-472) who argued that space is absolute and “created by society and not merely a context for society” and so requires a move towards “an alternative conception of space itself” (Ibid: 471). Despite the recognition that space could be itself constructed, Pirie did pursue the fact that space is a social construct. In a bid to address this challenge, Mustafa Dikeç’s work on spatial justice has focused on three notions, with explicit employment of the principle of *égalité* where both equality and freedom must be embodied in justice so to suppress oppression and domination (Dikeç, 2001). This triad includes (1) the right to the city, (2) the right to difference and, (3) the spatial dialectics of injustice. The political and ethical relationship, or rather bond, between these notions, could lead to emancipatory actions for those experiencing spatial injustice. Dikeç (2001: 1794) thus emphasises this bond by arguing that “the notion of spatial (in)justice sets the parameters by which the right to the city may be assessed, violations of which are resisted through a right to difference”.

One of the leading academics who has also done significant work on spatial justice is Edward Soja. As he puts it succinctly, spatial justice refers to the “fair and equitable distribution in the space of socially valued resources and the opportunities to use them” (Soja, 2009: 2). If these resources and opportunities are not fairly shared, it will result in spatial or geographical injustice. In this, the relationship between social processes and spatial arrangements is highlighted. However, spatial justice is not supernumerary to the other types of justice but rather offers another perspective of understanding the geographical aspect of justice. This is because society is shaped by space, and space is shaped by society. Soja (2010) further postulate that inequalities are perpetuated in spaces and greatly criticised social scientists who are unaware of spatial injustices caused by social processes. Interestingly enough, Sandoval (2011) reviewed Soja’s *Seeking Social Justice* and found four characteristics that are associated with spatial justice: spatial consciousness, ability to change geographies, participatory democracy and lastly, sustainability. Furthermore, spatial justice has two chief justices: procedural justice refers to the decision-making processes used to achieve an outcome, and distributive justice focuses on the fair and just distribution of goods and services (Didier and Quentin, 2019).

However, there does not seem to be a distinct difference between territorial justice and spatial justice. Philippopoulos-Mihalopoulos (2014) explains that Harvey’s territorial justice is mainly related to social space and not limited to physical space, while Soja makes no distinction between spatial justice and regional democracy and discusses social justice from the spatial viewpoint. Location discrimination, or rather territorial stigmatisation, has been intricately linked with spatial injustice (Soja, 2009). Territorial stigmatisation is primarily concerned with the negative and stereotypical images painted by the media and government of a specific geographical area. This concept explains how an area’s blemish negatively affects the residents living in those disparaged places (Wacquant, 1993), which has a ripple effect on the rest of the community where surrounding businesses and denizens are impacted. Furthermore, territorial stigmatisation has triggered a wide range and level of prejudice and discrimination directed towards the lower-class residents by outsiders. It undermines the collective identification of the residents and therefore forces residents sometimes to omit the truth when applying for jobs or universities for fear of rejection (Armstrong, 2012).

Most importantly, spatial justice is not a philosophical concept where discussions are held in controlled settings, but it is an emergence outcome that should be actively challenging the status quo to improve the quality of life of people in all areas through participatory, social activism (Soja, 2010). In other words, spatial justice sought to find interventions to achieve a fair and just society. Of course, this is not a simple process and may be seen as a dubious task as inequality, marginalisation and discrimination are deeply embedded into societal institutions. Due to the transdisciplinary across geography, law and philosophy, the definition, concept and methods of spatial justice have remained rather broad. Philippopoulos-Mihalopoulos (2019) postulates that the question of “what is spatial justice” should remain unanswered as answering it may suggest a specific setting in which a utopian value exists.

2.3.4 Socio-spatial justice

Having explained the concepts of social justice and spatial justice, this sub-section goes on further to link the two concepts that are often, incorrectly so, overlapped in literature. Noteworthy, both the spatial and social processes are equally important in this research, and as such, none is more important than the other. With the exemption of the work of Alfasi and Fenster (2014), there has been no attention focused on socio-spatial justice as scholars have tended to lean towards social justice or spatial justice (see Iveson, 2011). It is not the purpose of this text to debate the two concepts; instead, it uses socio-spatial justice as the theoretical framework of this dissertation. This is because space is a social product, reflecting social processes and formations, but it can also be considered an active agent that influences spatial processes. Space and society mutually affect each other. In other words, social processes are spatially reflected across all scales, not just limited to the city, with space being a vessel where inequality, segregation and social revalorisation are produced and manifested.

Alfasi and Fenster (2014: 411) define socio-spatial justice as “oriented toward creating an institutional and procedural base for delivering the highest level of planning goods for a variety of individuals and communities, whether defined in advance or not”. In other words, socio-spatial justice is a concept that is intricately linked to planning sustainability, where civil society organisations initiate the different planning approaches such as advocacy and communicative planning (ibid, 412). Related to planning and justice, Fainstein (2009) discusses three components of a just city and, therefore, urban justice: material equality, diversity, and democracy that are important for just urban planning. Through the use of spatial planning of case cities, she finds that these components are not interdependent as there might be instances where they might clash. In another research, through engaging with philosophical and political theory, Fincher and Iveson (2011) identified three critical principles associated with justice: encounter, redistribution, and recognition. Moreover, the same authors have deliberated on the analogy of social or socio-spatial justice: “for if one determines that the socio-spatiality of (in)justice is defining, rather than the social, then the forms of difference to be studied would be avowedly socio-spatial rather than social, and the philosophical categories to be sought would equally be socio-spatial rather than social” (239). Here, social sustainability is defined as a concept where all members of society have the equal distribution and availability of socio-cultural and economic opportunities, resources, and services to reduce marginalisation and inequality. Socio-spatial justice questions the capitalist, “winner-takes-all” system while encouraging society to organise themselves sustainably spatially. Therefore, focusing on “what needs to be done” in cities experiencing injustices, attention has been on the “right to the city”, “just city” and “compact city”.

In 1968, French philosopher Henri Lefebvre coined the phrase “the right to the city” during the protests in urban Paris to refer to the right to the usage of the urban space, the green space, to social networks and urban resources (Lefebvre, 1968). Due to the abstraction of the definition of “the right to the city”, Lefebvre has been criticised for a vague explanation as to whose “right” is being referred to here, what specific “rights” are being referred to here and what “city” (see Marcuse, 2009). The right to the city has two fundamental rights for those living in the urban space: the right to appropriation and the right to oeuvre (participation). The former refers to the right to physical availability, access and utilisation of services in the urban space by the inhabitants, while the latter emphasizes that those in the urban space must play a central role in decision-making processes that contributes to the production of urban life (Purcell, 2002). In addition, David Harvey (2008) posits that the city is vital for the very existence of capitalism because of the geographical and social concentration of surplus production. In this, he draws attention to power dynamics and control in urbanisation, where the right to the city is largely claimed for private interests. Acknowledging the work of the various right to the city movements active across the world, Harvey argues that these movements lack a coherent aim to ensure that those with surplus production are no longer wholly controlling the right to the city. In this, Harvey reiterates Lefebvre that the right to the city urban revolution has to be a “working slogan and a political ideal” (ibid: 14). So, with regards to the right to the city, he calls for greater democratic control over the production of surplus products.

Discussions on “the right to the city” have varied across different disciplines like geography, economics, and agriculture. Most relevant for this dissertation is the rising scholarship on disenfranchisement in cities

from the housing stance with the use of “the right to the city” against the struggles of neoliberal policies and access to housing. It is used as an analytical tool to move from a just spatial rights to a more inclusive empowerment of citizens and mobilise social movements towards addressing and correcting an injustice. Published work has been on gentrification (Balzarini and Shlay, 2016; Tsavdaroglou, 2020), homelessness (Langegger and Koester, 2016) and social housing (Darcy and Rogers, 2014). The focus on housing has increased because of the abandonment of the public housing policies as a social good due to the assumption that markets could regulate housing (Rolnik, 2014). Although the right to the city, under socio-spatial justice, can provide an operational framework for urban policymaking, it should not be treated as a panacea.

Due to the historic uneven development processes in post-socialist cities, socio-spatial injustices have been evident through time and space. From this, urban regeneration projects have been on the rise to address and correct the past injustices that are embedded in the social, physical and economic infrastructures. Urban space is socially constructed with the actors involved in different processes of planning being responsible for creating just or unjust spaces (Bassett, 2013). Nevertheless, urban regeneration often creates new injustices such as exclusion, displacement, and gentrification. In the case of gentrification, community members are usually divided concerning who can claim the right to the city. As the right to the city is concerned with the neighbourhood power, when developments occur in an urban community- issues arise of which direction a development occurs (Zhou, 2017). An example of this division occurred in Fishtown (United States) where the proposed development of a casino in the community caused a conflict between the long-time residents and the upper-income residents (Balzarini and Shlay, 2016). This points to an important issue that community members may not have similar interests in spatiality and oftentimes act on self-interest than community-shared ideologies (Dargan, 2009). Other times, residents may protest against new investment in their community not just because of pressure and exclusionary displacement but also because of fear of racialized exclusion. In a study by Danley and Weaver (2018) in the United States, they found that residents of Camden feared gentrification due to the creation of “white spaces” where the residents will be excluded from. As such, the same authors suggest that addressing exclusion (that may be caused by gentrification) through participative design and place-making in urban space may abate community fear.

Through the socio-spatial lens, this research looks at urban regeneration programmes in Budapest that were developed to mitigate injustices at the local neighbourhood scale. Socio-spatial processes are obsessed with the redevelopment and growth of urban spaces through connecting spatial and social spheres, thus laying the bedrock of social sustainability. Treated individually, both social and spatial justice offer fundamental frameworks in addressing urban issues; however, integrating them into one mutually supports and complements possible weaknesses of the frameworks. Socio-spatial justice, as promoted by social sustainability, can be treated as a crucial step towards encouraging democracy, active participation in decision-making processes, and creating sustainable, resilient cities.

2.4 Chapter conclusion

This chapter explored the theoretical groundings in relation to housing in Hungary. A literature review that tracked the urban redevelopment processes sought to ask “what is housing” was provided. This review found that urban regeneration is the appropriate concept that will be used throughout this dissertation to refer to the redevelopment and rejuvenating of urban space. An analysis of the historical housing policies helped understand why social housing provision in Hungary is low while there is a high number of homeownership. Lastly, through reading several publications related to this research, social justice and spatial justice were most relevant in guiding the rest of the dissertation. As a result, the socio-spatial justice framework was chosen due to the complexity of the current research. Moreover, sustainable urban development is the overarching concept that sets the theoretical framework's approach. The conceptual framework of residential satisfaction is critically presented and developed in the following chapter.

3. Conceptualisation of residential satisfaction

3.1 Introduction

This chapter presents the conceptual framework of the study of residential satisfaction. The evolution of satisfaction, concepts, literature, and definitions associated with residential satisfaction are discussed in the first half of the chapter. The second half of the chapter includes the current research gaps in the study of residential satisfaction together with the conceptual model developed for the current research. The chapter summary provides a linkage between the different sections.

3.2 Consumer satisfaction theories

The concept of satisfaction is relative, and as such, several competing theories have been developed to explain customer satisfaction throughout the decades. Satisfaction is a concept used to describe an individual's feeling of contentment after consuming a specific product. Before the multidimensionality of this concept, satisfaction studies were mainly in marketing, hence the consumers' satisfaction models that arose. These several theoretical approaches to consumer satisfaction have also been used to explain the relationship between disconfirmation and dissatisfaction. Therefore, the critical customer satisfaction theories that have influenced residential satisfaction theories and models are discussed in this sub-section.

3.2.1 Dissonance Theory

The theory of Cognitive Dissonance was originally developed by Kurt Lewin, who emphasised the dynamic forces that people have and use to navigate in their social space. This provided the foundation for Festinger (1957) to refine and further develop the theory to Assimilation Theory. According to Festinger's perspective, the prominent factors that affect people's lives are varied and dynamic. Meaning, these factors were shaped and motivated by the social world and people's personalities. The Dissonance theory suggests that when a customer, who expects a product of high value, receives a poorly valued product, discord will be formed due to the compared expected and received product performance. A negative cognitive dissonance will then be experienced by the customer who will put psychological pressure for the perceived performance to be reduced. Anderson and Fornell (1994) explained this as the post-usage evaluation. Therefore, through the customers identifying disconfirmation, the product's perceived performance then conforms to the initial expectation level.

Several researchers have vastly criticised the Dissonance theory. Firstly, the theory does not clarify how and whether customers will adjust discrepancy as the model predicts. Secondly, while it is agreed that satisfaction results from comparing the expectation and the product performance, the theory does not stipulate how disconfirmation leads to the satisfaction or dissatisfaction of product (Aigbavboa, 2014). Lastly, the model fails to consider the "tolerance level" lower limit in which customers are willing to accept a range of product performances, as long as the range is realistically accepted (Yüksel and Yüksel, 2008). As such, the greater the distance the performance is from this realistically accepted zone, brand performance will be perceived as being different from the original product and cause greater dissatisfaction with the product (Woodruff *et al.*, 1983).

3.2.2 Contrast Theory

Whereas in the Assimilation theory, customers are assumed to adjust the perceived difference between the product performance and the expectation of the brand, the Contrast theory postulates that customers may exaggerate this disparity. Based on this theory, when the product's performance is lower than the customer's initial expectations, this disparity between the initial expectation of performance and actual performance will cause the customer to exaggerate the gap (Yi, 1990). This means that products that performed well

below the expectations will be measured or rated poorly than in reality. Compared to those that performed well above the customer's expectations, that will be rated more than justified (Cardozo, 1965; Oliver & DeSarbo, 1988). Based on this theory, post-usage evaluations lead to opposite predictions for the effects of expectations on satisfaction. Apart from laboratory studies such as that of the ball-point pen by Anderson (1973), this theory has not been tested in the field.

3.2.3 Assimilation-contrast Theory

Proposed by Sheriff and Hovland (1961), the assimilation-contrast theory combines the assimilation and contrast theories. This theory postulates that consumers hesitate to concede the discrepancies from previously held expectations and distort the perceived product performance into the prior expectancy level, hence lowering the relevance of the disconfirmation experienced. This theory suggests that satisfaction is a function of the size of the discrepancy between the perceived and expected performance of the product. Similar to the theory of assimilation, customers will adjust or assimilate the relatively small discrepancies between the perceived and expected performance of the brand. However, the contrast theory showed that if a significant discrepancy exists between the expected and perceived performance, customers often tend to exaggerate the perceived gap (Peyton *et al.*, 2003; Isac and Rusu, 2014). However, Aigbavboa (2014) posits that most of the discrepancies of a product are not exaggerated by the users, such as in the context of affordable housing but are the honest evaluation based on what the residents have experienced. Of course, the functionality of products may be evaluated from an emotional lens. The disparity between the expected and perceived performance may be both subjective and objective, depending on the consumer. This theory aimed to illustrate that both the assimilation and contrast paradigms have applicability in consumer satisfaction research.

3.2.4 Attribution Theory

It is important to note that although the above theories have been used in satisfaction models, the Attribution theory has been used in dissatisfaction models and has been included in this description to provide a complementary theory. Derived from the research of Weiner *et al.* (1971), this model sees customers as rational processors of information that understand and explain the reason a purchase outcome has failed or succeeded (Folkes, 1984 cited in Yüksel and Yüksel, 2008). Customers use three dimensions for this: (1) locus of causality (internal or external cause), (2) stability (erraticism of outcome), and (3) controllability (volitional or non-volitional control). As such, this model seems more fitting in explaining customer dissatisfaction as it is, in essence, an extension of the negative disconfirmation of expectations under the expectancy-disconfirmation model

3.2.5 Expectancy-disconfirmation theory

The expectancy-disconfirmation satisfaction model (EDSM) was proposed by Oliver (1977) to address the shortcomings of the above theories. It is based on the work of Howard and Sheth (1969) that suggests that satisfaction is the degree of congruence between aspirations and the perceived realities of experience. In essence, expectancy-disconfirmation is formed from two processes, i.e. expectations and disconfirmation of these expectations through comparing the performances. According to this theory, customers create pre-purchase expectations of the product. This means that the expectancy level then becomes a standard for which subsequent purchases are formed. The expected level is then compared to the actual performance level after purchasing the product. If the judgement that results from the actual performance matches the expected level, confirmation occurs. However, negative disconfirmation occurs if the product's performance is worse than initially expected.

Although conceptually connected, both expectation and disconfirmation have a separate effect. The expectation level represents a baseline comparison standard against which disconfirmation judgements occur. As such, the higher the consumer's expectation, the higher the succeeding satisfaction judgement, *ceteris paribus*. The results of the disconfirmation of performance and expectations could be either negative, positive or balanced. Positive and balanced disconfirmation leads to satisfaction, while negative disconfirmation simply yields dissatisfaction.

The EDSM is the most widely applied paradigm in satisfaction studies to judge satisfaction in three main ways: higher satisfaction, satisfaction, and dissatisfaction. Similar to this is the actual-aspiration gap, developed by Galster (1987), who argued that the degree of satisfaction is dependent on the gap between the perceived actual environment and the aspired-to environment of individuals. In other words, a resident would cognitively construct a reference quality of a housing feature which will act as an ideal standard depending on their self-assessed needs and aspirations. If the actual housing feature is perceived to be in close congruity with the reference quality, residents attain satisfaction. However, suppose the mental picture of the housing quality that the resident had does not reach "threshold deficiency", in that case, residents will either lower their expectations and aspirations or a degree of dissatisfaction will be attained (Galster, 1987). This theory is also known as the psychological construct theory.

For this study, satisfaction and dissatisfaction will be the two ways used to understand satisfaction judgement. Furthermore, the EDSM not only focuses on product performance but also on service performance which fits in with the housing-led urban regeneration projects that have been chosen for this research study as these are provided by the government. However, despite this paradigm being supported by researchers from different disciplines, shortcomings exist. Firstly, the theory assumes that expectation is unchanging amongst the customers and that all customers have the exact pre-purchase expectations. Secondly, although customers make better decisions when they rely on prior experiences, this theory does not take into account that expectation is dynamic and is affected by the time when it was measured (Yüksel and Yüksel, 2008). Next, the model failed to explain how expectation levels of customers with limited brand experiences of goods and services could be generated (Halstead *et al.*, 1994). Despite these shortcomings, the current research leans towards this paradigm. Furthermore, to address some of these shortcomings, this research conceptualised its model and attributes through creating and administering questionnaires to current residents of the regenerated flats in Budapest.

The wide variance and definition assigned to satisfaction has meant several institutions to develop their reference points as a benchmark to compare customer satisfaction figures. To combat this, various methodologically harmonized national customer satisfaction indices have been developed (Hackl and Westlund, 2000). Customer Satisfaction Index (CSI) include the American Customer Satisfaction Index (ACSI), European Customer Satisfaction Index (ECSI), South Africa Customer Satisfaction Index (SAcsi). These CSI are used by companies, institutions, and/or organisations to assess their post-purchase performance to improve the quality of their service or product and retain customer loyalty (Fornell, 1992). The ECSI (Figure 3.1) is an analytic tool that is used to measure customer satisfaction. It was developed through the partnership of the EU Commission, the European Foundation for Quality Management, the European Organization for Quality, and various institutions (van Haaften, n/d). Although several modifications of this model exist, generally, the ECSI has seven latent variables: the perceived value, corporate image, perceived service and product quality, and customer expectation form the antecedents of the model; while customer loyalty and complaint are the results of satisfaction (O'Loughlin and Coenders, 2002; Biesok and Wyród-Wróbel, 2018). It uses an econometric model to understand the causal relationship between these variables and customer satisfaction (Kaveh *et al.*, 2012). Although the ACSI inspired this model, there are two fundamental differences where ECSI includes the corporate image and the separation of the service and product quality. Furthermore, the ECSI was retitled to the European Performance Satisfaction Index to measure customer satisfaction in other sectors and performances (Østergaard and Kristensen, 2005). To this end, the following section will review the residential satisfaction research that has been conducted in the past decades.

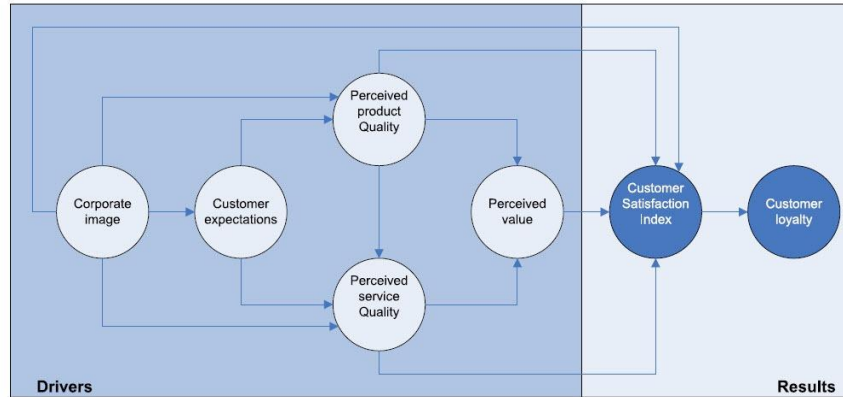


Figure 3.1: The model of the European Customer Satisfaction Index. Source: van Haaften (n/d).

3.3 Residential satisfaction research

As Lu (1999) postulates, residential satisfaction is a complex construct influenced by various factors such as the environment and socio-demographic characteristics of residents. Residential satisfaction is similar to the overall definition of satisfaction. It is the concept of residents experiencing a feeling of contentment whereby the dwelling they are inhabiting meets their expectations through achieving their needs and wants. As such, this section includes previous studies that have been conducted on residential satisfaction.

A literature review has shown how the study of satisfaction is not contained within one discipline. This has meant that satisfaction will alter discipline to discipline in both conceptualisation and definition. Even in housing studies, researchers often use different terminology to express satisfaction within housing, such as residential satisfaction (Roazzi *et al.*, 2009; Krūmiņš *et al.*, 2018; Momtaz *et al.*, 2018), occupants' satisfaction (Zalejska-Jonsson, 2014), residents' satisfaction (Ukoha and Beamish, 1997), and neighbourhood satisfaction (Permentier *et al.*, 2011). Residential satisfaction has been defined as a resident's satisfaction with the housing and neighbourhood (Hashim, 2003); as a subjective response to the current place of residence (Francescato *et al.*, 1979); as the degree to which residents feel their place of residence helps them in achieving their desired goal (Jiboye, 2012). These definitions differ due to the multi-dimensionality of the study of residential satisfaction. Interestingly, residential satisfaction studies have been focused on various housing settings. These include public housing (Ibem and Amole, 2013), affordable multifamily housing (Paris and Kangari, 2005), gated communities (Aulia and Ismail, 2016), university residences (Bella-Omunagbe, 2015), low-cost housing (Mohit *et al.*, 2010), housing estates (Dekker *et al.*, 2011). What these and similar studies have shown is that residential satisfaction cannot be generalised to any specific area as even though the causes of residential dissatisfaction are identical, it cannot be said the same for the causes of residential satisfaction due to the diversity of the socio-economic, political and environmental background of the residents. This is further supported by Clapham's (2005) housing pathways framework, which suggests that individuals follow a unique pathway that is influenced by several socio-cultural and personal factors throughout their lifespan.

Literature has depicted how both objective and subjective determinants influence residential satisfaction in different contexts. The determinant factors influencing residential satisfaction will vary depending on the country, study aims, and housing tenure. This is due to this concept being grounded on perception. As Ukoha and Beamish (1997: 446) put it succinctly, "residents' satisfaction is not absolute, and housing conditions are not static; thus, the housing condition or residents' satisfaction with these conditions at any given time can be measured only in relative terms". There are predominantly two types of measurements widely used: objective and subjective measures (Wiedemann and Anderson, 1985). Objective measure refers to the actual physical measurements such as the dwelling type or the residents' characteristics such as age and education level. Subjective measurement refers to the emotions, perception, and feelings towards

the housing features such as the appearance of the unit, degree of privacy and closeness with neighbours. Current literature has largely focused on measuring residential satisfaction using three components: housing characteristics, neighbourhood features, and socio-demographic characteristics. For example, Ukoha and Beamish (1997) measured residents' housing satisfaction with public housing in Abuja, Nigeria, through five determinants: building features, public housing management, structure types, neighbourhood facilities, and housing conditions. Out of the five, residents were only satisfied with the neighbourhood facilities. Researchers have used a variety of variables as determinants of residential satisfaction to measure housing quality. Since the past two decades, work published has included social environment features into the study of residential satisfaction. For instance, Addo (2015) assessed residential satisfaction in low-income households in Accra, Ghana, by taking a holistic approach whereby the dwelling unit, social networks and neighbourhood characteristics were used. Residents were found to be highly satisfied with community connections, moderately satisfied with the neighbourhood features, but the dwelling unit features have a negative influence on residential satisfaction. Social cohesion (Etmnani-Ghasrodashti *et al.*, 2017), residents' participation (Ammar *et al.*, 2013) and other social features (such as Salleh, 2008) have also been used to predict residential satisfaction.

However, residential satisfaction research results have often been inconsistent. Despite Crull *et al.* (1991) including discrimination by race as one of the six constraints that influence residents housing adjustments, in a study by Grogan-Kaylor and his colleagues (2006), the racial composition of the residents were insignificant predictors of residential satisfaction. This was in contrast with Lu (1999), who found that Black people were less likely to be satisfied than their white counterparts; but in accordance with Cook (1988), who found that race did not influence her study of investigating neighbourhood satisfaction with two groups of low-income, single-parent women in the U.S. In another study in Famagusta, Cyprus, results indicated that residents' perceptions differed significantly based on participants' ethnicity differed significantly (Davoodi and Dağlı, 2019). This study was in agreement with Riazi and Emami (2018), who found that ethnicity was able to moderate the connection between the interaction with neighbours and residential satisfaction. The measure of residential satisfaction is vital for key stakeholders such as housing providers, planners and developers as it offers them an opportunity to use this concept in several ways. Results of these studies are used to inform government housing policy (Ukoha and Beamish, 1997), improve housing design (Kshetrimayum *et al.*, 2020) and suggest proper management measures (Mohit *et al.*, 2010).

According to Weidemann and Anderson (1985), residential satisfaction studies can be classified into two categories. The first is the understanding that residential satisfaction research could predict residents' behaviour and thereafter, residential mobility. In this case, residential satisfaction is used as an independent variable. There is burgeoning research on residential mobility across the globe grouped into this category. One example of this is the Model for the First Stage of Mobility Decision-Making that was first developed by Speare (1974), where residential satisfaction was treated as an intervening variable between the resident and the determinants of mobility. The second category assesses residential satisfaction as a "criterion for evaluating the quality of the residential environment" (Weidemann and Anderson, 1985: 157). Research that falls within this category treat residential satisfaction as a dependent variable. One of the main research guiding the studies in this category is that of Marans and Rodgers (1975) model of residential satisfaction, which argues that three aspects influence a resident's satisfaction: the resident's behaviour and perception of the several objectives and their assessments of these determinants. It is the second approach that this current research falls into. In this, satisfaction is perceived as a criterion for evaluating the overall housing experience. Due to this, the dependent variable of this research will be residential satisfaction with various other determinants identified throughout the rest of the chapter, acting as independent variables.

In addition to Weidemann and Anderson's (1985) categorisation of residential satisfaction, Djebarni and Al-Abed (2000) postulated that there are predominantly four ways in which to use residential satisfaction: as a predictor to understand residents' perceptions of the general quality of life (Campbell *et al.*, 1976); as an indicator emerging residential mobility (Spear, 1974); as an ad-hoc evaluative measure for judging the success of developments built by private and public sectors (Zehner, 1977) and; as an assessment tool to

understand residents' perceptions of inadequacies in their current dwelling so to improve the status quo (Sanoff and Sawhney, 1971). From this, multiple residential satisfaction conceptual models have been developed in a bid to explain the sources of satisfaction.

Despite the rise of residential satisfaction studies globally, several critiques of residential satisfaction exist. Firstly, because residential satisfaction is a subjective response (by residents) to the physical, objective residential environment, studies often have a high level of residential satisfaction compared to what is depicted in reality. Secondly, Francescato *et al.* (1987) argue that since all residents are unique, the satisfaction with a determinant is bound to be different regarding the background of the residents and the time. The same authors have also argued that satisfaction studies should focus on the "real" issues found in the sub-optimal environment (i.e., housing facilities) rather than mere satisfaction. Notwithstanding these limitations, Canter and Rees (1982) posit that residential satisfaction studies can still contribute to the knowledge of residents' desire and how residents can be assisted in achieving this goal. Francescato *et al.* (1987) also offered that despite the limitations of residential satisfaction for measuring housing and environment quality that they had reviewed, these limitations do not render residential satisfaction useless. For example, even though the levels of satisfaction will differ with residents (even that of the same social group), residential satisfaction studies are useful because these studies will reflect the changes in social and personal factors, especially those living in a dynamic community. This has been echoed by several researchers who argued that (1) developing conceptual models with a solid theoretical foundation that address the limitations of residential satisfaction is vital (Kim, 1997); (2) the limitations are not warranted due to the comparison between the objective and subjective indicators of well-being (Campbell *et al.*, 1976); (3) the use of only objective determinants cannot effectively measure residential satisfaction (Galster and Hesser, 1981) and; (4) the combination of both the normative and satisfaction criteria will address the limitations (Rent and Rent, 1978 cited in Ogu, 2002).

The literature has also highlighted additional challenges that researchers experience in residential satisfaction studies. According to Amerigo and Aragonés (1997), researchers attempting to validate models of residential satisfaction and the connection between the residents and their physical environment often experience three dimensions of problems. Firstly, the definition, overall comprehension, and demarcation of the term "residential environment" in residential satisfaction studies are often unclear. These studies have investigated the house and the neighbourhood through two lenses: physical, referring to the services and equipment, and social, which is concerned with the social networks of the common features of the building and the overall neighbourhood (Amerigo and Aragonés, 1997). Despite this, the geographical boundaries of the house and neighbourhood are often undefined in that the former should take into consideration both the private space and the immediate, surrounding common areas; and the latter is often used interchangeably with words such as community and district, without providing a clear definition and limits of it. In this, Marans and Rodgers (1975) defined neighbourhood as the intermediate zone or rather the large area around the residents' home, between the macro-neighbourhood and the micro-neighbourhood where social connections are made with other residents, certain services are provided to the residents. However, it is essential to note that the neighbourhood concept remains undefined as it is often understood as a personal category in that it is not limited by physical boundaries but by feelings of belongingness inhabited by the residents (Marranci, 2008).

The second problem that Amerigo and Aragonés (1997) raised was the dynamic interaction process between the resident and their residential environment. When residents in low-income housing are dissatisfied with their current residence, they mainly experience cognitive restructuring. This is what keeps the residents in equilibrium with their residential environment as they attempt to make do with what they have. In combination with the intervening elements (e.g. behavioural intentions), this dynamic process tends to complicate the empirical treatment of the residential satisfaction conceptual models. According to Amerigo and Aragonés (1997:53), this process will activate a "motion internal mechanisms which determine the evaluations which will make subjects experience a higher or lower degree of residential satisfaction". Furthermore, the same authors argue that conservative methods previously used in environmental

psychology to understand residential satisfaction are difficult to empirically prove the mechanisms' interventions. This is because these methods cannot derive the cause-effect relations in residential satisfaction. As such, new and improved multivariate analysis methods are developed, which allow causal relations to be extrapolated between and using different variables (Amerigo and Aragonés, 1997). Examples of such earlier work include Lu (1999) and Galster and Hesser (1981).

The final problem pertains to the methodological issues in residential satisfaction research, on which Amerigo and Aragonés (1997) explain two issues in empirically quantifying residential satisfaction. The first issue is concerned with social desirability that is generated through questions that directly ask the residents about their degree of satisfaction with aspects in the residential environment. In this, the authors argued that some studies would achieve a high level of residential satisfaction and other determinants due to the use of this scale. Hence, Amerigo and Aragonés suggest that researchers use a scale that does not directly ask the residents about their satisfaction with an item but ask about them (the residents). However, comparison work by Amerigo (1990), as cited in Amerigo and Aragonés (1997), found that the term “satisfaction” does not often refer to a specific aspect of the residential environment but rather a global state – this would then impact the decision of satisfaction on the house, neighbourhood, and neighbours. In comparison, the use of indirect scales was found to be lacking somehow, which influences the scale's validity, as there is uncertainty if the satisfaction is being measured. Despite this limitation of validity, the current research leans towards indirect scales and addresses questions of validity by referring to specific components of the residential environment as it will offer a more valid measurement of residential satisfaction in Hungary. This is because it will allow the researcher to acquire more realistic scores rather than high residential satisfaction levels. The second issue is concerned with the challenge of determining the objective levels of residential satisfaction. Amerigo (1990), as cited in Amerigo and Aragonés (1997), argued that in a residence where the objective conditions are predicted, there is bound to be a high level of residential satisfaction. As such, this research takes the advice of Amerigo and Aragonés (1997) by employing a multi-item and indirect scale to overcome this challenge. The following section reviews the residential satisfaction models to provide a solid foundation for the residential satisfaction model used in this current research.

3.4 Residential satisfaction models

Residential satisfaction models have been previously used to conceptualise the complex interrelationship between the residential environment and the resident. In this context, the residential environment must be understood in its three main dimensions: the residents as the subjective part of the system, the objective attributes of the residential, the physical environment, and the satisfaction, which is the regulator of this dynamic relationship. As such, the current sub-chapter reviews the main residential satisfaction models introduced by researchers to explain their ways of studying the integrated index of residential satisfaction.

3.4.1 Housing needs theory

One of the earliest works done on residential (im)mobility and subsequently residential satisfaction is Rossi (1955), who introduced the housing needs theory, also known as the life cycle theory. Rossi argued that families often change their residence when life events make them uncomfortable in their current residence. It is through this discomfort that residential dissatisfaction occurs. A new housing requirement could be required in each level of the household's life cycle. Therefore, families often respond to dissatisfaction through relocation, allowing households' needs to be addressed. Examples that could cause families to move include the birth of a new family member, the death of a family member, change of marital status which would all require a shift in space requirements (Rossi, 1955). Residential mobility and intention to move is primarily influenced by residents' needs, aspirations, and expectations. As Speare (1974) argues, when a resident's level of dissatisfaction is beyond their threshold tolerance level, mobility increases. Therefore, residential satisfaction is also used to predict propensity to mobility.

3.4.2 Habitability System

In a critic of the empirical studies that have assessed the habitability of homes through the silos lens, such as only focusing on psychological determinants of residential satisfaction, Onibokun (1974) proposes a model that synthesises all the various aspects to study their interrelationships with each other while also identifying their influence on the residents' satisfaction. For Onibokun, the habitability of a home goes beyond inhabiting a space or shelter but also includes and is influenced by other elements found in the societal-environmental system such as social, behavioural elements. In this, a dwelling may be deemed unsatisfactory by a resident even if it has adequate physical characteristics. This is because relative residential satisfaction is caused by a chain of interrelated determinants, with the house being just one link (Bauer, 1951 cited in Onibokun 1974). Habitability, in this context, refers to a tenant-dwelling-environment-management interactive system. However, due to the human nature of this concept, habitability varies based on the surrounding circumstances; therefore, it is relative and not absolute. The Habitability Model goes on to argue that the appropriateness of a dwelling unit, as determined by the structural quality, the household amenities and services, the internal space, and the quality of the internal environment, will impact the level at which the resident is satisfied or unsatisfied with the dwelling unit. Although the housing unit is an essential subsystem of the habitability model, on its own, the dwelling unit is not the only determinant that has to be considered for measuring residential satisfaction. Hence, together with the environmental variables (positively or negatively influence residents' mentality) and the management (enforce rules and regulations), the resident (a focal point of habitability system) is the one who receives all the feedback from the other three subsystems and is the one who decides on what habitability was. The Habitability model emphasised that the variables that influence residential satisfaction are housing unit, environment, management and the indispensable subsystem in the system, the inhabitants. However, model criticism has been on the lack of clear, defined environment, management, and dwelling unit subsystems. Furthermore, the model has been limited regarding real, complex residential satisfaction.

3.4.3 Marans–Rodger's model

The Marans–Rodger's model (1975) has been argued to be the most comprehensive residential satisfaction model, and similar to other significant models, several studies have been based on this model. This model postulates that residents' satisfaction with their dwelling depends on their perception of the several neighbourhood characteristics (such as physical environment and the quality of services) and their assessment of these characteristics. It proposes that the perceptual evaluative process and overall residential satisfaction relate to the resident's characteristics, such as housing status and social class. As a stand-alone, these socio-demographic features only explain a small proportion of the satisfaction variation compared to the neighbourhood features' assessments. However, when the socio-demographic characteristics are in conjunction with neighbourhood features as predictors of residential satisfaction, it was discovered that to understand the latter, the former had to be also considered and did not have much independent influence on the satisfaction levels (Marans and Rodger, 1975). However, the Marans-Rodger model assessed the socio-demographic characteristics using the physical dwelling and neighbourhood features which was the main limitation of this model as these variables were unable to assess the socio-demographic characteristics fully.

3.4.4 Housing adjustment model

The Housing Adjustment Model of residential mobility was developed by Morris and Winter (1975) to explain how families continuously evaluate their housing conditions regarding their social and cultural norms. These authors went further to postulate that a housing deficit would exist if residents were constantly dissatisfied with their physical environment. In this, housing deficit is not referred to as the lack of housing to accommodate people, but as the lack of housing conditions (Morris and Winter, 1975). As such, residents would assess and compare their housing condition with that of their neighbours' housing condition through

the use of cultural and social norms that act as benchmarks. If the differences between their set norms and the housing condition are great, then a housing deficit will occur and therefore, housing dissatisfaction will occur. When this happens, this will result in a housing adjustment behaviour where (1) the family will choose to move (residential mobility), (2) family adaptation where families make decisions to change its composition, or (3) residential adaptation where families “take charge of their situation” by altering the housing conditions through behavioural manifestations such as renovations and remodelling (Morris and Winter, 1975).

3.4.5 Fransescato’s model

To identify the design and management features that are most likely to result in users’ satisfaction and/or dissatisfaction with residential environments, Fransescato *et al.* (1977) conducted a study in 36 housing projects in the United States through the multimethod approach to assess residents’ satisfaction with their housing environment. Four sets of variables were hypothesised to be necessary to residential satisfaction in that study: physical features; socio-demographic information of residents; management rules, regulations and policies; and the relationships between the housing project and the neighbourhood. Through the self-report method, measures for these variables were then developed, resulting in the causal model revealing various issues that would be direct or indirect predictors of residential satisfaction.

The empirical findings, examined within the framework of ecological models of man-environment relationships, suggest that user satisfaction in housing studies is made up of objective-individual, objective-physical factors, and user expectations from the housing environment. The underlying concept in this conceptual model emphasises the importance of residents’ satisfaction in evaluating overall residential performance. Moreover, the Fransescato (1974) model has been used as a prototype of recent residential satisfaction studies; however, this model assumes a direct relationship between the socio-demographic features of the residents and the socio-physical components and the overall resident satisfaction. A second limitation of this model is that it does not consider the various levels of the physical environment, such as the neighbourhood and city. To address this gap, the current research includes different components within the physical environment.

3.4.6 Integrated conceptual residential satisfaction model

The Weidemann and Anderson (1985) model is an extension of other residential satisfaction models and theories such as the Fransescato (1974) model, which explains the multi-directional interrelationships between the belief and perception, satisfaction, objective variables, the behaviour of residents and behavioural intentions (Figure 3.2). This model draws on Fishbein and Ajzen’s (1975) Theory of Reasoned Action that suggests beliefs, attitudes, intentions and behaviour all form a causal chain where an individual’s belief leads to an attitude that determines their intention to behave in an environment. This means that the objective environmental features of residential satisfaction influence the resident’s satisfaction. The model also interprets satisfaction as a purely affective criterion whereby residential satisfaction is subjective to a physical dwelling. By acknowledging how other models have included the variables with the intention of measuring social characteristics, this research did not examine these variables in combination with physical variables to measure their relative contribution to satisfaction. As such, this model expands the previous theories by including social and physical dwelling environmental variables and the levels of scales into one conceptual model. Furthermore, Weidemann and Anderson (1985) argue that although the level of residential satisfaction of an area may be of particular interest to key stakeholders, examining the variations (through specific variables) that are connected with the answers to the measure of satisfaction may be more advantageous. However, although this model has included the social information and demographic characteristics when other models have clearly neglected these variables, Aigbavboa (2014) suggested that in investigating housing satisfaction, residents’ characteristics in reference to personal

and social features should be integrated into the residential satisfaction studies. These features have therefore been included in this current study.

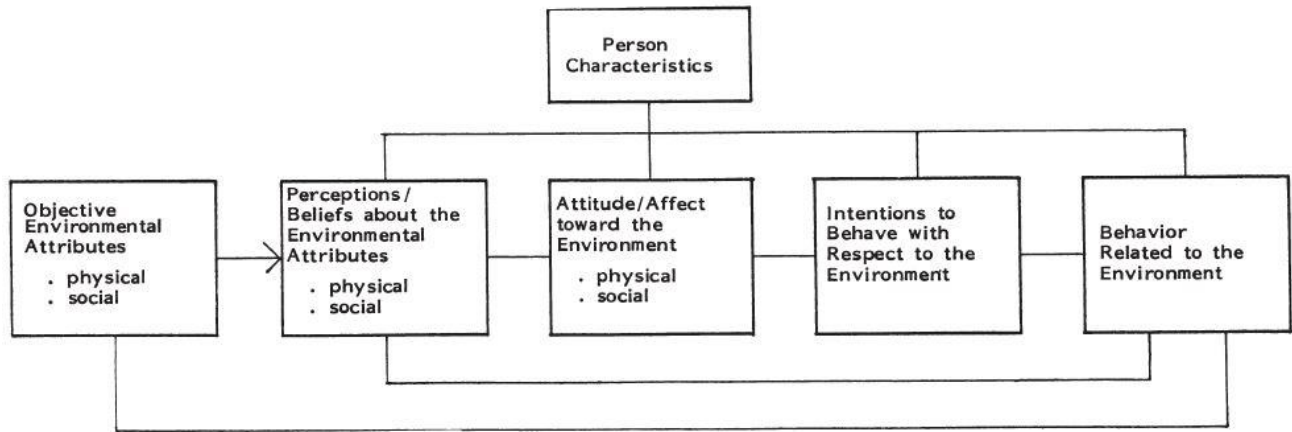


Figure 3.2: Integrated conceptual residential satisfaction model. Source: Weidemann and Anderson (1985: 160)

3.4.7 Mohit *et al*'s model

The conceptual model of Mohit *et al.* (2010) suggests an interrelationship between the different levels of the residential environment. They postulate that residential satisfaction is a composite construction of the indices of satisfaction which the residents perceive with residential satisfaction determinants of neighbourhood facilities, social environment, public facilities, dwelling unit support services, and dwelling unit features. Adopting the argument of Amerigo and Aragoes (1997) that objective attributes become subjective once evaluated by the residents, which will then generate a certain level of satisfaction, Mohit *et al.* (2010) explain that the socio-demographic, residential quality pattern and personal characteristics of the resident influence the subjective attributes. This then gives rise to the residents comparing their real and ideal residential environment (Mohit *et al.*, 2010). The conceptual model “shows that the respondents’ evaluation of objective attributes of housing through their socio-economic and demographic characteristics becomes subjective attributes which can be captured into five components of housing satisfaction (dwelling unit features, dwelling unit support services, public facilities, social environment, and neighbourhood facilities) and these five components together form the basis of residential satisfaction of the inhabitants” (Mohit *et al.*, 2010: 20). Noteworthy, in this model (Figure 3.3), the social environment variables include accident, safety, security, noise, and community relations.

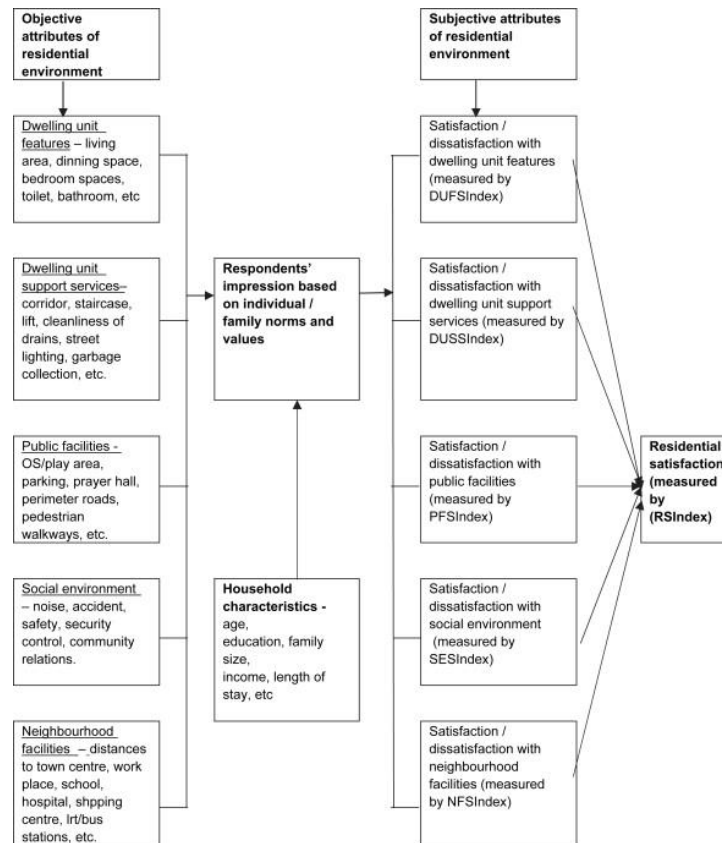


Figure 3.3: Residential satisfaction model of Mohit *et al.* (2010: 21)

3.4.8 Integrated beneficiary centred satisfaction model

To address the gaps identified in his literature review, Aigbavboa (2014) presented a model that includes the already established variables of residential satisfaction: services provided by the government, dwelling units, neighbourhood and environmental features, and building quality features. Most importantly, the integrated beneficiary's centre satisfaction model also focused on the impact of needs and expectations features and beneficiaries' participation features. This model was built on the work of Marans and Rodger (1975) and Marans and Sprecklemeyer's (1981) residential satisfaction models whereby the former regarded residential satisfaction as both a criterion of evaluation of the residential quality and a dependent variable while the latter derived housing satisfaction due to an integrated relationship between the environment and the human perception of beliefs. The integrated beneficiary's centred satisfaction model investigates the relationship of the services provided by the government, dwelling unit, building quality, neighbourhood and environmental features with the inclusion of the needs and expectations feature and beneficiaries' participation features and their role in predicting overall residential satisfaction by the residents. This model predicted the beneficiaries' satisfaction with the housing stock, behaviour to maintain the housing stocks and their overall responsibility in the low-income neighbourhood, or likelihood to move and eventually place attachment. In other words, the model investigates the relative predictive power of these determinants to test if overall residential satisfaction can predict the beneficiaries' satisfaction. This satisfaction refers to the housing stock, behaviour to maintain the housing stocks and their overall responsibility in the low-income neighbourhood, or likelihood to move and eventually place attachment. Although the model included all the basic variables for measuring residential satisfaction together with two additional vital variables, social sustainability, or rather, social environment features (as a standalone), is not included in the model. The model only had one question related to the residents' quality of relations

with their neighbours. The model, similar to others, also ignored the cultural dimension of residential satisfaction.

3.5 Determinants influencing residential satisfaction

Based on the literature on residential satisfaction models, various factors influence residential satisfaction in different contexts. Therefore, no consensus or universal factors exist which explain residents' satisfaction with their dwelling. Researchers often decide on the determinants of residential satisfaction based on the housing tenure, countries, and overall aim of their study (amongst other factors). This sub-section discusses the key 'bundle of factors' that bring about residential satisfaction that should be considered.

3.5.1 Dwelling unit features

Housing characteristics are crucial determinants as studies have shown that dwelling unit features such as enough space in the house, bedroom size, location of the bathroom, appearance of flat and overall quality of building are strongly related to residential satisfaction or dissatisfaction. These physical dwelling characteristics are essential for evaluating one's housing situation. Negative opinions formed of these factors may prompt mobility due to the unit not meeting the tenant's needs, while positive perceptions of the unit encourage immobility. For instance, previous empirical studies have shown that residents almost always seek dwellings that have enough space to meet the household's needs (Lu, 1999). As such, the person-per-ratio and residential satisfaction have a negative relationship as the higher density of the living environment is, the residential satisfaction decreases (Dekker *et al.* 2011). For instance, in a study conducted by Buys and Miller (2012) in Australia, overall residential satisfaction was found to be dependent on a certain set of dwelling and neighbourhood attributes such as the location of the dwelling, dwelling design characteristics (i.e., size, storage space and sustainability considerations).

3.5.2 Neighbourhood features

In most studies, the dwelling characteristics and neighbourhood features are often measured and analysed differently. However, it must be noted that both types of satisfaction are interrelated as the assessment of one's dwelling unit may include its immediate surroundings (Lu, 1999). However, rather than referring to the physical environment that limits it, the neighbourhood is understood from the residents' perception and how they relate to the neighbourhood (Amerigo and Aragonés, 1997). A host of neighbourhood features would determine the satisfaction with the overall neighbourhood. Proximity to basic amenities (Fried, 1982), open space (Turner, 2005), crime level (Mullins *et al.*, 2001), cleanliness of neighbourhood (Buys and Mille, 2012), and places of worship (Alnsour and Hyasat, 2016.) are some of the variables that are used to understand residential satisfaction with neighbourhood features. Mohit *et al.* (2010) assessed the residents' satisfaction with Malaysia's newly constructed public low-cost housing. The satisfaction index illustrated that residents are moderately satisfied with the dwelling unit support services, public facilities, dwelling unit features, neighbourhood facilities, and social environment.

3.5.3 Housing condition features

Based on the Effectiveness model that was developed by Duncan (1971), housing condition quality is categorised into three dimensions: interior features of the dwelling unit, the exterior of the dwelling unit, and the area surrounding the environment. As such, residential satisfaction is also derived from satisfaction with a given flat's building quality and housing condition. However, the construction of housing for the low to middle-income groups is hardly developed to address the needs and types of the inhabitants (McCray and Day, 1977). This is mainly due to the seldom quality elements of a building being considered for these families. In this, Aigbavboa (2014) argues that to achieve a quality of low-cost housing, there should be a combination of the resident's needs and the overall principles that guide adequate housing. However,

affordable housing is often built on limited, government money with the poor and (previously) disadvantaged often being targeted beneficiaries. Due to the limited budget, the cost and design of the construction of these housing are usually compromised. Therefore, a building with suitable quality materials and design is an important indicator that could determine residential satisfaction in residents.

Construction of affordable housing is inherently a complex process; therefore, a wide range of technical, function and aesthetic issues need to be revealed to determine residential satisfaction through evaluating the building performance. Jiyobe (2012) posits that the present and future prospects of the housing sectors depend on the residents' satisfaction with the dwelling as soon as they move in and to the life cycle of the entire building. Hence, it is imperative planners and developers understand the need and expectations of the residents and how much could be met (Lu, 1999). Elsinga and Hoekstra (2005) suggest that the housing quality should not be assessed using one variable as subjective and objective dimensions would offer a broader understanding of the resident satisfaction or dissatisfaction. Building quality features that contribute to residential satisfaction include internal and external building quality, window/wall/door/floor/plumbing quality, number and level of electrical sockets.

3.5.4 Housing support services

The relationship between the government departments and external stakeholders responsible for the housing flats and the residents greatly influences overall residential satisfaction. Some of the important determinants in residential satisfaction are attributes such as maintenance, rubbish collecting, drainage system, fire protection services, overall services, water supply, electricity supply, and rules and regulations within the housing estates. The time taken for the management to address the complaints raised by tenants also influences the resident's satisfaction with their dwelling. For instance, Jiboye (2009) found that a large majority of the respondents were dissatisfied with the management regarding their response and involvement in keeping the estates and their attitude towards imposing rules and regulations and general conduct.

3.5.5 Socio-demographic factors

Researchers have found that socio-economic and demographic questions do not add much value to the overall residential satisfaction research (such as Hourihan, 1984). However, these factors ought to be considered in understanding overall residential satisfaction. Several empirical studies have identified various important socio-demographic determinants in housing satisfaction. However, the socio-demographic variables are often treated as intervening or moderating variables. These include age, educational attainment income, number of people in households, housing tenure, duration of residence, gender, etc. Some researchers as Lu (1999), Morris and Winter (1975), and Chapman and Lombard (2006) have shown that age is a positive effect as older residents tend to be more satisfied with their residence compared to their younger counterparts. However, a study by Mohit (2009) found that the age of the households is negatively related to residential satisfaction. Similarly, Lu (1999) argued that education on housing studies is negligible. Nevertheless, the level of education has been shown to affect residential satisfaction. In a study by Ibem and Aduwo (2013), the education, employment sector and household sizes were found to be significant predictors of residential satisfaction. This is because the higher the education level of the head of the household, the more likely they will be satisfied with their dwelling compared to their counterparts (Vera-Toscana and Alteca-Amestoy, 2008 cited in Tan, 2011). The same study indicated that the high-income group is more satisfied with their dwelling than the lower-income groups as the former group has the financial means to afford better homes in attractive neighbourhoods. As such, there is a significant relationship between income and residential satisfaction. Lastly, gender has been a substantial predictor of residential satisfaction. Some studies argue that males are more likely to be less satisfied with their dwelling than females (Lu, 1999; Zhang and Lu, 2016). In contrast, Chapman and Lombard (2006), Oh (2003) found no effect of gender on residential satisfaction. No one variable is more important than the

other as each variable is necessary based on its relevance to the study. As Aigbavboa (2014) puts it, the assessment of a particular housing environment of a resident will depend on their personal characteristics.

The behavioural characteristics of residents have also been included in residential satisfaction studies. This has been informed by the housing adjustment theory (Morris and Winter, 1975), whereby households attempt to readdress housing deficits. The behavioural characteristics exhibited by these families often echo their thoughts and emotions about their housing condition, which leads to satisfaction or dissatisfaction. Characteristics such as intention to move, residents' sex and culture of maintenance, and duration of marriage often provide relevant information on residential satisfaction or dissatisfaction and residential mobility (Mohit and Raja, 2014).

As shown in the above discussion of the different determinants influencing residential satisfaction, it is evident that the complexity and interdependence of these determinants make it harder to agree on the influence of these factors on residential satisfaction.

3.6 Measuring residential satisfaction

Apart from residential satisfaction being a key component in understanding an individual's quality of life, it also determines how individuals perceive and respond to their environment. For residential satisfaction studies to continuously provide and contribute critical knowledge in urban and housing policies, a better understanding of the determinants facilitating a satisfied or dissatisfied response is required. Similar to how no consensus exists of the determinants to be used in residential satisfaction, different residential satisfaction models have been created to measure housing attributes. To adequately operationalise residential satisfaction, it is crucial to understand the affective, cognitive, and behavioural dimensional processes when the resident interacts with their residential environment.

The affective dimension is concerned with the positive or negative emotions that residents may experience in their current residential environment. According to Weidemann and Anderson (1985), this response is an evaluation composed of multiple responses, rather than single ones, which are distinguishable in different levels. Furthermore, three aspects are related to this measurement: subjective attributes such as events, objective attributes that include a number of rooms, and personal characteristics such as members of the household. In this, satisfaction is set as a dependent variable while the objective and subjective attributes are both treated as predictors of residential satisfaction. This means that even though residents may first evaluate a residential feature with the objective attributes, the responses that they may provide will be influenced by subjective attributes (Potter and Cantarero, 2006). These attributes will be influenced by their personal characteristics, such as aspirations and reference group, and will in turn contribute to their level of satisfaction with a particular residential feature.

The cognitive dimension refers to the positive or negative set of abilities, emotions and mental processes that residents may have when observing their housing environment; this may or may not be significant. In other words, the residents perceive and judge the performances of their residential environment (such as their dwelling unit and neighbourhood features) in how their expectations have been met or not (Weidemann and Anderson, 1985). Both purposive evaluation and comparative evaluation are two forms of cognitive processes related to the measure of residential satisfaction (Gifford, 1997 cited in Mohit and Raja, 2014). The former investigates residential satisfaction determinants using level factors, quality factors, and focus facets dependent on the quality factors. The current research uses purposive evaluation to investigate residents' perceptions of their residential environment. The latter, comparative evaluation, has split into two approaches, whereas the first focuses on the differences between the current and previous residences while the second approach focuses on the differences between the current and mental schemata residences. Here, residential satisfaction may refer to the discrepancies between aspiration and achievement (Campbell *et al.*, 1976).

The third and final dimension is the behavioural, or rather a conative facet, which is concerned with the kind of behaviour residents may exhibit in their residential environment. This process measures behavioural intentions, which mediate between the resident's affective decision and their actual behaviour (Weidemann and Anderson, 1985). Furthermore, according to the attitudinal model of residential satisfaction of Francescato *et al.* (1989), these intents may be grouped into three processes: residential mobility, social interaction, and residential modification. When residents experience high satisfaction with their residential environment, they will exhibit positive behaviour by adhering to management rules and regulations and recommending their place of residence to their friends and relatives. Continuous delivery of quality residential features could result in residents adjusting their behaviour to either maintain or increase harmony between their expected and actual residential environment.

To evaluate the perceived residents' satisfaction with their physical environment, Amerigo and Aragonés (1997: 48-49) suggested a four-stage procedure in designing a questionnaire on residential satisfaction:

- To determine the perceived environmental quality indices through the evaluation of a set of attributes related to the neighbourhood, the house, and the neighbours. The items are formulated in an ordinal scale with the subject being required to quantify how residents perceive the feature in the residential environment;
- To determine resident's satisfaction with their residential environment using direct and indirect questions to elicit the degree of satisfaction with neighbourhood, house, and neighbours;
- The socio-demographic characteristics should be assessed due to their proven value in previous studies;
- The evaluation of the behavioural aspects of residents in their residential environment.

Researchers use questionnaires, interviews or a mixed method to evaluate and measure residents' satisfaction with their environment (Chi and Griffin, 1980; Kährlik *et al.*, 2012; Hanák *et al.*, 2015; Smrke *et al.*, 2018; Milić and Zhou, 2018). Questionnaires are often the method of choice as multiple questions are framed to the resident to understand the perception of satisfaction with the chosen attributes and the degree to which their expectations have been met (Weideman & Anderson, 1985). Index of correlated items could be affective questions such as asking "how are you satisfied with living here" and/or behavioural such as asking "would you recommend this dwelling to a friend, relative or colleague".

The current study proposes an interactive model of the behavioural, cognitive, and affective elements to determine residential satisfaction. Additionally, it measures the objective and subjective features using a 5-point Likert scale as it has been widely used in residential satisfaction studies and that an increase in the scale does not yield more results, but it just adds confusion to the residents.

3.7 Research gaps in residential satisfaction

Based on the previous section's discussion, this section attempts to address the gaps found in the current studies that have investigated residential satisfaction. To assess the level of residential satisfaction or dissatisfaction with affordable housing in Hungary, Budapest, the criteria used should be specific to Hungary, but based on the main definitions and concepts of residential satisfaction internationally and on lessons learnt from existing studies in countries with similar backgrounds. As such, due to the lack recent of residential studies in Hungary, through this study, it is aimed that the current research gap will be filled while also contributing to the development of the public housing sector in Hungary and providing relevant housing policies recommendations for future housing projects.

3.7.1 Gap one: social environment

While previously there has not been much emphasis on the social features in housing studies as compared to the economic and physical environment, a few studies exist including social features such as the

interaction with neighbours, attachment to community and perceptions of privacy (Bruin and Cook, 1997; Weidermann and Anderson, 1985). Although these studies have contributed to the growing knowledge of social features in residential satisfaction, the contribution has been slower than the other features explained in the previous section. Furthermore, there is a general disagreement of social features that should be included in residential satisfaction studies. The conceptual framework of social sustainability (Ewing *et al.*, 2006) will be drawn upon in this research to fit within the understanding of social environment features of residential satisfaction (Figure 3.4). The concept of social sustainability with regard to urban planning rests within the achievement of social capital, social inclusion, and social equity. According to Bramley and Power (2009), a socially sustainable community often refers to social capital, social interaction, social behaviour, sense of place, pride and attachment, safety and security, sense of comfort, and level of interest.

The social aspects of a residential environment primarily refer to the social networks that are formed in the semi-private communal spaces of the physical building and the overall neighbourhood. When it comes to deciding on residence choice, residents not only consider the physical properties of a dwelling but also include the social aspects. There are several social sustainability dimensions such as quality of life, interconnectedness, democracy and governance, place attachment and equity. Place attachment is one of the social aspects used to assess residential satisfaction. It reinforces spatial identity through the quality relationship with neighbours, sense of belonging, sense of community increases residential satisfaction. Place attachment refers to the behavioural, positive affective and cognitive bonds people develop in the long-term in their socio-physical environment (Brown and Perkins, 1992). Several studies have included neighbourhood attachment as a factor when studying residential satisfaction. One of these studies is Aigbavboa's (2014) conceptual framework that included the neighbourhood attachment; however, it was more of a tangent with only a few questions.

Furthermore, the neighbourhood features in this model seemed to be mixed with the social sustainability features, with only one question, "quality of relationship with neighbours" referring to this. In another research study, neighbourhood attachment features were used to assess residential satisfaction amongst a group of variables. In the same study, it was found that this feature was a good indicator of residential satisfaction (Milić and Zhou, 2018). Similarly, in a study conducted by Oktay and her collaborators (2009), the features that influenced the perception of the neighbourhood as home, the degree of attachment to place, and the degree of belonging to the community were assessed comparing of four cities in North Cyprus.

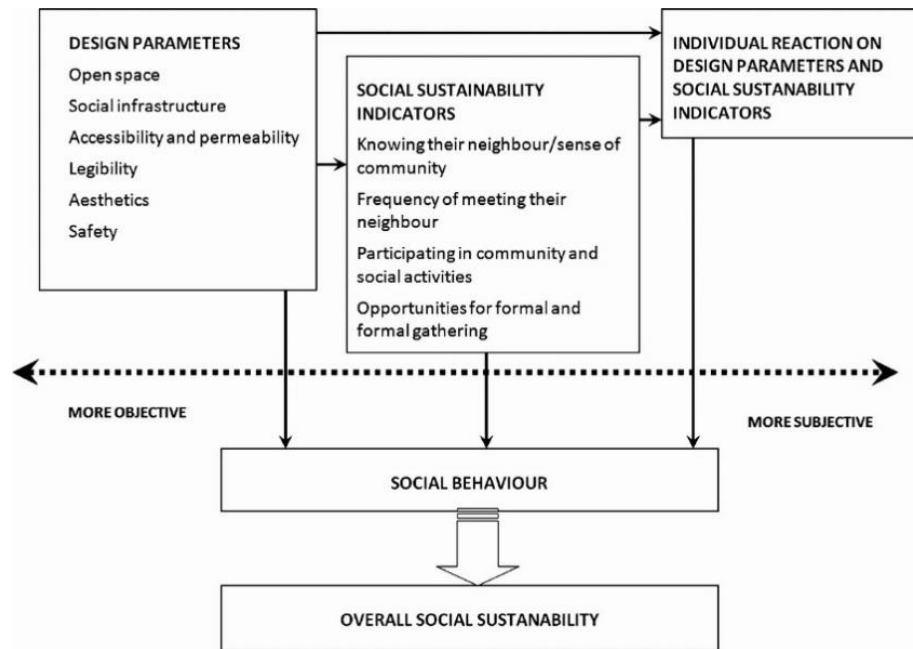


Figure 3.4: Conceptual framework of social sustainability. Source Karuppanan and Sivam (2011: 854)

Varying results were found: despite the lack of socio-spatial qualities in the area, residents were attached to the place because of the friendliness of neighbours; place attachment was found not to be associated with satisfaction with the neighbourhood; however, the perceived friendliness of neighbours did not influence the degree of belonging.

The main theory that is drawn upon to address this gap in research is the theory of place attachment. There exist various subsections of perceptual extents in the study of place attachment. One of these subsets is William and Vaske (2003), who posit that symbolic relationships can be systematically identified and measured. They propose to measure place attachment through a two-dimensional scale based on place identity and place dependence. Place identity involves the cognitive (emotional) connection that residents have with their residential, physical environment that gives meaning to the life of the residents and to the resident's identity, which enhances self-esteem and feelings of belongingness to the community (Korpela, 1989). According to Pretty *et al.* (2003), this is due to the complex forms of conscious and unconscious goals, beliefs, and values that occur. Several theories have influenced the place identity's psychological research, such as the phenomenological perspective, cognitive perspective, and self-concept theories. Place dependence, in contrast, refers to the physical (functional) attachment that residents may have on a physical environment based on the ability of the place to provide and satisfy the needs and wants of the residents. The quality of the physical environment and the relative quality of the alternative, comparable places form the two components of place dependence. In other words, it is the strength of association that a person has with their residence (Stokols & Shumaker, 1981).

A further expansion of the place attachment was provided by Hamit *et al.* (2006), where place belongingness, place familiarity and place rootedness were added. Place rootedness refers to the length of stay in a particular residence where one feels ultimately at home and does not see the need to move (Harun *et al.*, 2015). Different authors also offer their understanding of rootedness, such as Stegner (1992: 2), who offers an extreme level that "a place is not a place until people have been born in it, have grown up in it, lived in it, known it, died in it – have both experienced and shaped it, as individuals, families, neighbourhoods, and communities over more than one generation"; while others (such as Haruna *et al.*, 2015) have argued that rootedness is the place where you feel possessive about. Place belongingness refers to the individual's feelings as part of a community, belongingness and familiarity with community

members, related to the notions of bondedness (Scannell and Gifford, 2010). Residents often feel like they have a membership to the physical environment and have a spiritual connection between the social shared spaces of the community (Hammit *et al.*, 2006). The last dimension is the place familiarity which is concerned with the positive “feel good” memories that one experiences over time through interaction with community members and experiences. This process is known as the beginning of the human-to-place coupling process (Roberts, 1996). It is noteworthy that these dimensions are not inclusive of themselves.

Social cohesion, social capital, and social integrations often affect neighbourhood attachment through shared norms, mutual trust, participation, and social networking. This is so because when residents feel that they receive emotional support from their neighbours, they are more likely to feel more attached to a neighbourhood. In a study by Livingston *et al.* (2008) in deprived areas in England, it was found that attachment tends to be higher in places that have stronger social cohesion. These emotional social networks often lead to a sense of community, which is a vital determinant of quality of life (Weijs-Perrée *et al.*, 2017). As such, promotion of stability, involvement and investment in the physical environment is often the result of higher levels of neighbourhood attachment, hence social sustainability.

3.7.2 Gap two: resident participation

Historically, residents’ opinions and thoughts were hardly taken into consideration in affordable housing projects provided by the government. In recent years, resident participation has been a topical subject amongst housing researchers (Hall and Hickman, 2011; Anmar *et al.*, 2012) as governments have begun to involve various stakeholders, especially residents, in government planning processes. This is largely because most governments understand how complex and dynamic urban areas are, so ensuring the residents’ needs are met is vital for achieving a higher level of user satisfaction. The first gap discussed the lack of social sustainability features in the conceptualisation of residential satisfaction; however, the majority of the urban regeneration studies have focused on social capital, though good, but little evidence exists of the relationship between residential satisfaction and social cohesion (Etmnani-Ghasrodashti *et al.*, 2017). Although these studies provide valuable information on how urban regeneration projects promote social networks, trust and social capital, they have mainly focused on Western Europe and Asia, with few empirical studies have been conducted in Central and Eastern Europe (some exceptions include Temelová and Slezáková, 2014). This sub-section hopes to address this gap of resident participation by providing a synopsis of the participatory frameworks of the affordable housing projects as a tool of urban regeneration under the European Union and Hungary.

To understand the gap of resident participation in residential satisfaction studies, Arnstein’s (1969) Ladder of Citizen Participation and Wilcox’s (1999) Ladder of Participation will be simultaneously drawn upon. Arnstein’s (1969) hierarchy of participation – often referred to as a ladder – arose during urban politics in the 1960s in the United States of America and portrays the juxtaposition between those with and without power. The eight steps of the ladder represent the degree to which citizens could be involved in government planning processes. From the bottom, the manipulation and therapy form part of the non-participatory actions where there is a one-way flow of information from authority to public. In the middle of the ladder, the tokenism steps (informing, consultation, and placation) are found, which generally request public input. Citizen control is the highest level where citizens participate in the decision-making process. The three steps here comprise partnership, delegation, and citizen control. This model is important as it raises two main points: firstly, power is an essential tool and secondly, it shows that not all forms of participation empower the community. The appeal of Arnstein’s Ladder of Citizen Participation is founded on its simplicity where one can easily visualise the power agendas embedded in the various institutions and the differences in the types of participation that result from this (Collins and Ison, 2006). Despite the wide range of studies that have adopted this typology (Hamersma *et al.*, 2018; Davidson *et al.*, 2007; Kotus, 2013), this framework is not without limitations as it first assumes that participation is hierarchical in nature.

This is incorrect as citizens may not want to be in control. Secondly, Arnstein herself mentioned that each situation is unique and can require different types of participation.

As such, subsequent models have since modified Arnstein's Ladder of Participation by adding new terminologies and several rungs to the model together with the underlying perception of power. Examples of this include Ladder of Citizen's Empowerment by Burns *et al.* (1994), Eyben's (2003) Model of Participation with a rights-based approach, and Wilcox's Ladder of Participation (1999). Wilcox (1999) reworked Arnstein's model considering the United Kingdom's community regeneration work. He altered the eight steps of the ladder into five rungs: supporting individual initiatives, acting together, deciding together, consultation, and information. Instead of taking an oppositional stance similar to Arnstein, this model takes a collaborative consensus attitude. The information level refers to the process of providing details to the community. Various factors need to be taken in this stance, such as the language used, methods used to provide the information, type of audience, and expectations.

At the consultation level, the people should be given limited choices, and thereafter, a feedback process may occur. It is important to note that this stage is not about allowing the community to invent new ideas or give the planners permission but to empower the community by involving and possibly negotiating with them. The third stance, deciding together, is often labelled as the difficult level. It involves collaboratively deciding the community's choices without distributing the responsibility required to see-through the decision (Wilcox, 1999). The basics that need to be taken into consideration include the time scale of the project, the confidence-building for the community as it is required to ensure greater involvement, and the understanding of the complex techniques. The acting together stance involves creating short-term and long-term partnerships with the various interest groups that share the same vision of fair distribution of power, responsibilities and benefits. The last stance is supporting local initiatives, which is the most empowering level as it provides people to formulate, develop and implement their ideas. Noteworthy, these processes should be at the pace of the owner of the ideas, with the external stakeholders setting specific time schedules.

Apart from the five ladders of participation explained above, Wilcox (1999) also draws attention to the participation process, including the initiation, preparation, participation, and continuation phases. This framework emphasizes that participation is not just a "superficial consultation" as it is ongoing. This model does not assume that one situation is only suitable for one level; instead, Wilcox argues a 'horses for courses' whereby different situations call for different rungs of participation to meet the needs of the interest groups. Wilcox's (1999) Ladder of Participation fits within the current research study as all the chosen research projects in Hungary have similar aims where public participation was actively promoted.

3.7.3 Gap three: environmental features

The rehabilitation and/or creation of sustainable landscape structures and characteristics within European urban neighbourhoods has grown exponentially in the past few decades, with approximately 40% urban green infrastructure within the continent's surface area (Alberti *et al.*, 2019). The presence of urban green spaces has been proven to be advantageous in many ways, including mitigating the impact of climate change (Reis and Lopes, 2019), the creation of ecological corridors, cushioning noise pollution (Margaritis and Kang, 2017) and providing much-needed shade (Palliwoda and Priess, 2021). Specifically, green spaces within residential environments are utilised for several reasons for residents, such as gardening (Thompson, 2018; Chalmin-Pui *et al.*, 2021), outdoor exercises (Gladwell *et al.*, 2013; Nielsen and Hansen, 2007), and other leisure activities (Seeland *et al.*, 2009; Venter *et al.*, 2020; Nath *et al.*, 2018). Whether natural or man-made, these spaces have also been associated with health benefits due to the physical activities they require (Pouso *et al.*, 2020; Yessoufou *et al.*, 2020). In combination with neighbourhood features, green spaces can positively contribute to meeting overall urban regeneration goals such as social inclusion and fostering sustainability. John Ruskin was not amiss when he argued that "the measure of any great civilisation is in its cities, and a measure of a city's greatness is to be found in the quality of its public spaces, its parks and

its squares” (cited in Cowan *et al.*, 2005: 7). Linked intricately to this is the argument that the conditions of urban greenness, naturalness and openness may positively or negatively affect residential satisfaction. In this, residential satisfaction is defined as the subjective level of contentment that residents may experience once the residential environment meets their standards. The literature pertaining to the theories, conceptual models and determinants has been extensively covered within the past three decades (see Amérgo and Aragones, 1997; Lu, 1999; Abidin *et al.*, 2019; Smrke *et al.*, 2018; Aigbavboa and Thwala, 2018; Emami and Sadeghlou, 2020). Neighbourhood and environment features are essential due to their aesthetic attractiveness. As such, the evaluation of the quality and quantity of these features within urban spaces is vital to deem the success of the URPs. Moreover, environmental features have thus been included in the current study not simply as one variable but as an entire component.

3.8 Conceptual model of current research

The previous sub-sections have critically discussed the concept of residential satisfaction with the preceding sub-section addressing the current gaps in research with this field. It has to be repeated that although several previous models have included some questions within the stated gaps, none of the studies has integrated these gaps as stand-alone determinants. As such, in a bid to understand the overall residential satisfaction within affordable housing in Hungary, a holistic residential satisfaction model was developed. This model builds on the work produced by Marans and Rodger (1975), who argued that the residents’ overall satisfaction with their residential environment depends on their perception of the several neighbourhood characteristics and their assessment of these characteristics. Furthermore, the work of several authors, such as Aigbavboa (2014), have greatly influenced this current model. In this, the current research did not create an entirely new model but adopted and altered several models from existing literature. This was done with the sole purpose that ex-post housing-led urban regeneration studies in post-socialist cities often bundle up different determinants of residential satisfaction depending on their studies. Although this is quite normal in residential satisfaction research (see Smrke *et al.*, 2018), it makes the comparison of studies across different cities and countries quite tricky due to the significant differences in the questionnaires of residential satisfaction. In this, a multifaceted framework enshrined within the sustainability framework to make post-socialist cities more liveable and sustainable is required. In the same vein, the holistic residential satisfaction model includes eight determinants: socio-demographic characteristics, dwelling unit features, neighbourhood features, housing support services, housing condition features, resident participation, social environment, and environmental satisfaction features (Figure 3.5).

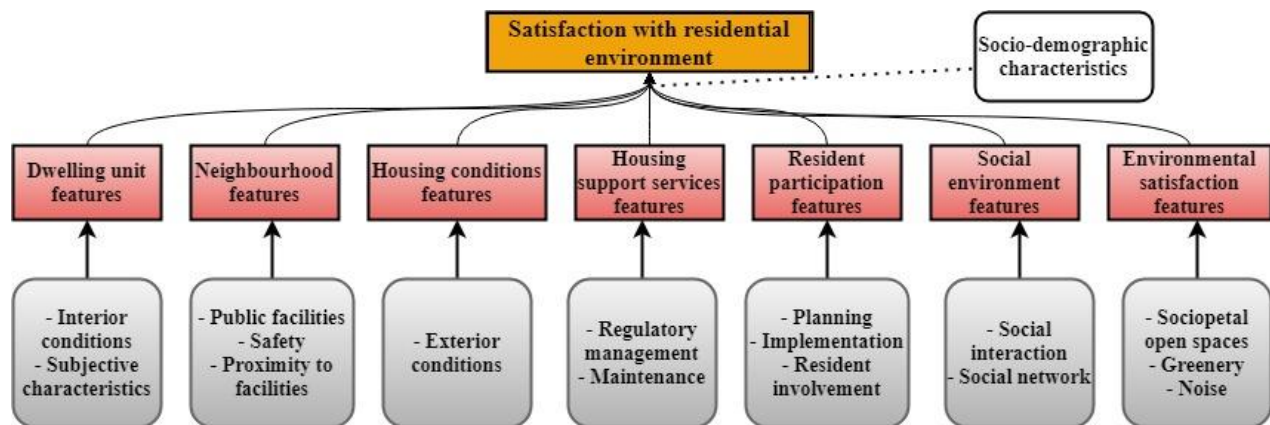


Figure 3.5: Holistic residential satisfaction conceptual model. Source: own.

3.9 Chapter conclusion

This chapter gave a detailed outline of the residential satisfaction research. First, in a broad understanding that once someone experiences pleasure on a product or service provided to them, they are more likely to

use and recommend the product in the future, while the opposite of this will mean a discontinuation of the product. The concept of satisfaction has been employed across several fields due to its primary function in customer services, or rather, the user who utilises a product or service. Thus, throughout the course of the development of satisfaction, several theories have been presented in a bid to explain customer satisfaction. In this, the chapter had first captured a brief, critical discussion on these competing theories. These theories include the assimilation theory developed by Festinger (1957), who drew inspiration from the dissonance theory; the contrast theory (Yi, 1990), as the name suggests, opposed the assimilation theory; Sheriff and Hovland (1961) found a middle-ground between the first two theories, thus the assimilation-contrast theory; attribution theory takes a different stance from the customer dissatisfaction (Weiner *et al.*, 1971); and lastly, the expectancy-disconfirmation theory (Oliver, 1977). It is this last theory that has, in comparison to the other theories, provided the foundation for most satisfaction studies and the one that has been chosen in the current research.

Next, the progress and challenges found in the study and measure of residential satisfaction research were discussed. After that, the most prominent residential satisfaction models, which conceptualise the complex relationship between residents and their residential environment, were critically examined. These were the housing needs theory (Rossi, 1955), Onibokun (1974), Marans-Rodger's (1975), Housing adjustment theory (1975), Fransescato's (1977), and Weideman and Anderson's (1985) models. The new models included were those by Mohit *et al.* (2010) and Aigbavboa (2014). Further on in the chapter were the determinants used to measure or predict residential satisfaction. The previously mentioned models essentially informed these. Several determinants exist in literature; however, these could be grouped into four main groups: dwelling unit, neighbourhood, housing support services, and housing conditions. It is important to note that socio-demographic and behavioural characteristics are often used as moderating variables. The different measurement tools for residential satisfaction studies were then discussed in the subsequent sub-section. The last two sub-sections looked at the gaps found in the current residential satisfaction research, including the social environment, resident participation, and environmental features. These, together with the determinants already discussed, formed part of the holistic residential satisfaction developed for the application in post-socialist cities.

4. Methodology

4.1 Introduction

The previous chapters, the conceptualisation of residential satisfaction and theoretical framework, have provided the theoretical foundation on which the current chapter seeks to build upon. This chapter discussed the researcher's steps to achieve the objectives. It is imperative that the research aim and objectives, in relation to the research problem, are reviewed to set the scene of the entire research. As with most research of this manner, a mixed method is utilised based on philosophical and practical reasons such as to allow a deeper understanding of the research problem.

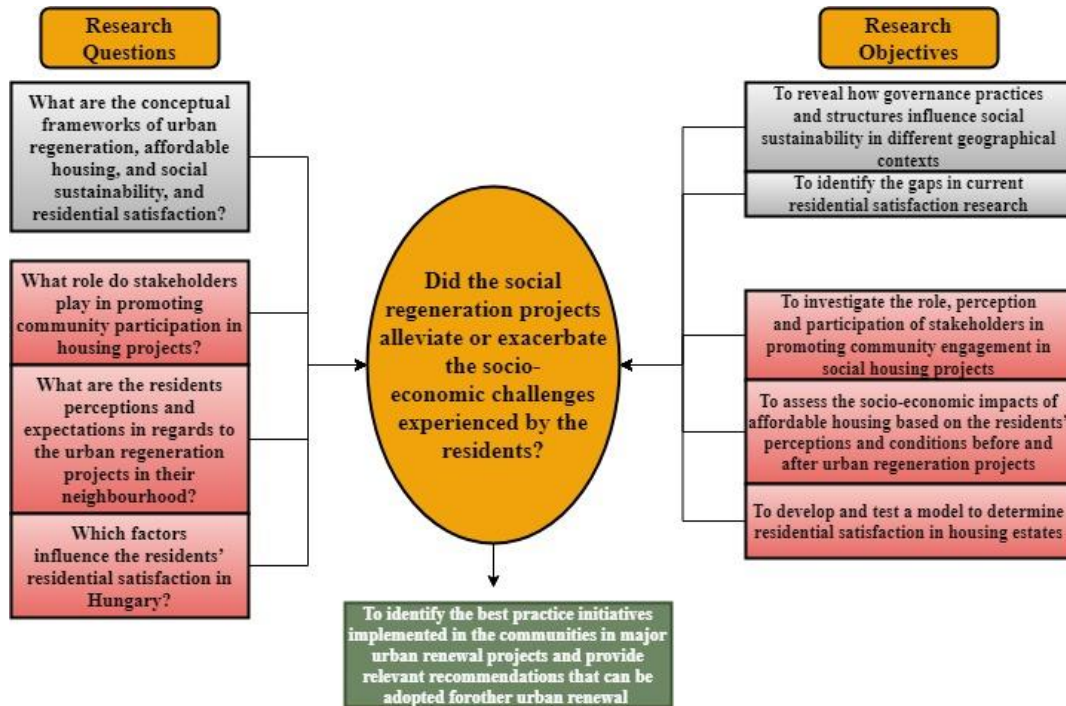


Figure 4.1: Relationship between the main research question, the research problems, and the research objectives. Source: own

Under the belief that science, particularly social science, should always seek the truth through eliminating bias to uncover social changes in social situations, it is imperative that researchers are transparent about the research process and clear on how the research objectives fit within the research problems. Furthermore, although critically reviewing literature provides a valuable foundation for research, it is simply inadequate. Hence, the current study underwent several methodology steps to support, verify or disprove the works in the scholarship. Due to the nature of the research, the main research aim, objectives and questions are illustrated above (Figure 4.1).

The “onion” research process, which will be continuously referred to across this chapter, is helpful as it provides young researchers with a practical guide through the research process (Saunders *et al.*, 2009) (Figure 4.2).

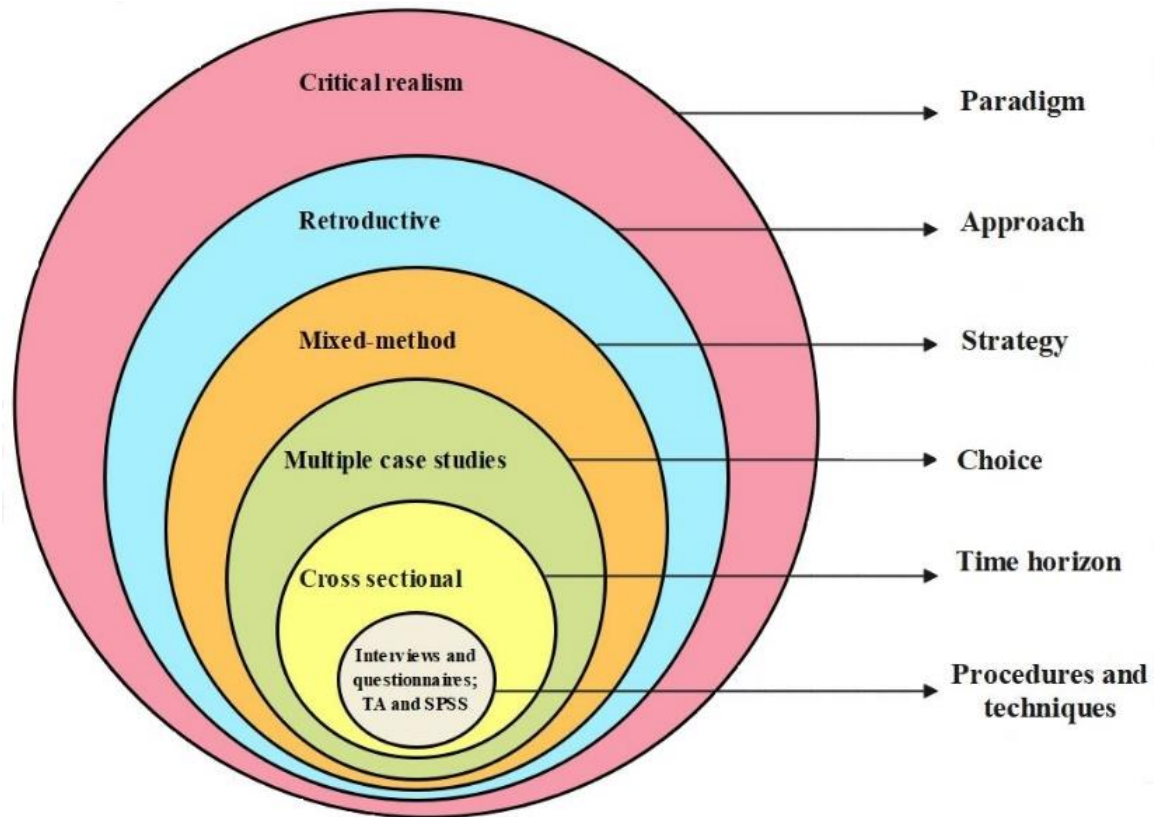


Figure 4.2: The “onion” research process. (Inspired by: Saunders *et al.*, 2009)

4.2 Research paradigm

One of the most important aspects of any research is the paradigmatic framework that a researcher uses throughout the research project. According to Asghar (2013) paradigmatic positions can be separated by the methodologies (qualitative and quantitative) and philosophies (epistemology and ontology). The devastating, widespread impacts of WWII raised the need for the integration of social and environmental planning policies into the built environment (Wullkopf and Pearce, 1977). Thus, the development of housing and urban studies. Housing researchers adopt two popular paradigms to investigate and understand issues in social sciences and natural sciences: the interpretivist paradigm and the positivist paradigm. Positivists argue that “reality is objectively given and is measurable using properties which are independent of the researcher and instruments; in other words, knowledge is objective and quantifiable” (Antwi and Hamza, 2015: 218). Coming from this technical path, quantitative data dominate this paradigm. One of the greatest criticism of this paradigm was its assumption that all forms of science can be quantitatively measured and observed in a prior scientific method (Kincaid, 1998; Jacobs and Manzi, 2000). Despite this, several housing researchers still use the positivist paradigm (e.g., Chipswa, 2017; Chambers *et al.*, 2009) as housing projects (particularly those in regenerated) are largely driven by financial investments that require quantitatively measured outputs so to continue funding and improve policy practice. Thus, despite the implicit foundation of the positivist paradigm in housing studies, it calls for a new philosophical basis that integrated social theory was made, hence the next discussed paradigm. As described by Crabtree (2006: n/d), interpretivism is characterised by “relativist ontology where reality is constructed intersubjectively through the meanings and understandings developed socially and experientially; and a transactional or subjectivist epistemology: investigator and the object of investigation are linked; where investigators cannot separate themselves from what they know”. Interpretivists believe that methods should be determined according to the research study and not pre-determined (Asghar, 2013). However, to a smaller extent,

housing studies rooted in qualitative research exist (such as Ambrose *et al.*, 2017; Hulse and Saugeres, 2007; De Zoysa *et al.*, 2021; Ebekoziem, 2021; Cretan *et al.*, 2020). Although there are several distinct differences between positivist and interpretivist research paradigms that include their approach, inquiry, and reasoning, some similarities exist between the two dominant paradigms. For instance, empirical observations are made to answer research aim and objectives (Johnson and Onwuegbuzie, 2004).

However, based on the definitions and literature pertaining to the positivism and interpretivism approach to research, this research study does not fall into any of the two paradigms. Hence, the adoption of the paradigm termed the critical realism approach. Apart from critical realism being a somewhat middle-ground between positivism and interpretivism, researchers have used it when studied phenomena had yielded unsatisfactory results, thus requiring the foundation of a different worldview (see Sayer, 1992). This is because critical realism offers an approach to looking at a phenomenon using an explorative process to understand the underlying causes of the phenomena. Although this is clearly one of the strengths of the paradigm, critics have accused critical realists of “sitting on the fence” as although it rejects methods that “reduce social science wholly to the interpretation of meaning” (Sayer, 1992: 4), it simultaneously acknowledges that “social reality, as well as its respective knowledge, are multi-layered and multileveled” (Banifatemeh *et al.*, 2018: 58) as “the world exists independently of our knowledge of it” (Sayer, 1992: 5). As a result, the methodological approaches of critical realism do not prescribe to one single method but offers a variety of methodological tools to answer a research question. In other words, “to truly reflect the social world that is being researched, then the research design needs to be methodologically *messy*” (Taylor, 2017). Although this can support the argument that critical realism is a “methodologically handicapped philosophy” (Yeung, 1997: 56), critical realists are tasked with finding creative and appropriate ways of uncovering underlying causes of studied phenomena. Furthermore, critical realism is centred around epistemic fallacy, whereby people tend to reduce ontology (statements about the world) to epistemology, that is, what can be known about the world (Bhaskar, 2013). Thus, this research study adopted the critical realist approach to understanding the residents’ and stakeholders’ experiences in the different urban regeneration projects. This philosophy allowed the researcher the freedom and flexibility to mix the most appropriate methods to the current study without conforming to prescribed methodological guidelines. Furthermore, a basis for critically engaging with the production of knowledge and the socio-economic impacts in respect to these projects was provided through this philosophy. The summarised key comparisons between the three discussed paradigms are provided in Table 4.1.

Table 4.1: The summarised comparison of three research paradigms in housing science. Source: own

Paradigm	Ontology	Epistemology	Axiology	Method
Positivism	Researcher is objective, external and independent	Researcher focuses on measurable facts to produce causal explanations	Researcher is value-free, neutral and maintains objectivity	Large samples, deduction research, quantitative
Interpretivism	Researcher is socially constructed, producing multiple realities	Researcher focuses on subjective meanings and narratives to understand the underlying meaning of events	Researcher is value-bound, part of the studied phenomena and thus subjective	Small samples, mixed methods, often inductive, qualitative
Critical realism	Researcher is objective and operates independently of the mind; reality is stratified	Reality and knowledge are socially constructed. A combination of fallibilism and judgmental rationality	Researcher is value-laden but also acknowledges that bias worldviews; hence attempts to minimise errors by remaining objective	Dependent on studied research’s objectives, retroductive

4.3 Research approach

The second layer of the research onion is the research approach. There are three ways in which theory is predominately tested (inductive, deductive and retroductive), with the retroductive approach selected as it fits within the critical realism paradigm. Noteworthy, inductive testing of theory is associated with the qualitative approach while deductive testing is linked with the quantitative approach. Linked intricately with positivism, quantitative research employs rigorous pre-determined scientific methodology to accept or reject a hypothesis, in a controlled environment (Johnson and Onwuegbuzie, 2004; Yilmaz, 2013). Inductive research is concerned with the use of social research methods that are sensitive to context to understand the phenomena. This is based on the assumption that social issues are complex and cannot be measured in a controlled environment, but rather in a natural environment (Yilmaz, 2013; McGuirk and O'Neill, 2016). The chosen approach suitable for the current research also termed abductive reasoning, first studies a phenomenon, identifies new themes, provides existing patterns, and then alters an existing theory supported by the collected data. In this, the research subsequently moves back and forth from the theory to the data, thus enabling integration of both the inductive and deductive research approaches.

4.4 Research strategies

4.4.1 Mixed method approach

Research serves several purposes, and one of the ways in which to answer the research questions is to have an appropriate research design. According to Babbie (2011: 95), researchers often opt for exploration for three main reasons: (1) “to satisfy the researcher’s curiosity and desire for better understanding, (2) to test the feasibility of undertaking a more extensive study, and (3) to develop the methods to be employed in any subsequent study”. Although residential satisfaction has been extensively researched in several regions, there is little evidence on residential satisfaction in housing estates of Europe. For these reasons, this research adopts an exploratory, mixed-method strategy. Mixed-method, also known as multi-method and triangulation, strategy is a research approach that integrates both the qualitative and quantitative research elements within one study so to reduce weaknesses of both research types while maximising their strengths (Timans *et al.*, 2019). This mixing of the methods allows researchers to choose and combine different research instruments and interpretation elements of both the qualitative and quantitative research strategies. However, it is essential to note that mixed-method research is not without its challenges as it adds to the research's complexity, requiring additional resources such as time and funding. The risks and countermeasures associated with this approach experienced in this study are illustrated in Table 4.2. However, despite the challenges found, and because of how the mixed-method strategies answer the research objectives and research problem, the strengths of choosing this approach to complement and explain the research much more than would be the selection of a single study was chosen.

Table 4.2: Risks and countermeasures of mixed-method in relation to current research. Source: own

Risks	Countermeasures
Additional resources required, time consuming and costly	Thorough planning, appropriate timing of qualitative and quantitative phases
Themes/variables identified during the qualitative phase are not always relevant	Careful selection of interview partners
Planning and implementing one method by drawing on the findings of another method always prove to be difficult	Identifying appropriate variables that match the identified themes/codes/issues Literature review precedes fieldwork
Difficulty in executing different methods in one study	Systematic planning of data analysis

There exist more than 35 designs of Mixed Methods (see Creswell *et al.*, 2003; Tashakkori and Teddlie, 2003). However, Engel and Schutt (2016, cited in DeCarlo, 2018) have succinctly summarised all these designs into two terms: sequence and emphasis. The former is concerned with the arrangement of the methods, while the latter refers to which method is more stressed. In a bid to summarise the overwhelming list of Mixed Method designs, Creswell and Clark (2011) offered four designs with their use, procedures, common variants, and challenges: triangulation, embedded design, explanatory design, and exploratory design. Out of these, two seem to be specifically relevant to the present research. First is the “instrument development model” exploratory design, where the qualitative research was conducted in the first phase of the data collection to inform the second quantitative phase. This design was chosen because (1) the current study explores the phenomenon of residential satisfaction and urban regeneration in Hungary, and (2) the research develops and tests a new model. The exploratory design has been used in several housing research (such as Khosravi *et al.*, 2016; Riazi and Emami, 2018; Chiappa *et al.*, 2020).

Second is the triangulation “convergence model” that collects and analyses both the qualitative and quantitative data separately to answer different research questions of the same investigation. This design is the most widely used whereby researchers collect and analyse qualitative and quantitative data on the same investigation and thereafter compare the different datasets (Chapple, 2009; Loukaitou-Sideris *et al.*, 2019; Salzer *et al.*, 2016). However, triangulation is no longer used to compare two separate datasets of the same phenomena as its purpose is “unfolding the complexity of phenomena under study by complementing several theoretical perspectives with each other and various methods with each other” (Flick *et al.*, 2019: 3). Noteworthy, researchers can mix and integrate the different types of mixed-method design to achieve the research goals. Hence the adoption of the exploratory-triangulation model (Figure 4.3) due to the emergent elements of the study in addition to the fixed elements. This design was first introduced by Kwok (2012) within the hospitality and tourism field as the exploratory triangulation design allows the researcher to develop a questionnaire similar to the interview protocol so that both the interview and questionnaire results may complement and be comparable with each other. Furthermore, this design was appropriate for this research due to three main reasons: (1) the use of different methods allows for different datasets of the same studied phenomena to be examined; (2) the second round of qualitative data was able to facilitate the quantitative survey instrument; (3) the quantitative method allowed the researcher to generalise the data in the population of the studied neighbourhood.

4.4.2 Case studies

The research design is a crucial stage of research as it is where a roadmap is painted of moving from the “here” to the “there”, or rather progressing from the research questions to the research conclusions. In other words, this research was undertaken to understand and explore the “how” and the “why” of the selected social urban regeneration projects. The method that was used to tell this story is the case study research method. Through the use of the case study approach, the researcher is able to “retain the holistic and meaningful characteristics of real-life events” (Yin, 1994: 13) through exploring and describing a phenomenon and thereafter triangulating datasets using a naturalistic design as compared to the experimental design (Merriam and Tisdell, 2015). Noteworthy, case studies are not limited to qualitative data as they can also be in a mixed-method research design (see Crowe *et al.*, 2011; Creswell and Poth, 2016). Furthermore, there are various classifications and distinguishments of case studies such as intrinsic, instrumental, and collective as introduced by Stake (1995), or the exploratory, explanatory, and descriptive case-study types (Yin, 2009). The most common distinguishment is that by Yin (2009), who separated the case studies into single versus multiple, and holistic versus embedded designs. Due to the research methodological questions (i.e. perceptions of residents and stakeholders and residential satisfaction) and the nature of the studied phenomenon, the embedded multiple-case design was found to be the most appropriate (Figure 4.4). This is because of two main reasons. First, the study includes more than one case study as the researcher aimed to understand the differences and similarities within and between the different case studies.

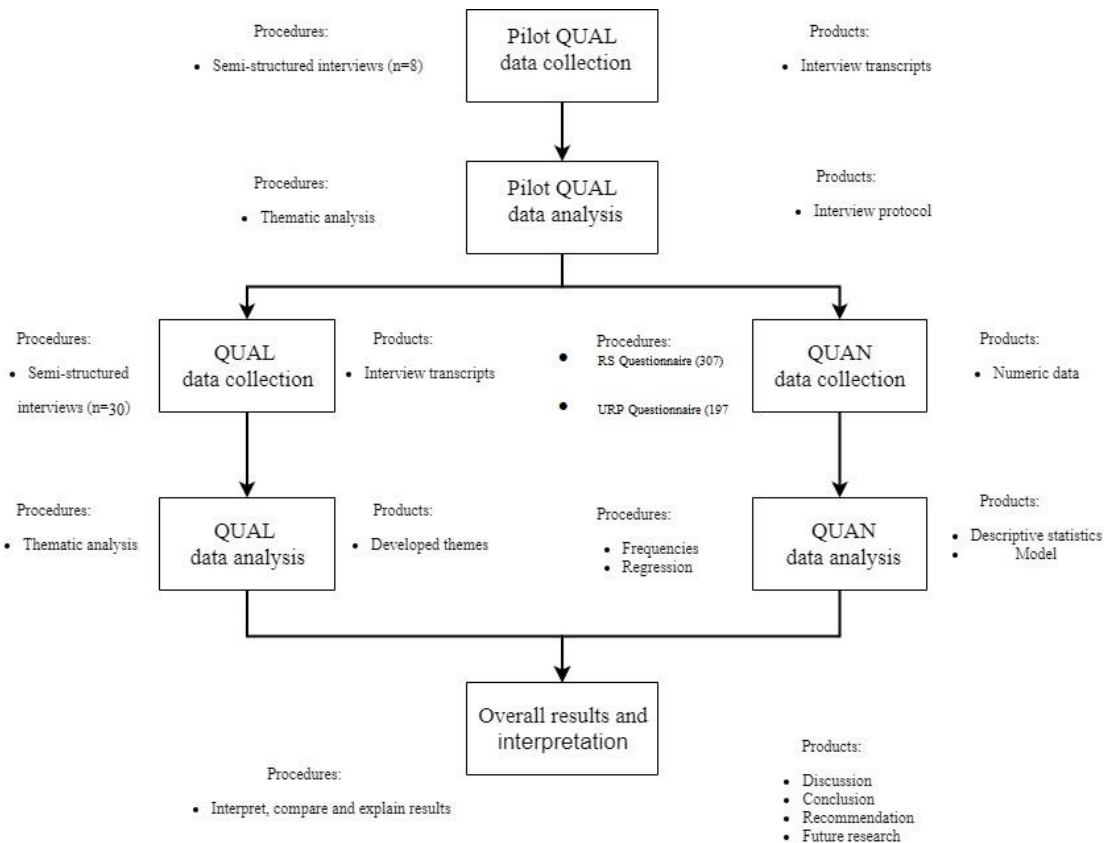


Figure 4.3: Diagram illustrating mixed-method research design of this dissertation (Inspired by Kwok, 2012).

Second, due to the larger dataset acquired from multiple case studies, findings are more reliable. Despite these benefits, a multiple case design is often costly and time-consuming. Apart from this, the context can be understood as the point in which the phenomena occur: the neighbourhood; the case is the investigated phenomena, specifically the affordability and satisfaction of residential environments; the embedded units of analysis refer to the multiple sub-units of a case study such as the urban regeneration and residential satisfaction surveys conducted in the same neighbourhood.

It is important to note that ensuring reliability and validity is not a straightforward process in a case study. This is because it is not the selection scheme of the cases studied but their individual characteristics that determine validity and reliability. It must be demonstrated that the characteristics of the observed case are relevant to the phenomenon under study. Here, the aim is to find the most appropriate data provider(s) rather than collect as much data as possible. Thus, the selection of the case is usually made by the researcher based on their professional knowledge and preliminary studies. Conforming to this, several study sites that provide rich information about the studied phenomena were purposely selected to meet the current research objectives. Specifically, under the broad purposeful sampling procedure, criterion sampling is the selection of a sample based on a predetermined benchmark (criteria). In other words, the researcher will first study the case in-depth before selecting it to become part of the study. The current study required the researcher to conduct an extensive search of URP in Hungary with these programmes that were then severely cut down to only include housing programmes as its main driving force. The third phase saw the exclusion of projects that did not have the social part of the regeneration process. The initial criteria paved the way for the overall criterion research.

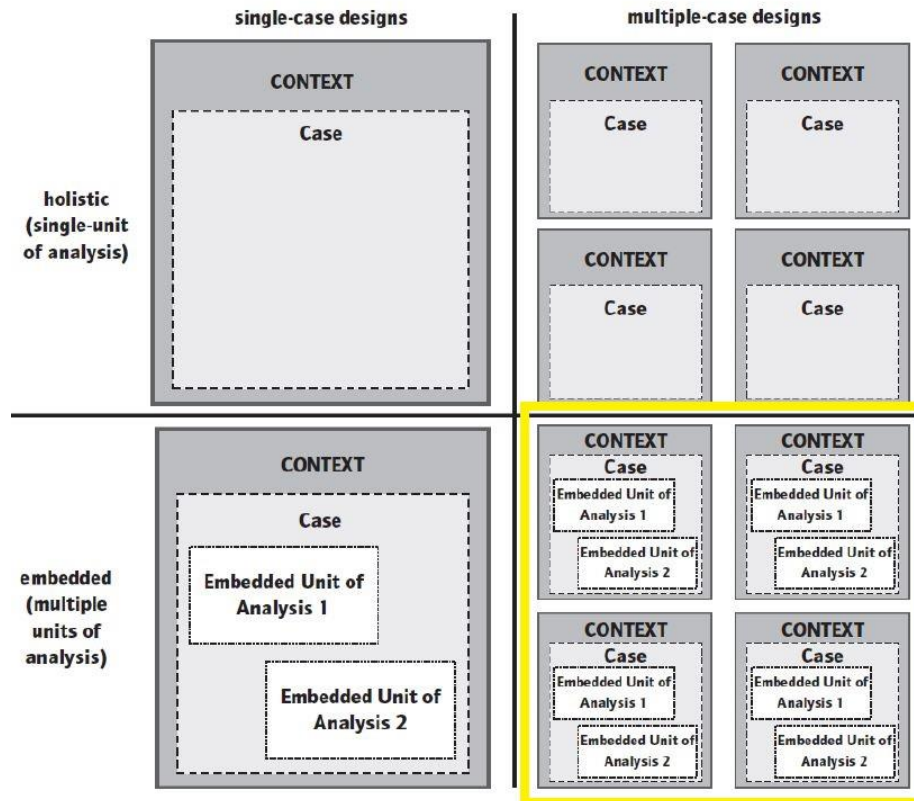


Figure 4.4: Case study design types. Source: Yin (2009).

As reviewed in the previous chapter, the process of redeveloping and rejuvenating urban spaces started several years ago, with each introduced process carrying its own specifications. The current research focused on the urban regeneration process due to the particular focus on stakeholder engagement and residents' participation. As such, the main criteria of the case study had to be the overall purpose of the urban regeneration projects that consisted of (a) rejuvenating residential buildings, (b) providing educational opportunities for those seeking to (re)enter the workforce, (c) improving public safety, (d) creation of community space, (e) improving and maintaining green spaces. Furthermore, the project selected should explicitly be an integrated social project with both soft and hard infrastructures. Soft infrastructure may often include community-building activities, crime prevention projects, counselling services, vocation and educational training courses etc. The hard infrastructure consists of constructing street bumps, creating sports fields and parks, thermal insulation of flats, installing security cameras, and the renovation or construction of a community hall. Furthermore, the selected case study was also dependent on the location where it is located. The research focused on cases that were argued to have been associated with "crime and grime" before the regeneration processes and generally found in the capital city's peripheral areas. The selected case studies are briefly described in the next section.

4.5 Methods

For this dissertation, the term "disadvantaged" is defined based on the combination of the socio-economical, geographical and political burdens limiting and confining that society's growth and emancipation. The case studies chosen for this dissertation are referred to as disadvantaged neighbourhoods due to the historical circumstances that segregated them from the rest of the capital city.

4.5.1 Case study selection

The current research was conducted in the capital city of Hungary, Budapest. Budapest is located in Pest county and is the largest city in Hungary, covering approximately 525 km². Based on the 2020 population census, Budapest has a population of 1 723 836 (Hungarian Central Statistical Office, 2021). Although Budapest has 23 districts, only four neighbourhoods that contained the housing estates were chosen for this study so to allow a greater comparison (Figure 4.5). A comparison of the URP is provided in Table 4.3 and Table 4.4. Despite these differences, the selected housing estates are unique due to the different initiatives: bottom-up initiatives, funded by the EU as a social regeneration project, municipal interventions, and the national panel programme.

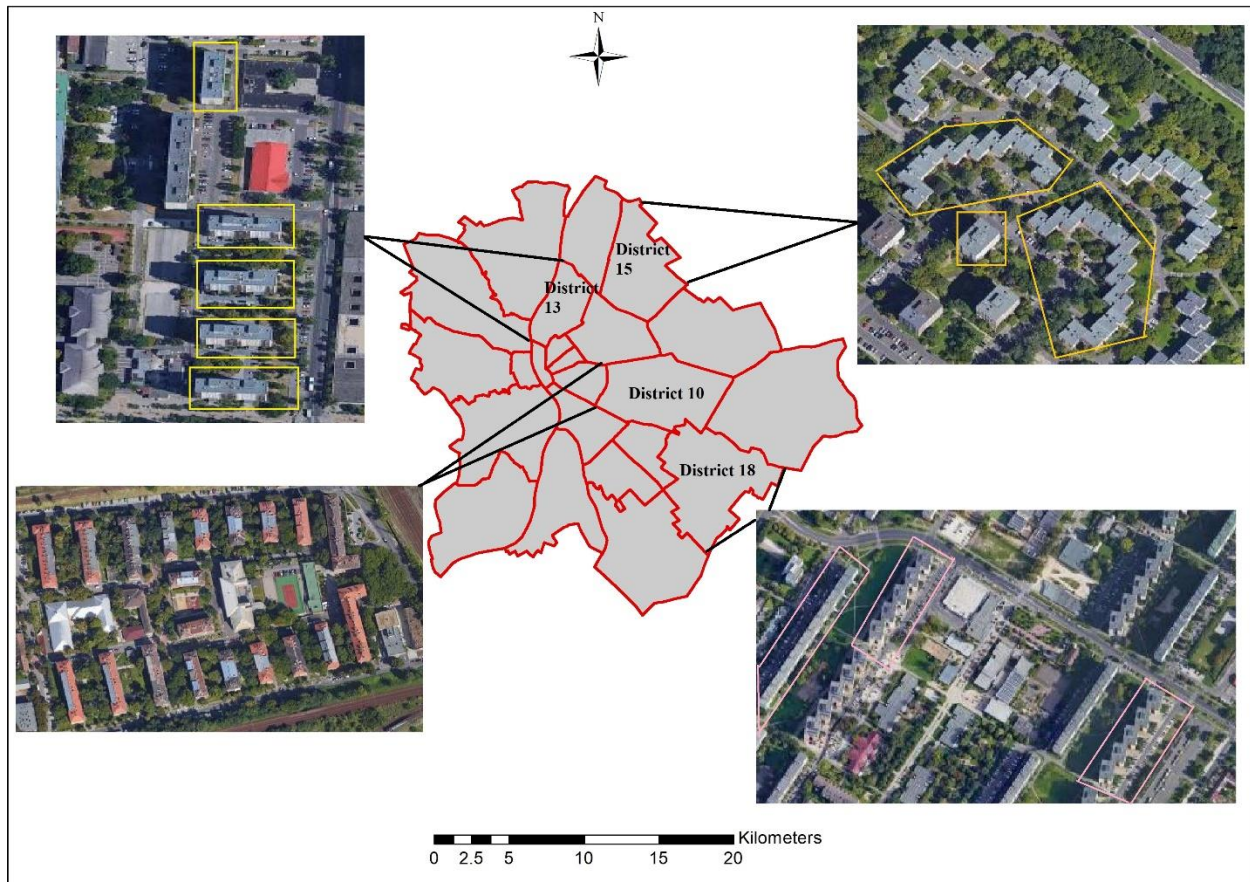


Figure 4.5: Location of study sites. Source: own

4.5.1.1 Havana housing estate

The Havana housing estate is located in District 18th and was built between 1977 and 1983 using prefabricated technology, which was popular during the era of state socialism under Soviet influence. Residents whose informal settlements were demolished by the government were relocated to Havana, which contributed to the bad reputation that the estate received (for a complete historical account of Havana, see Tosics *et al.*, 2005b). A total of 6,248 housing flats are distributed across 140 high-rise buildings with 10 and 11 floors. These buildings consist of both straight and in “zig-zag” design. (Appendix A).

4.5.1.2 Csepel déli housing estate

The district is known as the workers’ district due to the traditional industrial parks. However, whilst other peripheral districts have been slowly rejuvenating their areas, Csepel still shows evidence of

marginalisation and relatively few high-rise developments (Taraba *et al.*, 2021). Csepel déli refers to the apartments found in the south of the district and were part of the urban regeneration process. Specifically, Csepel déli comprises of five buildings that are all 10 and 11 stories high: Kossuth Lajos utca 83, Kossuth Lajos utca 79, Kossuth Lajos utca 75, Kossuth Lajos utca 71 and Petz Ferenc utca 4-6. Similar to Havana, Csepel déli boosts public and green spaces, local schools and shopping centres (Appendix B).

4.5.1.3 Kis-Pongrác housing estate

The Kis-Pongrác housing estate is located in the 10th district of Budapest (Kőbánya). The study area was limited to the area called Laposdűlő, including the blocks of Kerepesi út–Pongrác út–Hős utca. The 20 three-storey-high buildings, totalled 888 apartments, were built between 1939-1940 to address the housing issues in the capital (Appendix C). These flats were all municipality owned and rented to low-income families. After WWII, this area was characterised by high unemployment, crime, and other social ills. There are four parts of the neighbourhood delimited by a transport route; its spatial features can promote segregation. Unlike the other case locations, Kis-Pongrác has the least number of shops available, with only one local grocery shop.

4.5.1.4 Újpalota housing estate

The Újpalota Housing Estate is located in the northeast outskirts of the 15th District and is one of the largest and oldest prefabricated housing development in Hungary, with initially 60,000-70,000 residents once staying in this estate. This number, however, has been steadily decreasing in the past few years. The buildings in Újpalota were also constructed using prefabricated materials. Precisely, the urban regeneration action area was termed Zsókavár with the buildings chosen for the purpose of this study located within Kórákás Park. Only one building had 11 stories, with the rest being 4-story high (Appendix D).

Table 4.3: Characteristics of study sites. Source: Hungarian Central Statistical Office (2021)

	Housing estate	Population	Area (hectare)
Kőbánya	Kis-Pongrác	77,764	3,249
Rákospalota, Pestújhely & Újpalota	Újpalota	79,033	2,694
Pestszentlőrinc-Pestszentimre	Havanna	102,345	3,860
Csepel	Csepel deli	75,487	2,575

4.5.2 Qualitative method

4.5.2.1 Instrument

Semi-structured interviews were conducted with stakeholders either involved in the urban regeneration programmes or the overall housing sector in Hungary (Appendix E). The former was to investigate the roles and responsibilities experienced by the key stakeholders before, during, and after the social urban regeneration projects. The latter provided the researcher with the main challenges encountered in providing affordable housing in Hungary. All the interviews were open-ended, with the shortest being 43 minutes and the longest being over 3 hours (Appendix F). Before the interview commenced, permission was requested to audio record the interview from the interviewee. Due to the travel restrictions and social distancing measures imposed by the Hungarian government during the COVID-19 pandemic, the interviews were a combination of face-to-face and online interviews. The exploratory and in-depth interviews were often supplemented with relevant documents that the key stakeholders have supplied.

4.5.2.2 Sampling

The interviewees were chosen non-randomly through non-probability sampling techniques, depending on the main researcher's subjective expertise. Furthermore, due to the clear rationale of the interview process, it was adamant that the interviews be conducted with specific key stakeholders rather than with all the stakeholders involved in the projects. For instance, it was unnecessary to interview the construction workers of the projects but essential to interview the design architecture company due to the researcher's interests and the nature of the questions. Out of the four main types of non-probability techniques (see Taherdoost, 2016), only two were used for the qualitative method. First, convenience sampling was used as the interviewees who showed interest in this project and were readily available and accessible were selected. Second, the snowballing technique was used whereby interviewees suggested other colleagues, organisations, or professionals actively involved in the URPs.

4.5.2.3 Evaluating quality of qualitative research

Qualitative research, unlike its counterpart, involves a series of complex processes to prove that it contributes scientific knowledge to the world, no matter the studied phenomena. Thus, from the planning to the closure of any research project, the processes of ensuring dimensionality and scientific rigour are vital in qualitative studies. However, the reliance on human emotions and experiences in qualitative research is often brought under fire due to the issues of positionality, subjectivity and general mistrust in the quality of the work. The three most commonly used concepts for checking the quality of qualitative (sometimes quantitative) research quality are reliability, validity, and generalisability (Rowley, 2002; Leung, 2015). Reliability is the degree to which a specific measurement yields consistent results, using a similar case study, over time. Generalisability refers to the contribution of a case study to theory, thus analytic and not a statistical generalisation. Finally, validity refers to the appropriateness and accuracy of the methodology tools in answering the research questions. There are predominantly four types of validity used to evaluate the quality of qualitative research: construct validity, internal validity, external validity, and ecological validity. Construct, or measurement validity, refers to the choice of the methodology used

Table 4.4: Comparison of the urban regeneration initiatives in the case locations. Source: own.

	Budget	Duration	Environment initiatives	Economic initiatives	Social initiatives	Public participation	Stakeholder engagement
Havanna	2.7 million EUR	2009-2015	Cameras, traffic system, recycling project, bicycle storage, created green spaces and sports facilities	Panel renovation, Educational and vocational training courses for employment; schooling activities	Public space renovation, creation of community space, counselling	Public consultation broad; purchase of power dominated by local government	Közmunka Egyesület, local municipality, several NGOs, local schools, housing representatives, Agape church
Csepel	3.6 million EUR	2012-2015	Green space renovation; road, parking, bicycle paths; installing street lights, cameras	Panel renovation, educational, vocational training courses for employment; schooling activities	Community space created, street mentoring, expansion of family support services,	Limited public consultation; purchase of power dominated by local government	Kölcsey Lakásfenntartó Szövetkezet, local primary school, Budapest Esély Nonprofit Kft., several NGOs
Újpalota	1.2 million EUR	2010-2015	Creation of community gardens; sports facilities, renewal of road and parking;	Panel renovation, renovation of medical centre; educational, vocational training courses for employment; laundry room	Renovation of public space and community house; counselling;	Limited public consultation; purchase of power dominated by local government	Housing representatives, several NGOs and companies, local municipality
Kis-Pongrác	4.2 million EUR	2011-2015	Created small gardens and open spaces between flats; re-paving street and parking spaces; creating new a football field; renovating old and building new playground; installing street lights, signs, speed bumps and surveillance cameras, façade renovation of the kindergarten and day-care centre	Partial or full housing stock renovation increases property value and reduces maintenance costs. Educational and vocational training courses for employment; schooling activities	Street festivals, crime-prevention programmes, counselling services, providing occasional and logistical support to those with poor health	Limited public consultation; purchase of power dominated by local government	BÁRKA, district police station, Budapest Capital City, local secondary school, several NGOs, housing representatives, KÓKERT, ERDF, local municipality

to appropriately measure and explain the phenomena it initially sought out to study. Internal validity, often used for explanatory and not exploratory studies, aims to establish a causal relationship. External validity refers to the ability of the result to be generalised. Similarly, ecological validity is concerned with how well the results can be generalised to real-life situations.

As a result of the different treatment of the analogue concepts of validity and reliability within and between quantitative and qualitative research, different trustworthiness and quality evaluation criteria were proposed by Lincoln and Guba (1985), namely credibility, transferability, dependability, and confirmability. The first step is credibility, which refers to linking research findings with reality to ensure the truthfulness of results. Second, transferability refers to the extent to which other researchers may apply the study's findings to other similar settings (theory or practice). Third, dependability is concerned with the level of consistency to which research procedures were followed and documented to allow replicability. Lastly, confirmability refers to the question of positionality and objectivity of the researcher. Due to the understanding that all the above concepts refer to the same objective, i.e., ensuring that sound science has to be reliable, valid, rigorous and trustworthy to represent what it aimed to represent, the current research does not demarcate between the concepts. These concepts are interlinked: reliability–dependability; internal validity–credibility; objectivity–confirmability; generalisability and external validity–transferability. Therefore, several steps were taken to ensure the trustworthiness of the current research (Table 4.5).

Table 4.5: Evaluation of quality of current qualitative research (Inspired by Rowley, 2002)

Tests	Case study tactic	Phase of research in which tactic occurs
Credibility	Triangulation Member checking Rich verbatim descriptions	Data collection Data collection Data analysis
Confirmability	Acknowledging no research is objective-free	Throughout the research
Dependability	Developing case study database	Overall methodology
Transferability	Replication logic of case studies Case-study protocol	Research design Data collection

4.5.2.4 Data analysis

Whether subjective or objective, the epistemological position governs the entire research process, so the method used for the analysis of the dataset must be compatible with the epistemological position (Willig 2013). Thus, thematic analysis (TA) was used. This is a tool used to identify, analyse and elucidate themes that are found within a dataset. Owing to its flexibility, thematic analysis is used in several disciplines, such as international purchasing in retail firms, higher education, chronic disease management and understanding corruption. Although this tool is widely used in qualitative research, limited attention has been paid to the finer details of thematic analysis, such as what such analysis fundamentally is and what steps are needed to perform it. Thematic analysis and content analysis are similar in terms of their philosophical foundation, data coding and locating of themes that can explain a phenomenon from different perspectives (Vaismoradi *et al.* 2016). However, differences between the two methods also exist, including how content analysis can be performed on non-textual data, such as videos, and how the results are presented in conceptual models. To address these limitations, some scholars have explicitly grounded the different phases of the process of thematic analysis. These phases are related to those of grounded theory in that they include the initialisation, construction, rectification and finalisation phases, each broken into stages (Charmaz 2006; Braun and Clark 2006; Vaismoradi *et al.* 2016). Braun and Clarke (2006) postulated that thematic analysis should be a foundational tool for qualitative researchers to learn as part of identifying meaningful themes and among the few shared methods of qualitative research.

Clarke *et al.* (2019) have demarcated three main approaches in TA to discover patterned meaning in data: coding reliability, a codebook, and a reflective TA. The reflective TA is most relevant to this study, which

has six possible variations: inductive, deductive, semantic, latent, constructionist, and critical realist. In keeping with the paradigm guiding this research, the critical realist variation of reflective TA was favoured for three main reasons. First, unlike phenomenological studies, the present study did not seek only to include a detailed description of each stakeholder’s experience. This is because interviews were conducted to understand the context in which perceptions and experiences of each stakeholder came about. However, this does not mean that the research excluded stakeholders’ subjective experiences as a critical realist approach focuses on reporting an assumed reality evident in the data. Hence this method was chosen because it allowed the researcher to examine patterns within the dataset that reflect stakeholders’ perspectives to generate novel perceptions. In this, the study did not focus on developing an understanding of the social construction of the phenomena.

The analytical process of qualitative research is complex and iterative. In the initial coding phase, all the transcripts totalling 190 pages, which formed the analytical corpus, were loaded into Taguette qualitative data analytic software (Rampin *et al.* 2020). Several concepts and phrases were noted and recorded by repeatedly reading the interview transcriptions. This yielded a total of 701 verbatim, coded text from the interviewees. These concepts were subsequently coded, with a focus on both their semantic and latent meanings. The collation and organisation of all codes were performed manually using Microsoft Excel. Similar codes were grouped into subthemes. The subthemes were then thoroughly inspected to identify patterns of meaning across the dataset. During the theme-development stage, it was observed that the participants produced similar instances of language, but these instances were from different perspectives and therefore related to different themes. Additionally, some excerpts matched more than one theme because the themes were interlinked. Figure 4.6 presents the six steps of conducting a thematic analysis.

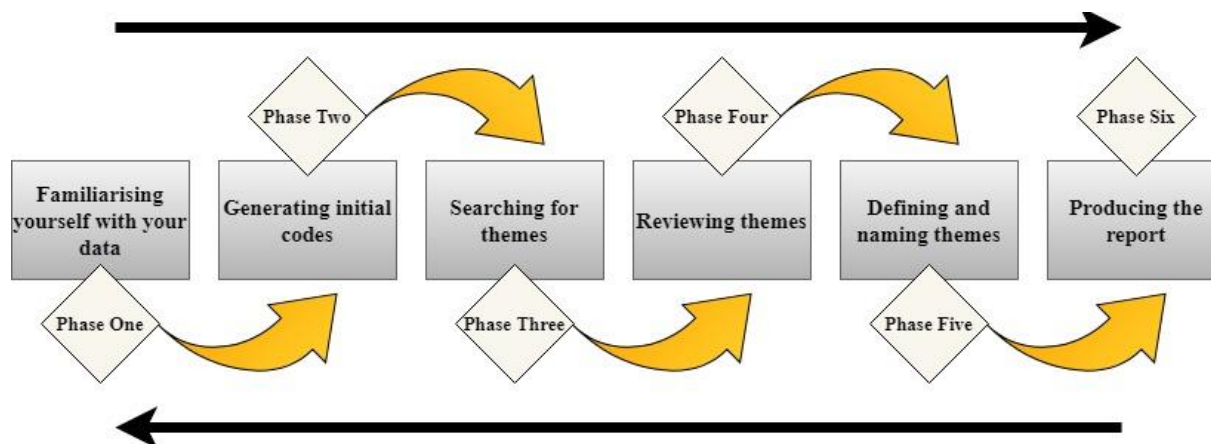


Figure 4.6: Six phases of thematic analysis. Source: Braun and Clarke (2006)

4.5.2.5 Fieldwork limitations

A large majority of the key stakeholders were not proficient in the English language. Although two interviews were conducted in fully Hungarian and the others in both languages, the main researcher decided not to further interview key stakeholders who were not comfortable having English interviews. This challenge meant that a lot of the key stakeholders were unavailable for interviews. Another limitation during the interview phase was the unavailability of the key stakeholders after having agreed to be interviewed.

4.5.3 Quantitative method

4.5.3.1 Instrument

A semi-structured questionnaire (Appendix G) was administered to the residents of affordable housing flats that were renovated during the social URPs. This form of enquiry was used to acquire information from a

large dataset and enabled the researcher to compare the results of the different datasets. The questionnaire was first administered via an online software, LimeSurvey, but did not yield high completion rates. Thus, the questionnaires were physically administered to the residents due to three main reasons: (1) to achieve nearly 100% completion; (2) residents' anonymity is protected; (3) high response rate (see Bowling, 2005).

The survey questionnaire (Table 4.6) consisted of three main parts: socio-demographic and socio-economic, the impact of urban regeneration, and residential satisfaction. The first section was split into two sub-sections, with some questions asked at the beginning of the survey, and the rest asked at the end of the survey. These questions were related to the socio-demographic and socio-economic background of the residents. The response format used for the first section was ordinal, dichotomous and interval.

To understand both the negative and positive impacts of urban regeneration projects in the study locations, section two asked long-term residents to complete questions based on their thoughts, perceptions, and participation in these projects. For the purpose of this research, long-term residents are those residents who have been living in the buildings for more than 5 years – with 5 years chosen as that is when the URPs were completed. As such, for this part of the questionnaire, the exclusion criteria included residents that have lived in the buildings for less than 5 years. This part of the questionnaire was informed by the literature and interview findings from the qualitative research. To meet the objectives of this questionnaire, the response format was a rating scale (“1” = very bad to “5” = very good), multi-interval, dichotomous, and open-ended questions.

Table 4.6: Structure of questionnaire. Source: own

Section	No. of items	Scales
Housing information	7	Closed-ended
Socio-economic impacts of the urban regeneration project	11	Both
Level of residential satisfaction	9	Closed-ended
Socio-demographic	8	Closed-ended
<i>Total</i>	35	

Finally, several different measures were constructed to examine residential satisfaction. These variables included: dwelling unit, neighbourhood features, housing support services, housing condition features, social environment, resident participation and environmental satisfaction features. All the questions were informed by the extensive literature review that was performed prior to data collection. To understand and measure the residents' satisfaction with the different determinants, the questionnaire used a 5-point semantic differential scale which rated from “1” = very dissatisfied to “5” = very satisfied. The 5-point Likert scale was also used to enable residents to state how much they agreed or disagreed with a given statement.

4.5.3.2 Sampling

Unlike the qualitative method, probability sampling was used for the quantitative phase of the research to allow the population an equal chance of being selected. Due to the nature of the study, the buildings in the study sites, as previously explained, were not all part of the regeneration processes. Thus, a combination of sampling techniques has been adopted, consisting of (a) clustering and (b) random sample techniques. This method is also called multi-stage sampling (Etikan and Bala, 2017). First, each floor in the regenerated residential buildings was treated as a separate subgroup (cluster). Second, within each cluster, the simple random probability technique was used to select one participant as this allowed flexibility whereby if one resident was not at home, another resident on the same floor could be sampled. Noteworthy, only one representative per household was allowed to partake in the research, i.e. if the head of the household was unavailable, another household member was allowed to answer the questionnaire. For the overall questionnaire, the exclusion criteria were those under 18 years. The target population were those living in

housing estates that were part of the regeneration processes. This ensured that all the buildings that were part of the regeneration process were sampled.

4.5.3.3 Variable

The holistic residential satisfaction conceptual model comprised of 7 latent variable constructs with 70 measurement variables: dwelling unit features had 8 measurement variables, neighbourhood features had 13 measurement variables, housing support services included 12 measurement variables, housing condition features had 8 measurement variables, social environment included 13 measurement variables, resident participation included 7 measurement variables, environmental sustainability included 9 measurement variables and finally, overall residential satisfaction included 5 variables (Appendix G).

4.5.3.4 Research assistants

Research assistants, also known as fieldworkers, administered the questionnaires to the residents. A total of fourteen bilingual Hungarians were trained and hired by the main researcher to ensure that they understood the main purpose of the questionnaire and how to administer the questionnaire consistently. All research assistants had to practice with each other to understand the entire questionnaire procedure. After every practice round, debriefing sessions were held where the research assistants and the researcher discussed problematic questions that could confuse the residents. All necessary corrections were made before the commencement of the fieldwork. Due to the lack of the Hungarian language, the main researcher was not part of the data collection but was with the research assistants throughout the data collection process to assist and advice with issues that arose in the field. Furthermore, the main researcher ensured that all the questionnaires were fully completed.

4.5.3.5 Data collection

The questionnaire was orally administered to the residents, and it took 15 minutes to complete a single questionnaire. The data collection process occurred on 3 Saturdays and 1 Sunday, with weekends chosen due to the availability of research assistants and the higher probability of residents being at home on weekends than weekdays (Table 4.7). The descriptive statistics for both types of questionnaires are provided in Appendix H.

Table 4.7: Summary of data collection procedure for questionnaires. Source: own

	Csepel-déli	Kis-Pongrác	Havanna	Újpalota	Total
Date	01/05/2021	30/05/2021	29/05/2021	03/07/2021	
Total questionnaire (URP)	90	77	90	50	307
Total questionnaire (RS)	59	47	58	33	197

4.5.3.6 Evaluating quality of quantitative research

To evaluate the quality of the residential satisfaction questionnaire, Cronbach's alpha was used as the reliability statistical tool. This tool measures the degree to which an instrument (i.e. questionnaire) produces the same results if the exact measurement is repeated. It is the most widely used to measure the internal consistency of an instrument with scores above 0.70, often said to have high reliability. However, a high-reliability measurement does not necessarily mean it has high accuracy (Taber, 2018).

As discussed in the evaluation of qualitative research quality, several forms of validity exist. Specifically, for the quantitative research, the questionnaires used was measured through construct validity. This validity questions whether the measurement instrument is underpinned by theoretical concepts (Leedy and Ormrod,

2013). The development of the questionnaire parts was informed by an in-depth literature review that was supported by expert interviews, particularly the urban regeneration questionnaire. Moreover, a pilot with approximately 12 Hungarians was conducted before the commencement of the data collection. Criterion-related validity was employed to determine the degree to which the instrument of measurement correlates with other measures (Leedy and Ormrod, 2013). The residential satisfaction questionnaire is used to predict and measure residential satisfaction in the different housing estates of Budapest. Thus, several statistical tools were used to understand the relationship between the determinants and overall residential satisfaction, such as Multiple Linear Regression (MLR).

4.5.3.7 Data analysis

Prior to the administration of the questionnaire, all the questions were coded, which allowed for the preceding steps to be less challenging. The raw data of the physical questionnaires were digitised and entered into Microsoft Excel. Data triangulation occurred when the entered data was checked and then cross-checked with random surveys to correct any errors that may have happened, such as duplicated entries. Once data entry was achieved, the data was exported to Statistical Package for Social Sciences (SPSS) for statistical analysis.

For the residential satisfaction questionnaire, the data was statistically analysed in three ways. First, descriptive statistics of respondents' socio-economic and socio-demographic characteristics, such as frequencies, were obtained in all the case studies. This enabled the data to be presented in a meaningful and visually pleasant manner to ensure readability. This stage was also only done for the URP questionnaire.

The second step comprised of the adoption of three indexes used to calculate residential satisfaction: habitability index, satisfaction index, and residential satisfaction index.

The habitability index (HI) is used to calculate the exact variables of the components to find out the degree to which they contributed to the satisfaction or dissatisfaction of the resident. This index was introduced by Ogu (2002) and calculates the indices separately rather than combined. In other words, based on the scores (1-5) that respondents assigned to each variable, these are totalled and then divided by the sum of the maximum possible score for that specific variable. This is then multiplied by 100 (Equation 1):

$$HI_x = \frac{\sum_{i=1}^N a_{yx}}{\sum_{i=1}^N A_{yx}} \times 100 \quad \text{Equation 1: HI}$$

Where HI_x represents index of habitability of variable x and N is the number of respondents (307), while a_{yx} is the actual score on the five-point scale by the y th respondent on the x th variable. "A" represents the maximum possible score that respondent "y" could give to variable x on the five-point scale (Ogu, 2002: 44).

Next is the satisfaction index (SI), which calculates the satisfaction index of a specific component which was introduced by Onibokun (1974). It is understood that the score of all the variables within a specific component would indicate if respondents are satisfied or dissatisfied with that component. Thus, this index builds on the habitability indices that were calculated in the previous step (Equation 4.2):

$$SI_x = \frac{\sum_{i=1}^N y_i}{\sum_{i=1}^N Y_i} \times 100 \quad \text{Equation 2: SI}$$

Where SI is the index of relative satisfaction of a tenant with a specific component (x); N is the number of variables selected for scaling under x ; y_i is the actual score by a respondent on the i th variable; Y_i is the maximum score that variable i could have on the scale used (Onibokun, 1974: 192).

Lastly, the residential satisfaction index (RSI) calculates a respondent's residential satisfaction in all the components enquired (Onibokun, 1974). This is mathematically expressed in Equation 3:

$$RSI_m = \frac{\sum_{i=1}^{N_1} d_i + \sum_{i=1}^{N_2} n_i + \sum_{i=1}^{N_3} hs_i + \sum_{i=1}^{N_4} hc_i + \sum_{i=1}^{N_5} rp_i + \sum_{i=1}^{N_6} s_i + \sum_{i=1}^{N_7} e_i}{\sum_{i=1}^{N_1} D_i + \sum_{i=1}^{N_2} N_i + \sum_{i=1}^{N_3} HS_i + \sum_{i=1}^{N_4} HC_i + \sum_{i=1}^{N_5} RP_i + \sum_{i=1}^{N_6} S_i + \sum_{i=1}^{N_7} E_i} \times 100 \quad \text{Equation 3: RSI}$$

Where RSI_m , is the satisfaction index of a respondent with the residential satisfaction model. $N_1, N_2, N_3, N_4, N_5, N_6$ and N_7 , are the number of variables selected for scaling under the dwelling, neighbourhood, housing support, housing condition, residents participation, social features and environmental components, while $d_i, n_i, hs_i, hc_i, rp_i, s_i$ and e_i represent the actual score of a respondent on the i th variable in the component. $D_i, N_i, HS_i, HC_i, RP_i, S_i$ and E_i are the maximum score of the variable i in the dwelling, neighbourhood, housing support, housing condition, residents participation, social features and environmental components.

The final step utilised the regression method to investigate which components could predict residential satisfaction in housing estates of Budapest, Hungary (Equation 4).

$$Y^* = \beta_0 + \beta_1 X_1 + \dots + \beta_p X_p + \epsilon \quad \text{Equation 4: MLR}$$

where \hat{Y} is the predicted value of overall satisfaction, $X_1 \dots X_p$ are p continuous and categorical independent variables, β_0 is the intercept, β_1 through β_p are the estimated regression coefficients, and ϵ is the error term. Categorical variables included in the model were age, gender, education, marital status, ethnicity, household dependents, household occupants, occupation and tenure.

4.5.3.8 Fieldwork limitations

Due to the main researcher being unfamiliar with the Hungarian language, research assistants were hired to administer the questionnaires to the participants. As a result, the main researcher was unable to control how the questions were posed to the participant, creating an interpreter bias and, therefore, the way the respondents interpreted the questions created respondent bias. In an attempt to reduce the interpreter bias, the main researcher ensured that the questionnaire was in Hungarian to prevent research assistants from translating a question with daily post-fieldwork debriefing sessions held. Furthermore, due to the research focusing on low-to-middle income groups, there was a chance of social desirability bias and where participants responded to the questionnaire in such a way that they think will make them more acceptable. To lessen this, participants were ensured anonymity. And finally, to prevent acquiescence response bias, the questionnaire utilised a scale of measurement instead of the ubiquitous agree-disagree answers.

4.6 Ethical considerations

Research ethics is essential and has to be upheld in all situations. All the participants, both key stakeholders and residents, took part in the research knowingly and voluntarily. Before the data collection process commenced, participants were informed of the main aim of the research and the importance and purpose of their role in the research. It was emphasised that participants would not receive any compensation (financial or otherwise) from participating in the study. Participants refusing to take part in the study were not prejudiced, discriminated or treated unfairly, with participants having a right not to answer a specific question or withdraw entirely from the research at any time.

Lastly, although there does not exist a formal research institutional board in the University of Szeged, Doctoral School of Geosciences, this research received authorisation from the University of Szeged General Data Protection Regulations (GDPR) office. All the acquired data has been securely stored by the main researcher and will be disposed of after a maximum of five years. At this time, the data will not be disclosed to third parties. Moreover, to appropriately disseminate the research findings, the main results of the study will be (1) written and illustrated in non-scientific Hungarian, printed and pasted in posters (varying sizes) across the housing flats, (2) where possible, similar work was submitted to the local organisations' newspaper, social media accounts and local websites for publication (3) recommendations for the key stakeholders involved in the decision-making and residents living in the housing estates are planned to be submitted. Although often overlooked by several researchers, this will be conducted as the dissemination

stage is one of the most vital aspects of research as it ensures that the investigation has a social, environmental or economic impact on the studied phenomena.

4.7 Chapter conclusion

The current chapter has outlined various steps and tools undertaken in the research. Through the adoption and laying the foundation of the critical realist theory, several building “blocks” have been utilised to meet the methodological objectives of the research. Through the use of four Budapest housing estates as case studies, the research employed the exploratory-triangulation mixed method design as the qualitative and quantitative techniques beautifully completed one another. The qualitative data was analysed via thematic analysis, whilst SPSS analysed the quantitative data. For the quantitative data, the results were split into two parts due to the complexity of the questionnaires with one part explored through descriptive statistics whilst the other through descriptive statistics, correlation, MLR, and coefficients. The findings of the research are presented in the following chapters.

5. Qualitative results and discussion

5.1 Recognised themes

The recommendation of Nikitas *et al.* (2019) guided the writing-up phase of the research, which was carried out by identifying structures within the data that have an explanatory capacity instead of merely accumulating textual wealth. Most of the verbatim comments were concerning the interview schedule, with other views and comments raised as the interview continued. Although interesting, some details unrelated to the rest of the themes or the study's overall objective were excluded from the analysis, thus the research. Five themes were conceptualised from the dataset, with subthemes in each main theme enriched through verbatim excerpts to support the identification of essential issues and findings (Table 5.1). To retain interviewees anonymity, codes have been used (Appendix F)

5.2 Conceptualisation of URP

The first theme centred on conceptualising URPs in Hungary, specifically in Budapest. This theme resonated the highest amongst the participants as the type, purpose and outcomes of these programmes are still uncommon in Hungary compared to previous programmes. Furthermore, URP in Hungary (specifically funded by ERDF) often include inclusionary argumentation partnerships where decision-making processes are not autonomous.

5.2.1 Perceptions about programme

In Hungary, within the funding period of 2007-2013, 71 social regeneration projects have been implemented [6]. These projects have primarily been implemented within housing interventions and often include a mix of environmental, economic and social interventions such as providing training courses to increase residents' employability, installing security cameras and energy-efficient windows, creating green

Table 5.1: Thematic analysis illustrations. Source: own

Theme	Sub-themes	Verbatim excerpt
Conceptualisation of URP	Perceptions about programme	[PS7] On the one hand, during the planning of these projects, the social and physical parts are planned separately which leads to major problems. On the other hand, stakeholders and decision-makers cannot see why the soft or social parts of these projects should be final.
	Role of housing	[RL7] People don't have the money to really renovate their homes because the renovation prices are really high.
Public participation	Legislation	[RRI] Public participation and the notice must be posted a certain period of time before...yes we have to send a notice once a month but I mean come on!
	Engagement techniques	[RL1] we also talked to the local kids it was organised in the local school, what would happen and what would they wanted it was part of the public participation process in a way
	Local attitudes	[RL2] There is a group of people who are unfortunately always looking for the bad in everything.

	Shortcomings	[TA3] These residents made it very clear that the residents forums were not really forums, as in most cases in Hungary. Basically giving face-to-face information, what's gonna happen and basically you do not have much to say. And this is the Hungarian participation.
Stakeholder collaboration	Role of stakeholders	[TA2] Our aim is to provide tools and mentors for the community members and to develop the skills of the local people and to encourage participation of the locals. So after this programme, they became community development workers due to the skills we provided to them
	Perceptions of engagement	[TA5] I think a lack of cooperation was one of the main issue during the programme-from the professional side. This is because there are a lot of organisations, lots of institutes that did their own activities, and own goals. It was a really...it really hurt us because we know potential resources if we could cooperate with each other.
Factors hindering URP	Financial	[TA6] For social developments, it is always hard to find the money and from the district's budgets or any budget
	Administration	[TA8] And that they are so so slow-you write something and they will only respond months later....
Ensuring sustainable URP	Long-term strategies	[RR1] There is a need for integrated projects that follow a more people-based urban housing approach that will address this urban problem and social problems
	National housing policy	[PS12] So, urban regeneration is very much about, you know, um, going back to a time when, on the particular part of the city needs to be functional, it used to be functioning, but the regeneration projects usually focus on only one or two aspects of the four-ways functions that inevitably leads to exclusion and changes your balance in the urban space

spaces, and encouraging residents to participate in decision-making processes. Noteworthy, these interventions are all interrelated and require the communities to be placed at the development centre. Although both urban regeneration and urban restructuring are geographical processes used to prevent further socio-economic decline and the physical degradation of buildings, more often than not, tension rises when the social and physical aspects of the programmes have to be implemented.

[PS12] So, urban regeneration is supposed to be about regenerating communities, regenerate working functions of various urban spaces, but definitely, we are not. We are governed by the logics of the property markets, and capital accumulation and all these regeneration projects are very much about reusing urban space.

In Hungary, the social regeneration programme outcomes and procedures are unique in that they significantly differ from urban renewal programmes that focus mainly on the physical aspect of the development. Furthermore, the EU has played a vital role in the surge of these programmes in the country, as mentioned by several respondents (e.g. RL4, RL5, RL6).

[PS7] Basically, EU accession and the money that came with that, in my view, was the main catalyst which brought urban regeneration policies and projects into the major cities in Hungary.

5.2.2 Role of housing

Regarding the role of housing in the selected URPs, all the respondents agreed that housing played an essential role in the housing estates. All the housing estates had issues with the physical conditions of the apartments in varying degrees. However, local municipalities and residents often do not have the financial means to renovate these buildings, hence the surge in applying for various funding from the EU. One of the stipulated conditions from using these funds is that the municipality cannot use the money to renovate housing.

[RN1] Hence, this is why the Hungarian government like to call their projects rehabilitation so they can apply for funding cause if it is just a housing project, nobody would care.

[PS11] In terms of political will, at the district that we want to do something with housing. And then the availability of money which is, it's unquestionable that from the very small budget of local neighbour or local governments, they could do something really large or landscape project or long-term project or increasingly the municipally-owned housing stock.

However, with the majority of the funds allocated to achieving the physical goals, some respondents reported that that leaves little funds for social goals, which are often made to put a tick next to that box. Moreover, the renovation of housing contributes to the aestheticism of the estates, which has been argued to have encouraged residents to sell their flats.

[RL7] Regarding the main square, I am sure they did do some work there but I really don't think it is something spectacular.

5.3 Public participation

5.3.1 Legislation

The following consensus was found when the stakeholders were asked if they were familiar with any public participation legislation in Hungary.

[PS11] there is debts obligatory kind of, I wouldn't say that it's participation but still the involvement or the possible involvement of the public.

[TA2] The role exists because it is part of the EU process.

Defining public participation, respondents from the private sector emphasised the difference between the superficial and the real meaning of participation.

[PS7] If I would make up a definition, it would include a separation between something like a superficial participation which is quite common in projects where you gather people for 2 hours and then you can tick the box of project management file that you made a participatory event. And I would say that the real participation is when people who will be affected by the project have significant say in how the project is shaped throughout the project and not just the beginning...which is pretty hard to achieve because it takes a lot of time and a lot of money.

One of the stakeholders referenced Arnstein's ladder of participation to explain Hungary's public participation process. This was similar to the thoughts of PS1, PS2, PS3 and PS4 in that although they

participated in condominiums meetings and requested certain things such as the little children's playing ground, little of what they asked for was delivered.

[TA3] ... we are in the first set: basically, people can take the information; maybe on the second step, people can decide about minor issues, and I think they can decide if there are new pavements and what colour stones should they use. They can't even say that the pavements are fine, they do not need a new painting; instead, give us something else. But they can only say if it is going to be a yellow stone...

5.3.2 Engagement techniques

The public participation process is only as good as the techniques used to invite, interact and involve the residents in the URP. When residents feel involved in the process, they are more likely to involve themselves and expend more energy on the project. Incorporating social sustainability into URP stresses the empowerment of community members, enabling them to access goods and services while encouraging active participation in decision-making processes. Thus, several techniques exist and were employed when interacting with the residents.

[RL3] We held a lot of forums for the community to come in and get to know each other, and they could get to know me. We had a newspaper called "*Vagyunk*", "*We Are*", written by the association, and we printed it out.

[PS5] After contacting the coordinator, I organised a general meeting with the residents where a representative of the coordinating company was present and outlined to the community the purpose of the project, the conditions for the participation of the houses (undertake self-renovation), the financing and the expected schedule.

On involving the youth,

[TA8] So, I researched it a lot and found my own way of community theatre and the first performance was about how youth live in housing estates with 10 stories.

[TA2] The youth felt like they did not belong because many of the participants and the methods were for the older people. It is important to include all age groups, especially in social programmes. It was a mistake on our side for not involving the youth properly.

5.3.3 Local attitudes perceived by stakeholders

Noteworthy, stakeholders had clear differing views on the impact of the programme on community life. At the beginning of the programme, the stakeholders found that the locals were sceptical of the URP, mainly because of the lack of prior participative manner from the municipality.

[RL2] Of course, in the meantime, we received a lot of criticism, we were often disappointed, because nothing was good for the people, for the people who lived there.

After the initial stage of involving the residents, the level of participation increased, with the locals becoming actively engaged in different tasks. However, due to the inflexibility of acquiring funds for the needs of the community, changes are not usually welcomed by the funders.

[RL1] It was one of those things that take time: sometimes, the situation will change; in the meanwhile, these processes are not always flexible, so when we talked to the people in the beginning, "okay, what is important, they say the cameras are fairly important", but maybe later they would say something else ... it's in the list of what we promised to do, what we got the funding for—and if you say, "oh no, the camera was a bad idea", we can't really change it, so, yeah, it is a problem.

Specifically, the implementers of the soft programmes were in accordance with residents in that local participation was not strong, and thus, the programmes did not improve much of the community life. In contrast, local municipality and block representatives exclaimed at the increased community improvement and life.

[RL2] Community life developed a lot in my opinion.

Furthermore, it would be remiss to dismiss the several local initiatives made by the housing estates to improve their residential environment. For instance, residents came together, discussed and approached the municipality with the help of one of the tender awardees to have community gardens in the area.

[TA5] We organised some events with the 4 different community gardens in collaboration with the communities because community garden was a totally new thing at that district. So, the municipality built 4 gardens in that area and I think they are really active right now as well so it was nice. But as I can see, people just mainly focus on gardening in their own communities and don't look around and discuss about local issues and topics.

However, as evident in the second part of the above verbatim, initiatives may be done in the communities, but the onus is mainly on the residents to continue with the project. In another district, although residents had agreed during the URP to be responsible for the plot of green space in front of each housing block, they did not factor in the amount of time it would take to upkeep the area nor the energy it would take to continuously engage with other residents to maintain it.

And finally, contributing approximately 15% towards the housing renovation, residents did not have full decision-making power but partnered with the local government and thus had a say in the project through their housing representatives who were part of the consortium. Noteworthy, although residents were invited to contribute, due to their low share in the joint venture, there was little room to manoeuvre.

[TA3] So they were really thinking that couldn't they use the money to remove our arrears instead of renovating a park. And of course, the EU does not give people money for arrears as people should have a more self-financial plan for their lives, work harder, save. So, EU does not give money for that but gives money for stuff that we can have a little celebration and cut the ribbon and say you did it.

5.3.4 Shortcomings

Due to the complexity of public participation, numerous shortcomings that prevented the complete success of the URP were revealed by the stakeholders. Foremost was the lack of enthusiasm in participating in the projects by the residents. To explain and understand the lack of participation among the locals, some participants looked to the authoritarian domination that Hungarians have historically experienced.

[TA1] Hungary was a socialist country for quite long, and nobody consulted anybody. Nobody wanted to be consulted, so sometimes people are really afraid to speak out. So it is not in the culture, and they also think that if I go to a meeting and tell them what we want, it won't affect the decision ... which is usually true.

[RL6] When we start the work, we experienced people do not like the neighbourhood and the house. And they want to move out somewhere. They try to catch solutions for every problem that they have. We tried to communicate that we work with housing at the first step because we only have €30,000.

However, it is essential to point out that public participation is not a process that may be included in the planning or implementation stage but rather in all the stages for a project to ensure maximum involvement. Involving residents in the implementation stage would mean essential information about the needs of the product users is unknown, thus the commencement of conflict.

[TA5] So it is not about how I can draw a wonderful painting, but how I can fulfil a document in order to get something from the municipality. It was a lot of knowledge, skills and experience missing in connection...how I can be a real civilian.

[PS7] So, I would say that those are much more problematic right now but the lack of participation is also there. In case where there would be much bigger participation and I have seen a few projects where their participation was an integral element of the project implementation and many times there was tension between the people and what they would like to do and what is possible to do given the structural constraints. Even in cases where people are given autonomy, they themselves feel that this structural limit or political limit that you cannot go beyond and maybe from the perspective of the project manager, it is better that people experience it themselves and it is not the project management that experiences it and then they have to communicate to the people.

Lastly, several tender awardees mentioned the time constraints in implementing their projects in the communities. Trust is intricately linked to resident participation, where the absence of trust between the residents and key stakeholders and residents with other residents within the community causes tension.

[TA6] ...if it was on a longer term, people would be more open and trustful and these discussions would be more fruitful. It would be much better as everyone could speak with each other, in a better sense and in a better way. It is about understanding each other.

5.4 Stakeholder collaboration

Stakeholder engagement in URP is neither constant nor linear, and local municipalities often have majority power due to being consortium leader stakeholders. The participation of these parties depends on the engagement stage, the degree of the stakeholder's responsibility in the project and the stakeholder's own main goal, according to which they partake in the project and have a positive or negative impact on the decision-making and implementation processes.

5.4.1 Role of stakeholders

Ensuring local participation and improving stakeholder engagement were two of the most cited reasons for participating in the programme by the stakeholders. Moreover, all the URPs included in the dissertation was a result of partnership stakeholders in the private sector, NGOs and the public sector.

[TA1] I believe in soft elements. I think it makes it easier for people to connect with what is happening and to get personal view and touch of the project.

The first goal focused on the overall renovation and maintenance of the housing that comprised both public and private stock.

[RL1] In this housing district, we had a good partnership with the private owners because the street got a face lift to look better and be more inviting in a way in parallel to this, but, also encouraged by this renovation, the houses, the committees in this condominium also decided to renovate the facades with the money. Some of them got extra funding; most of them were funded by the owners to repaint the facades or to make the insulation.

Secondly, safe and security projects were conducted to provide a safe and comfortable environment for the residents.

[RL3] Big change can be seen in security of the area, thanks to the project, surveillance cameras have been added, so criminal activities, and homeless people have been pushed back a lot.

To encourage social cohesion, green spaces and community spaces were created or renovated in all the case studies.

[RL2] The green territories between the houses, originally, are the ownership of the district council. But, if in a house lives people who like gardening, they can do it.

[TA5] In our case, in the second round of this project, we did a lot of effort to invite more people than in the first round. Because we would like to design the whole process together with the partners and NGOs and institutes to become involved into the investment. But the main goal was to assist local people to act together

Increasing the local employment rate and overall quality of life through projects aimed to empower those excluded from the working force and low-income families. Projects in this category often included vocational training.

[TA1] Women were the ones taking care of the household, which meant women were the goddesses of the budget. So most of the participants were women because they were interested in how they could save and manage the household money even though most of the income came from men.

5.4.2 Perceptions of engagement

Stakeholder perceptions of urban regeneration projects may vary from one stakeholder to another because of project complexity. Thus, this sub-theme consists of both negative and positive perceptions.

5.4.2.1 *Negative perceptions*

Public-private partnerships in URP have numerous benefits; however, problems are bound to arise because of the nature and complexity of this URP. These institutional problems are vital to reveal as the institutional arrangements significantly affect the programmes' overall outcomes. The main issue concerning public-private partnerships in URP was the diversity of the different institutions and organisations coming together to achieve one common goal.

[PS11] And this is I think one of the one of the important issues, you know, these players have quite distinct interest

[TA2] I know that working with different kinds of organisations is always a kind of trouble because NGOs have their own way of working and thinking and rules. So if you come together and have to work together, it can lead to misunderstandings, communication problems and stuff.

[TA8] Maybe “work together” is maybe too deep. It was f***ing hard because for NGOs, it is really hard in Hungary because the government does not like NGOs. So, it is hard to cooperate with them because you have to really fight for being a NGO. And we always try to work with other NGOs but they really have no time or energy for that-and I understand. It is stupid and I understand that it is the government that makes it like this cause if we not only make what we make but also if we work together, the government will feel more threatened. So now they make it really hard to cooperate in this way and we don't have energy to work with each other. But somehow, we do work with each other.

A tender awardee, TA5, recalled one of the low lights of the project when the Mayor of the local community transferred the responsibility of letting the residents know of his ultimatum of the selected projects to TA5, after several months of public consultations.

[TA5] ...we did 6 or 7 community planning meetings together with the mayor and the professionals, and local people and everything went really well, and the end of it, he just got bored of this thing because he didn't have time or didn't want to take more effort to do dialogue with the local community. He just sat down and said “okay, here is my offer. If the community can accept it, it is fine. If not, it is okay, there will be nothing”. So, there was a lack of commitment from the municipality side.

The above verbatim has been echoed by TA8 in that local municipalities often treat professionals within social development in projects as middle-persons and often do not fully understand details pertaining to their projects. In other instances, the lack of professionalism between the stakeholders and lack of information-sharing has been claimed by several stakeholders.

[TA8] But they wanted us to pay for them and we were like “how when we are making this project for you and now have to pay you”. So it was definitely not easy with the district or the politicians.

[PS5] I can say, on the other hand, that I myself would not choose a contractor who worked on our houses for further work because I was not convinced of the high level of professionalism of his people.

5.4.2.2 *Positive perceptions*

Stakeholder engagement in decision-making offers a unique approach towards collaborative planning to transform a dilapidated social and physical environment into a sustainable community. Despite these and other shortcomings, positive experiences in stakeholder engagement and collaborative planning do exist as experienced in these URPs. First, communication is the most crucial feature in ensuring a successful URP as through effective communication tools, projects can reach different stakeholders, thus ensuring a collaborative process. Keeping and maintaining a line of contact by the local municipality with the stakeholders was praised by respondents.

[PS5] Close co-operation was established with the representative of the trustee of the local government, who was involved in the processes during the planning, and arranged the implementation in its entirety. He could be reached at any time by phone, in person, by e-mail, with great patience and empathy.

[TA7] So it was very easy getting the understanding because the key person was the mayor and he was an architect – so he knew the work. So we were able to create the development with ease and the model also.

[TA5] It was interesting because the owner of the facility was not the local municipality but the capital city. In that case, local municipality could be our partner and ally and they helped us in talking to the City about this. And at the end of this 1.5-year process, the local community managed to change the mechanical thing and it was a great success.

5.5 Factors hindering the success of URP

The stakeholders directly involved in the programme were asked to discuss the challenges they faced during the programme's planning, implementation, and closure phases. These were subsequently grouped into financial and administrative challenges.

5.5.1 Financial challenges

Owing to the nature of the programme, the majority of the NGOs that applied and won the tenders to implement the soft-element projects pointed out that due to the limited financial support available for said projects, it meant limited resources and, thus, less impact on the community.

[TA1] Maybe if we had more funds, we would have had three groups [more people].

Other respondents mentioned that the local municipalities had not adequately planned for the soft projects and this was clear when money was allocated to it without much of clear guidelines for the tender awardees.

[TA8] They give the money – so that was not a problem. Well, they had to give cause the EU said that they have to. So it wasn't their money.

TA8, who still works in the social development field in one of the case-study districts, expressed their dismay in another NGO's work contract terminated so early despite issues still existing in the neighbourhood.

[TA8] they could not stay because there was just not enough money or support for them. It is stupid, I think. We are here because we were here before and we wanted to be here. We had a budget for the project but also our own budget because we were already working here. So that is why it was easier for us to do more work here and to stay.

Other respondents argued that although it was a relatively larger amount of money the programme received, a small proportion was allocated to soft projects despite the importance of these projects in achieving the programme's overall objectives.

[TA5] Regarding this kind of project's budget, it is enormous money that comes from the EU to develop this kind of intervention. But only 6 or 8% of the whole money is implemented into the social part.

[TA1] It was 1.5 million, which is about 4,000 EUR so it was not that big of an amount of money for a project that we had to stretch for more than a year.

5.5.2 Administration

Regarding administrative challenges encountered, the mismanagement of resources such as money resonated highly amongst the majority of the interviewees. Key stakeholders responsible for managing funds, disseminating and allocating specific funds to responsible actors are often under a professional and fiduciary duty to ensure all transactions are honest, impartial and in alliance with the stipulated guidelines. However, some respondents mentioned incidences of dubious tender processes in implementing the different projects.

[RL7] there is a lot of space for corruption in these projects because when it comes to renovations, it is hard to control the quality of the work.

[TA8] But off record, we knew that there were supposed to give us more money but the money just “vanished”.

Furthermore, these alleged accusations (understood as being known in the housing estates) often leave an unpleasant impression on not just the stakeholders who are innocent, but also on the residents who financially contributed to the completion of the programmes.

[PS1] ...some workers of the project made it worse during the renovation. So some workers made less work than the project planned. The money was corrupted and so many residents have a worse remembering for the project.

The low level of quality work by contractors has also been raised as a significant factor in the unethical behaviours of contractors.

[PS5] there was a difference of opinion in some cases with the contractor (during the chimney or gas renovation) about the work done and its quality.

[RL7] It is a nice building with big windows but they basically did not do the renovation properly. There are many problems there and it was also done by the same company.

Finally, tender awardees reported the high paperwork required as part of the reporting back procedures.

[TA1] Every child had to sign when they received and the children cannot sign because they are minors so mothers of the children had to sign on their behalf. So it was this kind of administration that caused frustration.

[TA8] It was the biggest challenge to work with the local government because of the lots of administration.

5.6 Ensuring sustainable URP

5.6.1 Long-term strategies

Challenging the entire status quo of these programmes, several respondents argued that such programmes are aimed mainly at doing the least amount of housing renovation and do not truly consider the needs of the residents. Specifically, the lack of long-term strategies when planning URP is glaring.

[RR1] They (case studies) are in segregated areas where the level or the share of the population is very high, they are really marginalised, unemployment is very high, density is very high, overcrowded houses, you know it is very bad. What they do is they go there and do some housing renovations without really checking if people will afford it. They always want to link it with employment interventions, and they do like 20 programmes.

[PS9] The social regeneration is a long process and until the local municipality realises that, we won't have results. You have to continue the projects, and not stop after the elections.

However, it is essential to note that such projects are not merely ends in themselves but means to other ends. Many regeneration projects have been found to have the ability to transform a residential environment physically and socially. However, these projects cannot solve all the problems in an area, they can provide a push and encourage residents to take pride in their community. Half a decade after the closure of the project, novel developments have taken place in Kis-Pongrác: a seniors' club was built in 2020; in addition, two other buildings were renovated. Moreover, a dog park was constructed, and the residents are still taking care of their own green spaces in front of their apartments. Evidently, urban regeneration projects can create self-reliant communities and foster stakeholder collaboration even after the closure of a project.

5.6.2 National housing policy

Due to the unaffordability of housing in Budapest, the analogy between “us” and “them” echoed across the narratives and included mentions of homelessness in all the districts. A policy is only as good as its implementation. And although the EU partially funded all the URPs, it is essential to repeat that the EU can only provide recommendations to member states as it is solely the responsibility of the member state to choose to implement a housing policy or not.

The lack of a national-level housing policy in Hungary has been deliberated for more than three decades by several experts in the field (e.g. Hegedüs, 2017), and more than 30 years since the collapse of the socialist era, housing policies regarding rental and affordability still do not exist.

[RR1] The central state does not want to have a housing policy for the poor, they do not want public housing for the poor and they say it is the municipalities jobs to provide these while on the other hand the municipality have no funds to actually implement these. The available funds are decreasing but the main reason for this is the centre for social housing policy

Furthermore, the unregulated rental housing market in Hungary continues to be a challenge in the accessibility and affordability of housing, especially in Budapest as it was listed the 3rd worst European capital city for a first-time buyer to purchase a house [7].

[RN1] If the sector (rental) prices are not transparent, produced and shown then people may lose a lot because of the lack of information.

Furthermore, echoing prominent housing experts in the country (e.g. Hegedüs, 2017; Baross, 1987) ensuring housing affordability means creating conducive programmes that are not only aimed at those in the middle-to-high income brackets but also include those in the lower socio-economic strata. Several rental models exist globally and in countries similar to Hungary, where through public-private partnerships, dignified, affordable housing may be available to residents such as rental co-operatives and social agencies (see Somogyi *et al.*, 2014).

Connected to housing policy are urban regeneration processes. Urban regeneration has a lot of potential, maybe more than previous processes; however, having the best key stakeholders and funds would not automatically make the different projects a success as they are not independent of a country's political status. In this sense, the success of URP in neighbourhoods depends on several factors.

[PS7] Even if you have the smartest, most well-designed urban regeneration projects for neighbourhoods, you cannot really rule out that if you have the exclusionary housing regime, when you have a really stigmatising, social policy regime in the country, when you have a really centralising system and I could go on with the structural problems with this broader policy domains.

As far as the stakeholders and the main researcher is aware, there has not been any follow-up social study, or rather ex-post facto, conducted since the completion and closure of the URPs. There was a limited

dissemination meeting with some stakeholders but this was not inclusive to all those who have been part of the different projects, including residents.

[RR1] The EU now wants to force the member states to do more and to really define the previous programmes. But, at the end, we cannot force these things. We have nice programme like Kis-Pongrác. But really there is no checking after the programme has been implemented.

5.7 Conclusion

Organisations interested in bottom-up initiatives should recognise that, despite the general assumption that trust-building increases participation, trust must be a two-way process and that inadequate trust may reduce project effectiveness. Furthermore, a one-size-fits-all participatory process will simply not work; it is essential to understand that communities are not homogenous and require different methods of engagement. Finally, top-down approaches to urban regeneration should not dominate. This is not to say that such practices should be entirely excluded from urban regeneration projects; rather, these approaches should be harmonised with bottom-up initiatives that aim to revitalise communities by increasing stakeholder participation. Without a power shift, stakeholder participation is relatively meaningless. Both local and national governments should put administrative systems in place to support and facilitate stakeholder engagement, strengthen governance processes, and empower and increase stakeholder participation. And finally, it was not this section's aim to provide a blueprint guideline for the housing authorities. Still, suppose authorities are serious about ensuring housing affordability in not just the middle-to-high incomers but also to those in the low-income brackets. In that case, critical and uncomfortable conversations need to be held with all the relevant stakeholders involved in this field.

6. Results and Discussion (urban regeneration)

6.1 Housing affordability

Affordability of housing includes utilities, rent, home loan repayment and other costs related to the households. Figure 6.1 illustrates that in all case studies, except for Havana (36.2%), housing costs per month broadly fall into the 11-30% category, often the standard of affordability. This is in accordance with the 22.5% of housing costs that the average EU population spend monthly (Pittini, 2012); and the average 30-40% acceptable range in which housing costs should fall under per household (Ámon *et al.*, 2019). In contrast, the analysis showed an alarming number of residents who pay 31-50% and more than 50% of their monthly income towards their total housing costs. This partially supports prior research (e.g. Smart and Klein, 2018) that has argued that residents often have to choose between location affordability and housing affordability. Therefore, residents would choose to stay in a much more affordable place, even if it is further away from service points. Although it may be argued that residents in the other locations significantly save on transport and thus off-set high fees in their estates, as contended in Acolin and Green (2017), the Budapest transport system is relatively affordable, whereby a student and an adult pay approximately €9.4 and €25.9 for unlimited monthly use of the different forms of transportation. Similarly, Eurostat's database (2019) showed that those with a disposable income below 60% of the national median income were 27.2% in Hungary. This means that in 2019, nearly 30% of the population in Hungary earning below 60% of the national median income was at risk of poverty. Noteworthy, it is not only those within the lower income bracket that may be experiencing housing poverty but also those in the middle-income bracket who cannot access affordable housing (Tunstall *et al.*, 2013). However, from the same database from Eurostat, it is essential to note that the arrears on mortgage, rent or utility bills have steadily declined in Hungary with a recorded 24.3% in 2010 to an 11.2% in 2019, although this is still higher than the EU27 average of 8.2%.

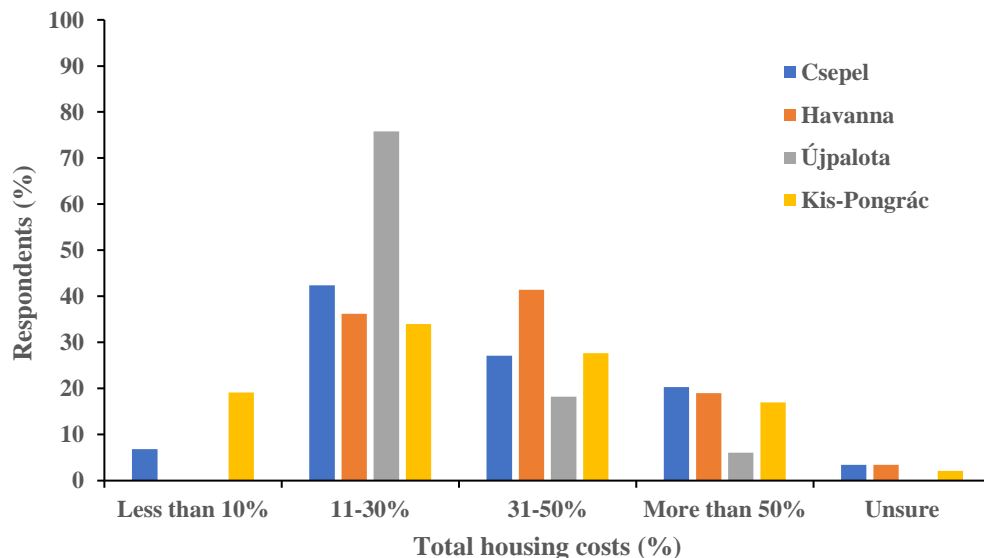
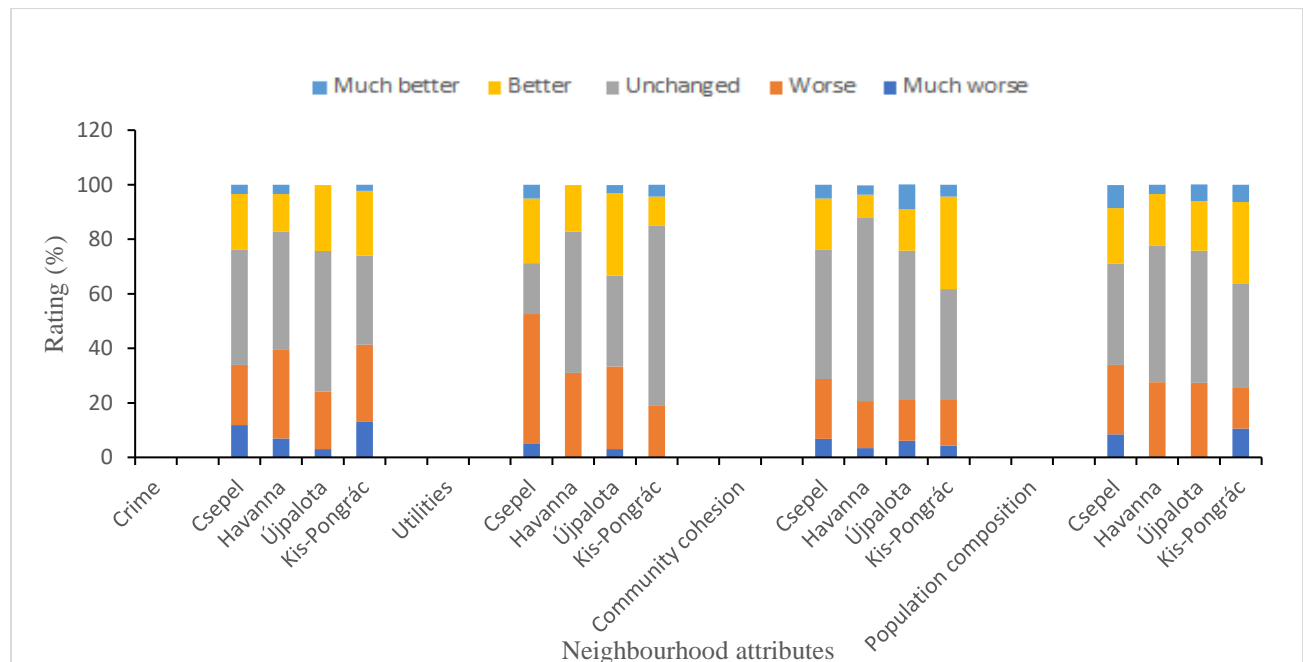


Figure 6.1: Total housing costs residents spend. Source: own

6.2 Neighbourhood attributes

Residents were asked to rate the different neighbourhood attributes before the urban regeneration occurred (Figure 6.2). Taking a look at the crime level, Kis-Pongrác (13%) and Csepel (11.9%) residents reported a higher rate of crime as compared to Havana (6.9%) and Újpalota (3%). This is similar to the public safety attribute whereby Újpalota reported that this attribute was not worse (0%) with Csepel, Havana and Kis-Pongrác residents reported public safety was much worse at 5.1%, 5.2% and 17%, respectively. Urban

regeneration projects are often aimed at improving the quality of neighbourhood attributes, thus improving residents' quality of life. In this, residents were asked to rate the conditions and quality of the different renovated features in their neighbourhood. For instance, the public space quality was relatively much worse before the intervention in all the case locations with Újpalota (45.5%), Kis-Pongrác (40.4%), Havanna (39.7%) and Csepel (37.3%). Due to the role public spaces play in facilitating social networks within communities, it was somewhat surprising that when residents were asked to rate the level of community cohesion, all locations reported the community cohesion unchanged between before and after the intervention. As previously mentioned, urban regeneration projects are often accused of displacement, gentrification and general marginalization of those belonging to a lower standing in the community than others. Thus, it was interesting that residents argued that the population composition of Havanna remained unchanged (50%), followed by Újpalota (45.5%), Kis-Pongrác (38.3%) and Csepel (37.2%). In continuation, residents of Újpalota (60.6%) and Kis-Pongrác (57.4%) reported an unchanged quality in their dwelling. All the projects in the case locations included the installation of energy-efficient technology in one way or the other. In this, most of the residents in Csepel (47.5%) indicated that their utilities were worse before the urban regeneration projects. Noteworthy, the Hungarian government introduced a utility cost programme in 2013, which may have also accounted for the lowered costs (see, Szép and Weiner, 2020). This was in contrast to Havanna (51.7%) residents who argued that there had been no difference in their utility bills before and after the project. As the information on whether the flats were insulated on the interior and exterior due to the agreement households had with the local municipalities, future regeneration programmes may look at the combination of this insulation. Furthermore, in 2020, 10.4% of Hungarians have arrears on utility costs which is higher than the 2019 estimated 6.1% EU average (Eurostat, 2021). Thus, with the understanding that housing unaffordability is linked with energy poverty, efforts should be made to implement energy efficiency projects.



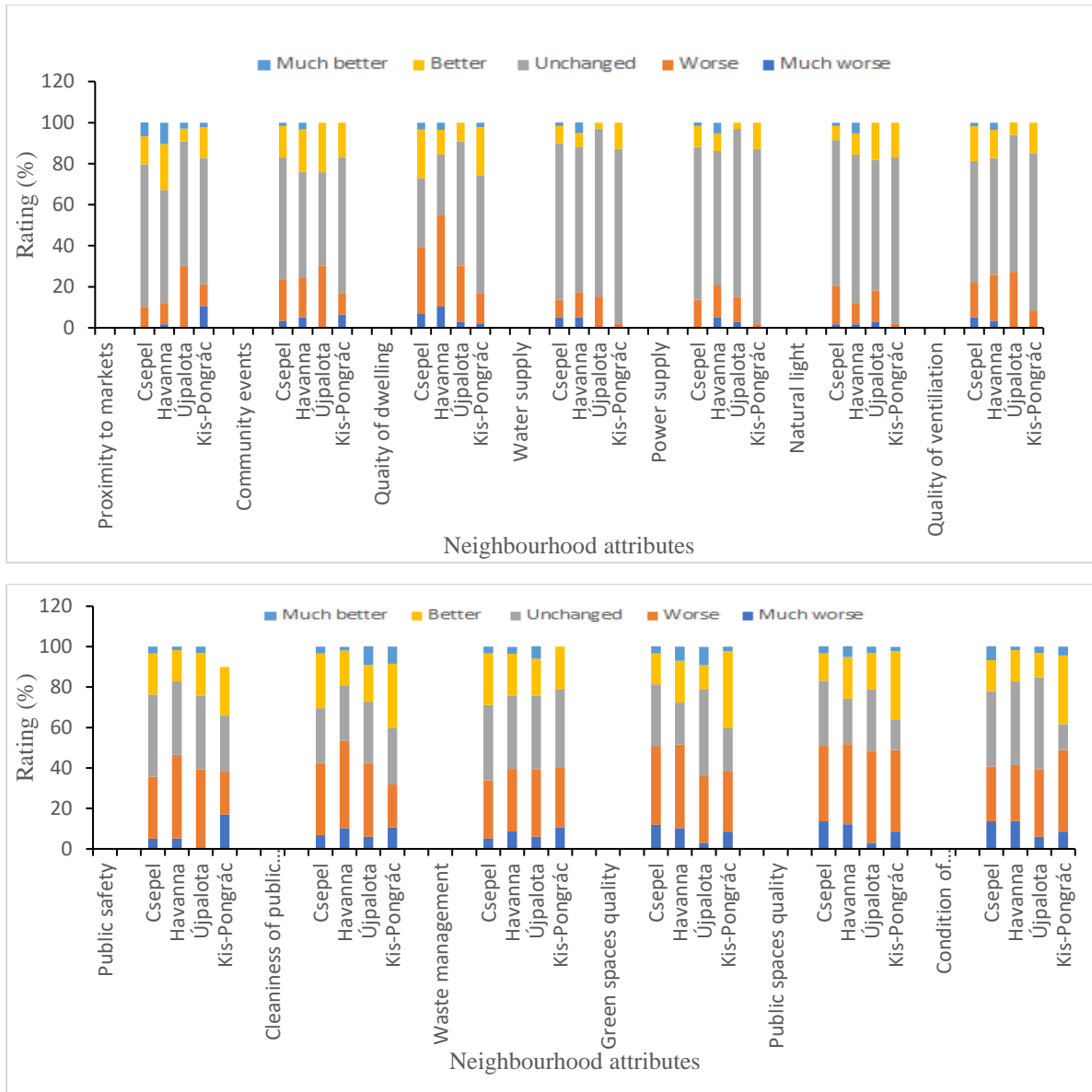


Figure 6.2: Rating of several neighbourhood attributes in all the study sites. Source: own

6.3 Expectations of the urban regeneration programmes

Regarding the expectations residents had for the URP, residents in all locations expected the building exterior to be renovated (Table 6.1). Next was the need for the renovation of community spaces that include both green and public spaces, where residents in all locations chose this as the second most expected regeneration focus. The least area of focus was business opportunities for both Csepel (20.3%) and Havanna (14.5%), while a need for the improvement of public services and job opportunities were at a tie in Havanna (24.2%), and similarly, Kis-Pongrác recorded a low score for job opportunities (20%). This contrasts with studies that have found that residents highly expected their local economy to improve due to the URP (Baek and Joo, 2021; Bozdağ and Inam, 2021). Public services were not expected to be improved, and this could be because (1) it was already satisfactory or (2) residents did not expect service delivery to improve due to their past experiences. The latter has been recorded in the literature (e.g. Varady and Carrozza, 2000), where

residents who have experienced a general low service will thus have a low expectation of it improving in the future.

Table 6.1: Expectations residents had of URP. Source: own

	Csepel (%)	Havanna (%)	Újpalota (%)	Kis-Pongrác (%)
Building exterior	86.4	74.5	66.7	80
Transport and traffic	40.7	49.1	48.5	35.6
Community spaces	55.9	56.4	48.5	57.8
Public services	33.9	29.1	24.2	31.1
Job opportunities	25.4	30.9	24.2	20
Business opportunities	20.3	14.5	30.3	35.6
Other	1.7	0	0	0

6.4 Public participation

Public participation in URP forms an integral part of the overall programme, with the complex interaction between the key stakeholders and residents often viewed as a recipe for a successful programme or a “panacea to regeneration failure” (Li *et al.*, 2020: 1). Thus, urban regeneration has moved from focusing on physical features to incorporating social and economic features, with public engagement a key element in the URP. Despite this focus, results from the current research suggest that most of the residents did not participate in the URP because “I was not contacted” by key stakeholders cited as the most common reason (Figure 6.3). Additionally, similar to previous studies (e.g. Innes and Booher, 2004), other residents felt that the participation was unnecessary as despite having raised issues in the past, these issues were ignored or did not have the time to participate. However, it is essential to note that a lack of participation does not necessarily mean residents were uninterested in the project, but rather that previous experience has negatively influenced their decision.

Additionally, history has produced socio-political conditions in which public participation has not been encouraged. Since the dawn of democracy, public participation has been incorporated into national planning processes, policies and programmes, with modern democratic states, such as Hungary, mandating and stipulating public participation in their legislation and constitutions (see Vértsey 2016). Nevertheless, it is commonly understood that a law is only as good as its implementation. Urban regeneration, conducted under neoliberal urban policies in their orientation, is often accused of only superficially addressing the community's demands. For example, using the New Deal for Communities in the United Kingdom as a case study, Dargan (2009) argued that community participation was overly simplified and that certain groups were excluded from the decision-making process. Other studies have further supported this conclusion in various contexts (Gosling 2008; Layson and Nankai 2015; Naseri and Safari 2018). Furthermore, the path-dependent development of Hungary in the bureaucratic institutional legacy of the Habsburg Empire together with the state socialist and post-socialist periods, has contributed significantly to the relatively low level of social participation with the Hungarian society. According to Gerő and Kopper, (2013), although civil society played an important role in dismantling socialism, it was expected that this society would continue creating change after the democratic elections; however, this was not achieved. Nicknamed a “semi-consolidated democracy” (Freedom house, 2020), “Potemkin democracy” (Ágh, 2016), “selective democracy” (Varga and Freyberg-Inan, 2012), “illiberal democracy” (Polyák, 2019) and other terms used to describe the populist political party Fidesz adopting a pro-Russian policy strategy whereby civil society, and thus public participation, is not highly encouraged.

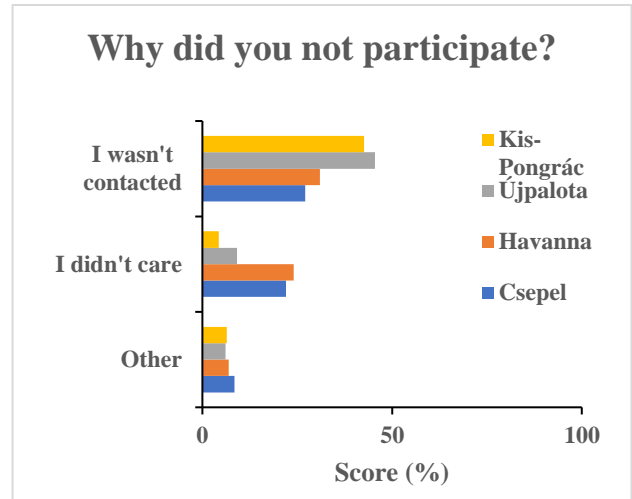
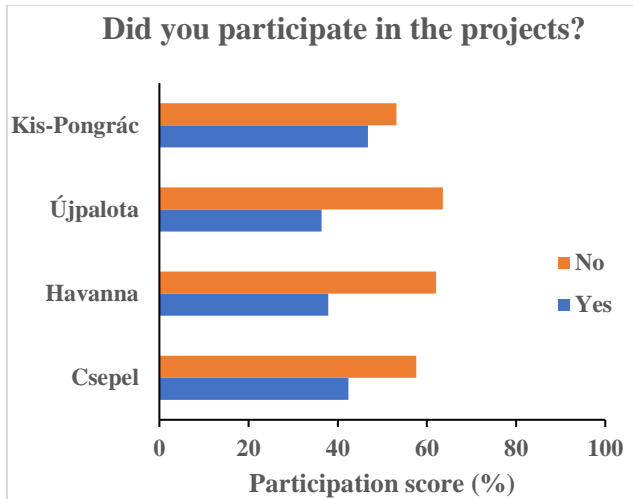
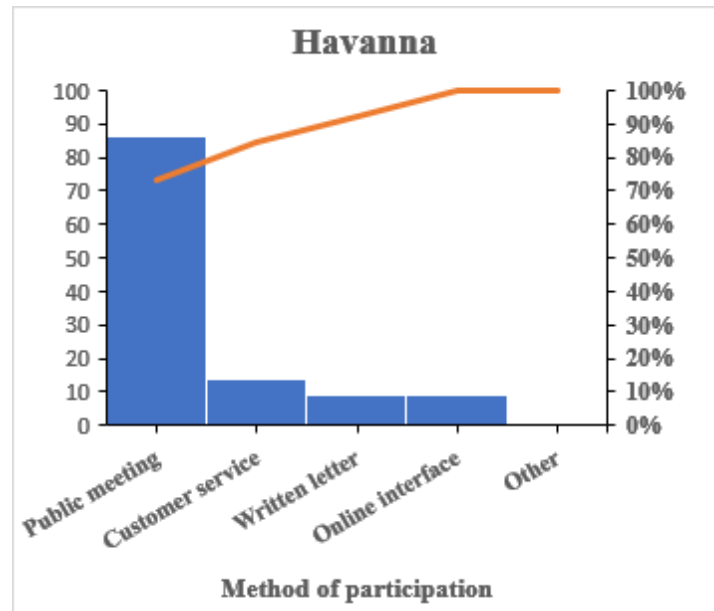
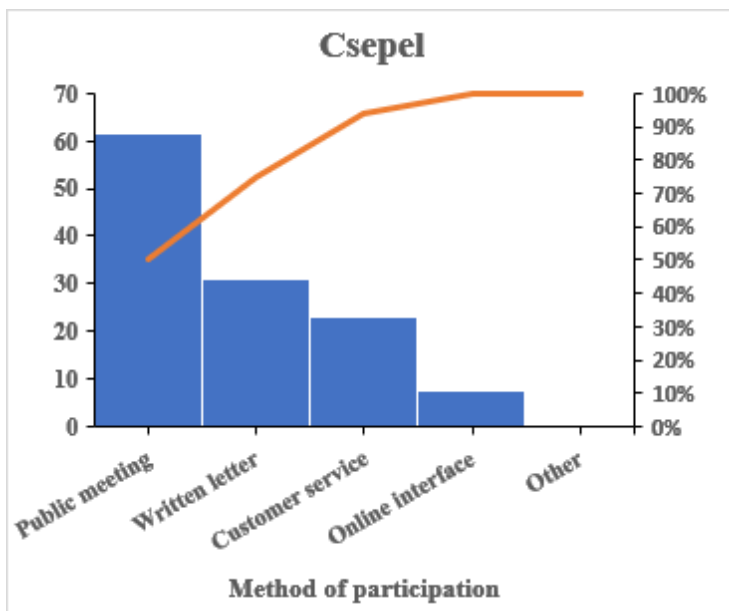


Figure 6.3: Residents asked if they had participated in the projects (left) and if no, why did they not (right). Source: own

There are several tools used for ensuring communities' views and wishes are recorded. Face-to-face contact is the popular option as it fosters and builds trust between the residents and the key stakeholders, thus increasing social capital (Putnam, 1993) while needs-assessments surveys are used for a larger target group (Csizmady *et al.*, 2016). Figure 6.4 agrees with the first option as most of the residents who participated in the URP used physical contact tools to raise their needs and wishes. The use of an online interface, such as an online questionnaire, was at the lowest in both Csepel (7.7%) and Havanna (9.1%) as compared to Újpalota (25%) and Kis-Pongrác (28.6%). Although the use of an online platform provides faster responses with the saving of time, it also requires advanced knowledge of information, communications and technology and often excludes residents who cannot access the survey. Therefore, a multi-method tool for encouraging community participation is needed to ensure that diverse groups of residents are catered for (i.e. Hrivnák *et al.*, 2021).



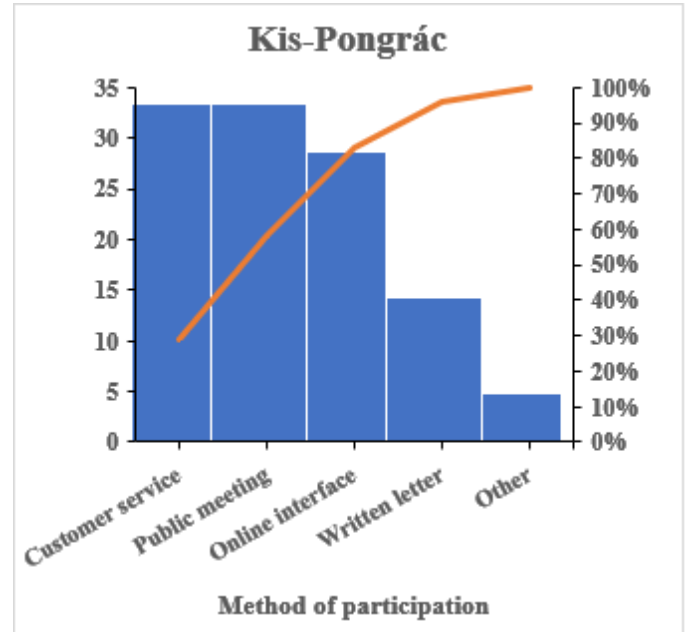
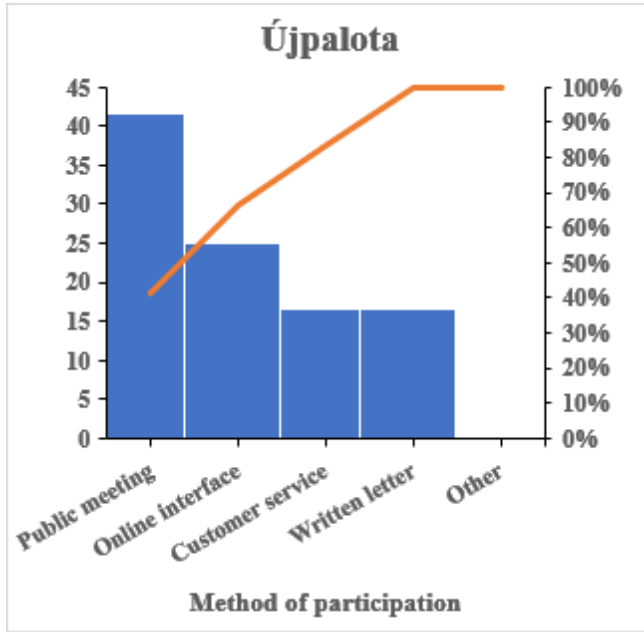


Figure 6.4: Pareto charts showing the methods of participation across the study sites. Source: own

6.5 Before and after urban regeneration programme

The following sub-sections focus on these programmes positive and negative socio-economic impacts upon the communities. As these open-ended questions were answered in Hungarian, translation to English were conducted.

6.5.1 Positive impacts of projects: what worked

Residents had several mixed praises for the projects implemented in their communities. Some of the comments ranged from complete praise (e.g., “a lot is improving”) to others arguing that the projects were partially delivered (e.g., “served in part”). Interestingly, some comments mentioned the projects' positive outcomes but criticized how people in the communities did not take care of the renovated works (e.g., “it got good, they just don't take care of it”). These positive outcomes varied from household level to neighbourhood (Table 6.2).

Table 6.2: Positive outcomes of the URP in the communities. Source: own

Category	Havanna	Csepel	Újpalota	Kis-Pongrác
Housing	-Lift -Insulation -Less monotone of buildings -Doors and windows -Staircase	-Cheaper utilities -Doors and windows replacement - Thermal insulation -Value increase	- Insulation -Colourful houses	-Servicing of old pipes - Exterior of buildings -New window frames
Provision of services	-Improved public service Good transport connection -Medical office -Schools and kindergarten -Sidewalks -Parking	-Present of law enforcement	-Renewed school, kindergarten and service house -New roads	-Improving roads and sidewalks -Kindergarten renovated -Main cable -Community building

				-Installation of cameras
Recreational spaces	-Nicer/cleaner environment created - Renovated public spaces - Creation of playground -Soccer field - Outdoor gym	- Playground -Cultured environment - Running track -Construction and renovation of public spaces -Soccer field	- Safer playgrounds -New green/cleaner spaces -Creation of community spaces	-Creation of pleasant green spaces -Renovation of public spaces -Playground -Garden work
Market place	-Renovation of market -Opening of new shops		-New stores opened	
General	-Safer community - Improved quality of life -Better recognizability -Possibility to relax -Job opportunities	-More modern -Benefitted poorer strata - Better life	-Liveable environment created	-Moving out of people who could not afford -New younger residents -Area overview

Most respondents were aware of the URPs intended outcomes as they were part of the consortium through their block representatives. The positive impacts outlined above are also aligned with the projects' goals. Thus, these impacts were broadly consistent throughout the estates. For example, one of the projects created energy-efficient apartments, which is consistent across all four case studies.

6.5.2 Negative impacts of the projects: what can be improved

Participants were asked to describe what the key stakeholders could have implemented in the project to make it better, or rather to state the programme's shortcomings (Table 6.3). Responses ranged from their frustrations regarding service delivery to the general lack of information given to the residents. Some of the comments included residents nostalgically recounting how things may have been better in the past, such as the placement of benches in front of apartment blocks. Moreover, frustration over mismanagement of funds from key stakeholders was one of the main issues raised in all the case studies, except Havana.

Table 6.3: Negative outcomes of the URP in the communities. Source: own

Category	Havana	Csepel	Újpalota	Kis-Pongrác
Housing	-Cleaning of staircase is poor -Interior of buildings - Main entrance doors -Renovation of more apartments - Doors and windows -Wire replacement -Staircase renovation -Insulation	- Lift renovation -Linoleum in the stairwell -Heating system -Interior of building -Better quality doors and windows Pipe replacement	-Insulation	-Additional residential development - Insulation
Corruption, Mismanagement		-Inappropriate spending -Poor quality -Warranty loss problems -Appropriate professionals	-Infrastructure investments are negligible	-Careless renovation -Corruption/relocation
Participation	-Public not asked -Lack of information	-Lack of information	-Public hardly involved	-Little space for public participation
Provision of services	-Accessibility of sidewalks - Parking	Healthcare -Ventilation - Road repair	-Creating more community spaces - Road repair	-Better public security -Sidewalks - Public cleanliness

	<ul style="list-style-type: none"> - Camera - Waste management - Road repair -Night buses - Public transport - Better public security -Bicycle path/park - Helping people with reduced mobility 	<ul style="list-style-type: none"> Security equipment construction -Waste management Parking lot system 	<ul style="list-style-type: none"> -Side-walks repair -Improving public safety -Creation of bicycle path -Increase doctors' offices -Bigger cultural centre -Better waste management 	<ul style="list-style-type: none"> Separate waste collection -Increase age limit of playground More benches in front of flats -Road repairs - Carpark construction
Markets			<ul style="list-style-type: none"> -Market renovation -Quality shops 	<ul style="list-style-type: none"> -Lack of a pharmacy -More shops
Recreational spaces	<ul style="list-style-type: none"> -More flowers - Benches - More planted trees - More parks - Playgrounds -Running track 	<ul style="list-style-type: none"> -Lack of green area management -More parks -Green space in front of house 	<ul style="list-style-type: none"> - Benches - Maintenance of green areas - Cleanliness of garden 	<ul style="list-style-type: none"> -Soccer field -Renovation of playground -Cleanliness of green -Shared gardens
General	<ul style="list-style-type: none"> - Community life has not improved -Graffiti -Projects for young people 	<ul style="list-style-type: none"> -The composition of the population has changed with negative effects -Protection from the homeless effect 		<ul style="list-style-type: none"> -Noise barrier construction -Invest more money -Fewer municipal apartments -Opportunities for local business -Job creation Restoration of season graffiti

And finally, residents were asked if they believed their current living conditions have greatly improved compared to before the URP (Figure 6.4). Except for Újpalota (31.3%), all the other residents largely agreed that their living conditions are now better, with Csepel residents being the first (54.2%), Havanna (50.9%) and Kis-Pongrác (45.7%). Residents from Újpalota indicated that their living conditions were unchanged (37.5%) and worse (18.8). Csepel was the only location where residents did not think their current living conditions were much worse than before.

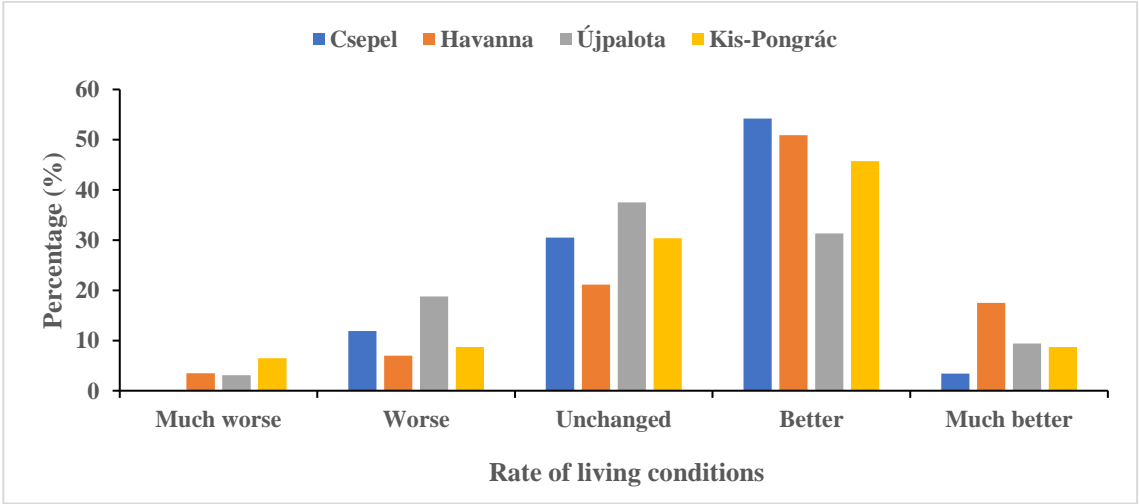


Figure 6.5: Overall rate of living conditions across all study locations. Source: own

6.6 Chapter conclusion

The current chapter has aimed to investigate the socio-economic impacts of the urban regeneration programmes on the residents of Csepel, Újpalota, Kis-Pongrác and Havanna. The section provided an insight into the housing affordability, neighbour attributes, expectations of URP, public participation and both negative and positive impacts of the programmes on the community livelihoods. Results from the questionnaire indicate that residents were moderately satisfied with the programmes; however, failures and shortcomings were also provided together with the expectations of the URP. It is interesting to note that majority of the residents expected several outcomes, but most did not participate in the projects, although some wanted but were not directly contacted. In this sense, public participation is rather a paradox where in some instances, residents wanted change but did not participate in the project. The following section discusses the satisfaction residents have towards their residential environment.

7. Results and Discussion (residential satisfaction)

7.1 Reliability

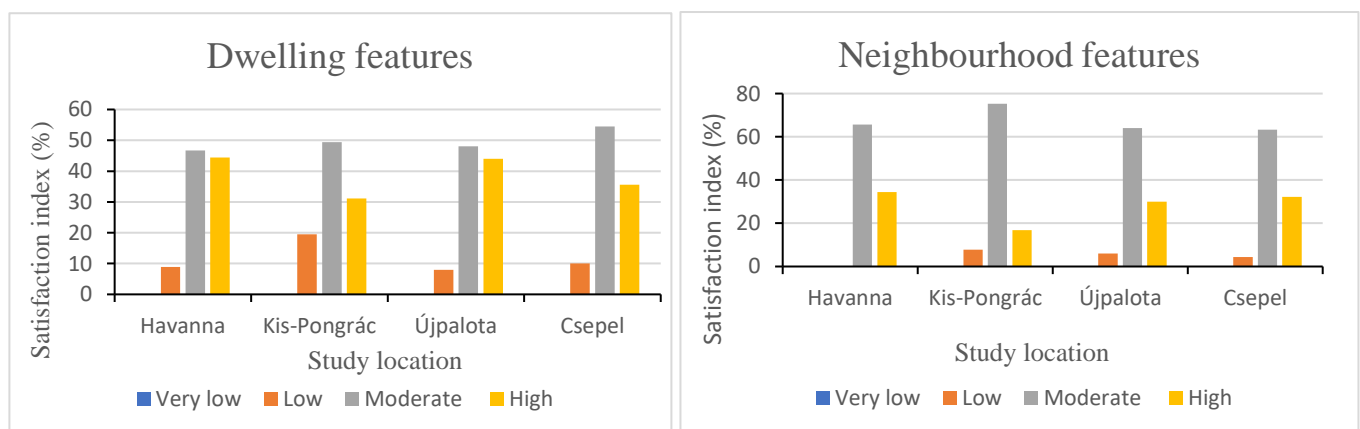
With the exception of D8 (quality of balcony), all variables were included, and their Cronbach alpha's calculated (Table 7.1). D8 was excluded as it yielded negative scores; thus, excluding this variable from the analysis was fit. Furthermore, the scores of EF in Havana, Csepel and Újpalota were relatively low compared to Kis-Pongrác's. Rather than an overall score, individual alpha scores were reported to provide accountability and ensure transparency.

Table 7.1: Cronbach alpha's scores for all case studies with excluded D8

	Havana	Csepel	Kis-Pongrác	Újpalota
Dwelling	0.718	0.736	0.829	0.776
Neighbourhood	0.618	0.722	0.716	0.856
Housing condition	0.849	0.809	0.886	0.868
Housing support	0.735	0.656	0.805	0.803
Resident participation	0.757	0.770	0.875	0.731
Social environment	0.922	0.822	0.888	0.909
Environment	0.538	0.528	0.739	0.341

7.2 Residential satisfaction indices

From the equations provided by Onibukun (1974), three main indices were calculated. The ranked habitability indices obtained across the case studies are found in Appendix I. The satisfaction index (SI) and residential satisfaction index (RSI) are presented in Figure 7.1. The results of the indices are grouped into four regions of satisfaction: very low (20 – 39%), low (40 – 59%), moderate (60 – 79%) and high (80 – 100%), as suggested by Ogu (2002). The Likert scale used ranged from 1 to 5, and thus each score was multiplied by 20.



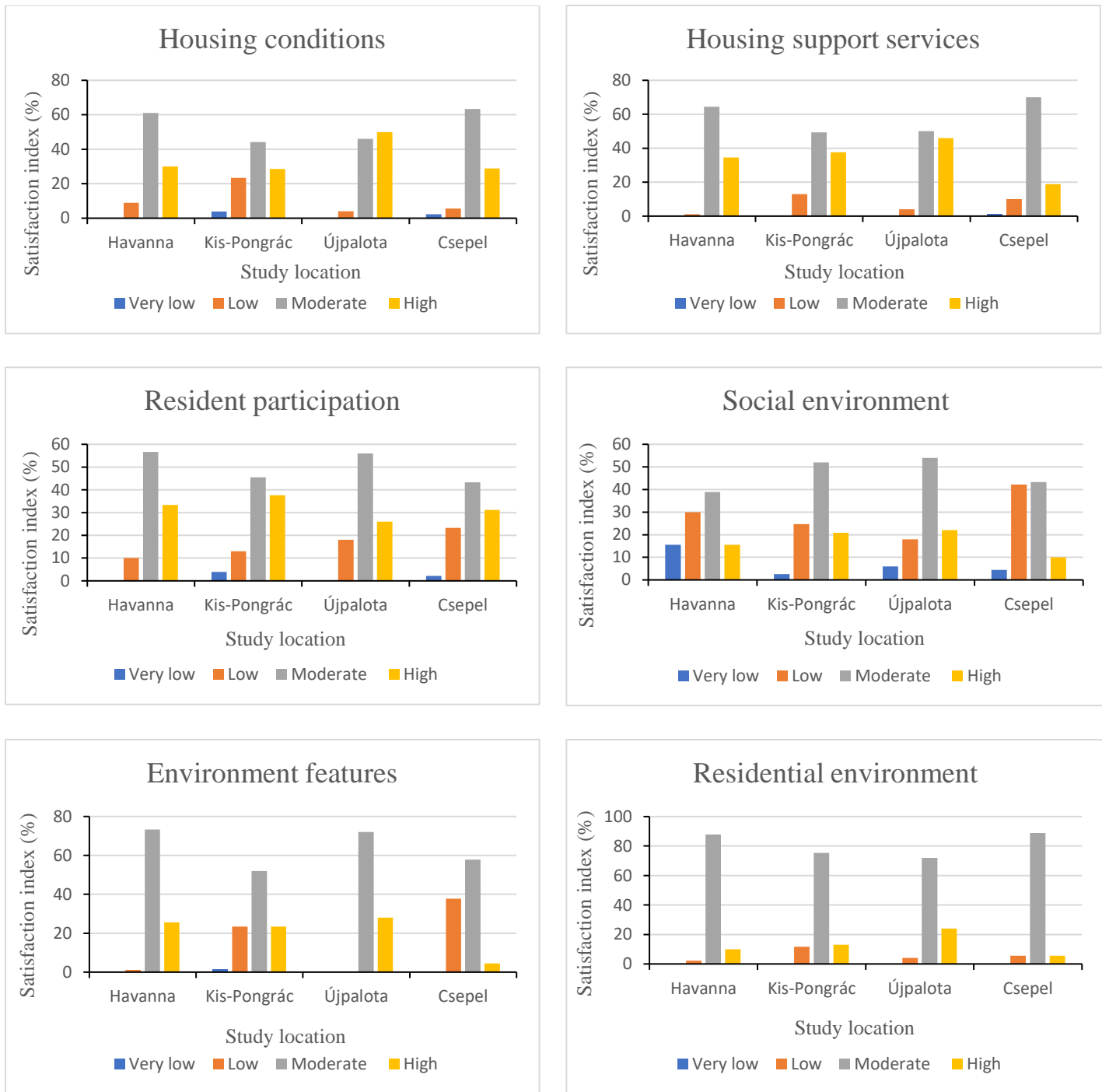


Figure 7.1: Level of satisfaction for all components plus the residential environment. Source: own.

7.2.1 Dwelling units features (DUF)

The satisfaction index of DUF was moderate in all case studies. Specifically, for Csepel (82.7%), Havana (81.8%) and Kis-Pongrác (74.8%), the natural light that the flat receives obtained the highest habitability index in the DUF component while the apartment temperature during summer received the lowest score in

all the case studies. The former results tend to support previous research by Aslanoğlu *et al.* (2021), who found that majority of their respondents were satisfied with the daylight quality in summer but partially contradict studies that have argued that residents that live in dense, high-rise buildings experience lower levels of satisfaction (Xue *et al.*, 2014; Ng, 2003) as both Csepel and Havanna are high-rise housing estates, but their residents reported higher satisfaction with daylight quality. Surprisingly, the sense of privacy was expected to be low in housing estates due to the design of the apartments; however, it was relatively high across the locations. This may be because living in flats in Hungary and similar countries is not considered inferior compared to western countries (Lindsay *et al.*, 2010). Alarming, besides the thermal comfort in summer, the thermal, natural comfort in winter in all case locations was the second-lowest despite all apartments having undergone insulation renovation. Hence, improving the thermal comfort of these flats by urban planners and projects stakeholders may increase the residents' overall satisfaction with their dwelling unit. Noteworthy, thermal insulation was conducted in all the housing estates during the URP; however, results from the questionnaire indicates that this was inadequate.

7.2.2 Neighbourhood features (NF)

Taken as an entire component, the satisfaction index of NF was moderate in all the case studies, followed by a high reported satisfaction level. Specifically, there were three features whose satisfaction level was moderate. First, residents across the locations reported relatively moderate habitability with parking lots and/or quality of the sidewalks (Havanna, 68.2%; Csepel, 60.7; Kis-Pongrác, 67.8% and Újpalota, 65.5%). These findings concur with those by Perez *et al.* (2001) in Spain and Ha (2008) in South Korea that observed that majority of their respondents were unsatisfied with the quality level of pavements and parking lots despite the research conducted showcasing the importance of sidewalks to pedestrian satisfaction (Wang *et al.*, 2012). Second, satisfaction with the crime level was also moderate in Havanna (69.3), Újpalota (66.3%), Kis-Pongrác (61.6%) and Csepel (68.9%). This contradicts with the study of Gorczyca and Grabiński (2018), who investigated residential satisfaction in Polish housing estates, and found that their respondents rated the level of safety relatively low. Several scholars (e.g., Chapman and Lombard, 2006; Borgoni *et al.*, 2021;) have also argued that high crime has a negative impact on overall residential satisfaction. Third, residents in Csepel (63.6%), Újpalota (66.3%) and Kis-Pongrác (59.2%) generally believed that their neighbourhood was not as clean as they would have liked it to be. These features play a vital role in predicting neighbour satisfaction and thus showcase the need for improvement.

On the other hand, proximity to healthcare, schools, places of worship, markets, and workplaces from the housing units plays an essential part in increasing residents' satisfaction with their neighbourhood. For instance, in their study in Nebraska, Potter and Cantarero (2006) found that transportation was a significant predictor for neighbourhood satisfaction. This is because the accessibility to good transportation reduces the intention to move of residents. Not surprisingly, Csepel did not report a high satisfaction level as it is geographically located in the peripheral compared to the other case locations. However, unlike Clement and Kayode (2012), who opined that their respondents in Nigeria had a high satisfaction rate of proximity to the place of worship than healthcare facilities, the current research findings, specifically in Havanna, showed that residents are more satisfied with the latter than the former. Ha (2008) and Ogunbayo *et al.* (2018) have corroborated these results who conducted studies in South Korea and Nigeria.

7.2.3 Housing conditions (HC)

Regarding the satisfaction index of HC, Újpalota was the only estate whereby the majority of the residents had a high satisfaction score (50%), whilst the majority of the residents in the other three estates were moderately satisfied: Havanna (61.1%), Csepel (63.3%) and Kis-Pongrác (44.2%). The highest causative variables for Havanna were exterior of buildings and quality of doors; exterior of buildings and quality of windows for Csepel; exterior and interior of buildings in Újpalota and finally for Kis-Pongrác, both quality of windows and number of electric sockets. These results partially support the study conducted by

Fernández-Portero *et al.* (2017), who found that their respondents positively assessed their residential environment's interior and exterior quality. The lowest SI were: exterior of buildings for both Havana and Csepel, while for Újpalota and Kis-Pongrác, it was the location of electric sockets and wall quality, respectively. It is important to note that during the questionnaire collection, the researcher noticed that even though some aspects (e.g., gardens) were not maintained, residents reported higher overall satisfaction with this component because the housing estates were generally in good condition. This concurs with previous studies that have argued that residents judge their residential environment not only by the interior and exterior of the buildings but also by the different components that influence their livelihood (e.g. Levy-Leboyer and Ratiu, 1993).

7.2.4 Housing support services (HSS)

The satisfaction with gas and electricity supply had the most influence on the overall HSS component throughout the case studies with the addition of water supply in both Újpalota (76.1%) and Csepel (77.6%), and mobile service in both Havana (78%) and Kis-Pongrác (73%). However, the results support literature in that water supply (Ibem and Amole, 2013), electricity supply (Jiboye, 2010) and gas supply (Xu and Ge, 2020) significantly contribute towards predicting resident satisfaction. However, these results tend to contradict studies of Ning and Chen (2016) and Mišetić and Mišetić (2006). Interestingly, although residents in all estates, except Újpalota, complained about the lack of fire protection equipment, it is only in Havana where this variable had the lowest level of satisfaction. Furthermore, although the researcher and the research assistants were shown by residents a few issues with the fire protection equipment, other residents were generally satisfied with it. Two other variables with the least satisfaction are waste management and joint representative. The low satisfaction for waste management supports the findings by Waziri *et al.* (2013), who investigated the extent of residential satisfaction in residents living in Abuja (Nigeria) and found dissatisfaction with waste management.

7.2.5 Resident participation

Inspired by Aigboabav (2014), this component was included due to the surge in governance planning whereby governments involve several actors, including residents, in projects. However, in contrast to Aigboabav (2014) results, the question that asked residents if they should be consulted on the interior design and layout of the dwellings had the lowest satisfaction level in all the case studies. There exists an assumption that residents want to participate in housing projects so to influence the decision-making process; however, previous studies have alluded to the fact that no matter the incentive for participating, some residents may choose to simply withhold any form of participation (Lawless and Pearson, 2012; Aitken, 2017). Furthermore, these results negate the findings of Ibem and Aduwo (2013), who found that residents of Ogun State (Nigeria) were more satisfied with their participation during the design and construction stages of their dwelling units in comparison to neighbourhood features. Surprisingly, on the other hand of the spectrum, residents rated higher agreement scores for both wanting to be consulted regarding estate management and maintenance and the renovation of their public space. The gap between these two participations may be attested to the lack of political will in Hungary in creating participatory budgeting (Sipos and Reszkető, 2019), thus indirectly encouraging residents to believe they do not have the legitimate power to influence major decisions (i.e. design and construction) but minor decisions (i.e. garden and public space). However, key stakeholders need to understand that “social sustainability can only be achieved by continual active engagement with the community in all project stages” (Nzimande and Fabula, 2020: 396). Moreover, the increasing number of digital initiatives in Budapest in respect to the rising public interest and public communication of ideas, such as the *Járókelő* (fix my street) and Budapest Dialog, although a step in the right direction of engaging with the public, often do not relate to the “major” decisions that residents can take.

7.2.6 Social environment (SE)

The satisfaction index of SE was found to be moderate in all the case studies with the following scores: Havana (38.89%), Kis-Pongrác (51.95%), Csepel (43.33%) and Újpalota (54%). In the same vein, Havana residents (15.56%) were more dissatisfied with their social environment, while Kis-Pongrác residents (2.6%) scored the lowest in this variable. The social predictors included in this component included a variety of variables included in belongingness, community participation, social integration and support. Intricately linked with the resident involvement are the questions asked about the participation of residents in community events and meetings. These two questions, plus the question asking residents if they agree if their neighbourhood says a lot about them, were the least agreed statement across the four case studies. This contrast Oropesa's (1989) findings that residents who own valuable property are incentivised to participate in local initiatives to increase the property market. Community participation in events hosted in the housing estates alludes to a feeling of belonging through interpersonal relationships with other residents (Grillo *et al.*, 2010; Amérigo & Aragones, 1997). However, findings from the research indicate the contrary. Additionally, literature has also shown that residents that form friendship networks with their neighbours are more likely to be satisfied with their residential environment (e.g. Oh, 2003). However, in the current study, Havana (56%) and Csepel (58.4%) reported the lowest HI in the variable if the resident had meaningful relationships with other residents in comparison with Újpalota (64.3%) and Kis-Pongrác (66.8%). Similar results are seen if residents often talk to their neighbours in Havana (58.9%), Csepel (60%), Kis-Pongrác (70.4%) and Újpalota (71.8%). These results support literature published concerning social networks contributing to residential satisfaction's social environment (e.g. Weijs-Perrée *et al.*, 2017). Moreover, Kis-Pongrác and the majority of the flats in Újpalota are classified as low-rise apartments compared to the high-rise apartments of Csepel and Havana. Therefore, it is unsurprising that low-rise apartment residents have slightly higher SESI and HI scores than their counterparts. This has been supported by Holahan and Wilcox (1978), Fondacaro *et al.* (1984), Kearns *et al.* (2012), Abrams *et al.* (2019).

7.2.7 Environmental features

Environmental satisfaction, or rather the landscape quality, usually takes two approaches: (1) asks questions related to greenery and landscape preferences or (2) asks about residents' environmental awareness practices. The satisfaction index of approximately 70% of the respondents on the environmental features falls in the moderate satisfaction region in Havana and Újpalota, while only about 50% of respondents in Kis-Pongrác were moderately-satisfied. Kis-Pongrác and Csepel had the identical variables that contributed negatively to residential satisfaction: cleanliness of air and noise levels. Based on previous research, good air quality and lower noise levels have been closely related to residential satisfaction due to its psychological well-being (Kahana *et al.*, 2003; Hamersma *et al.*, 2014; Chen *et al.*, 2019). And lastly, the presence of urban green and open spaces in combination with neighbourhood features contribute towards the realisation of the urban regeneration project through fostering social inclusion and sustainability.

7.3 Normality tests

Prior to any analysis of the dataset, two types of normality tests were conducted to find out if the data was normally distributed. Although SPSS was used to run both the Kolmogorov-Smirnov and Shapiro-Wilk normality tests, it is the latter that the current heavily relied on due to its power intensity (Razali and Wah, 2011). However, graphical methods such as histograms, normal Q-Q plots and box plots were also used to verify variable distribution. Therefore, Shapiro & Wilk's test ($p > 0.5$) and visual inspection of their histograms, normal Q-Q plots and box plots showed that overall satisfaction was approximately normally distributed in each category of the categorical variables: age, part of income needed, duration of stay in the current place of stay, marital status, ethnicity, number of house members, and occupation type.

7.4 Multiple Linear Regression (MLR)

The MLR has proven its strength to predict how much each independent variable contributes on its own to the variance in the dependent variable after the effects of all other predictor variables in the model have been removed. For more theory on MLR, readers are referred to Tabachnick and Fidell (2013). Regression indices for each component of residential satisfaction were computed using varimax rotation in SPSS, entered into the model as continuous variables. MLRs were calculated per case study using the RSI score of each case study as the dependent variable. Moreover, to uncover the significant variables and variations within the case studies, 70 variables from 7 components plus 11 socio-demographic features were simultaneously run in each case study. Categorical variables included in the models were age, gender, education, marital status, ethnicity, household dependents, household occupants, occupation, duration of stay in current residence, type of tenure and affordability. Beta weights together with significance scores were used to find predictor variables (Appendix D).

The Havana model had 38 models, with the 38th model thus discussed (Appendix J). The meaningful relationship with neighbours, attending events when invited, many opportunities for community activities, sanitary quality, participation in the interior design and layout of the dwelling, and trusting of neighbours contributed the highest in predicting residential satisfaction in Havana while the quality of housing interior the least contributor. Furthermore, five socio-demographic variables were found to be significant. Single residents are 0.041 times more satisfied with their place of residence compared to those divorced/living separately while those who identified as women are 0.048 less satisfied compared to their reference group (male). Residents aged 18-24 and 56-65 are likely to be less satisfied than those 66 years and older. Those with primary education levels are 0.048 less likely to be overall satisfied than their reference group. Lastly, those with zero dependents are 0.036 more likely to be satisfied in Havana than their reference group. The model was a perfect fit (i.e. 100%).

There were 33 models for Csepel, with the 33rd model selected and thus discussed (Appendix K). From the socio-demographic variables, residents who own their flats are expected to be 0.076 times more satisfied with residential satisfaction compared to the reference group. Moreover, residents aged 36-45 years are expected to be 0.078 times more satisfied as compared to those 66 years and older. The following top 6 variables contributed the most in predicting residential satisfaction: talking to neighbours often, less noise in the area, doors quality, identifying with the neighbourhood, participation in the interior design and layout of the dwelling, floor level quality. The least contributor was the quality of floor covering with a beta weight of -0.066. The model indicated 98% of the variance in residential satisfaction.

In Kis-Pongrác, the results of the 28th model illustrate that many green areas in the area, trusting in neighbours, wall quality, doors quality and taking part in community events and activities in the area significant factors positively affecting overall residential satisfaction while participation in the exterior design and appearance of the dwellings was the least predictor. Residents who have stayed between 6 to 10 years were 0.067 times more satisfied than those who have stayed for more than 20 years. Those with intermediate (skilled worker) qualifications were 0.024 less satisfied than postgraduates. And finally, residents that have three household members were 0.039 less satisfied when compared to their reference group. The model's adjusted R² indicates that the MLR model explains 99% of the variance in the phenomena (Appendix L).

The 15th model, Újpalota, indicates that those who pay more than 50% of their income towards housing costs are likely to be 0.105 more satisfied than their reference group. The physical appearance of the apartment, doors quality, water supply, taking part in community events and activities in the area and number of electrical connections were the most contributors in predicting residential satisfaction in Újpalota. The degree of natural light in the apartment was the least predictor. The adjusted R² was 0.989 (Appendix M).

Finally, from the regression models, it is evident that all 7 of the components were able to predict residential satisfaction in Budapest's housing estates in all the case locations studied. Due to the lack of similar studies in Hungary, comparison with previous research within the same country is scant. However, studies in Czech (Hanák *et al.*, 2015), Malaysia (Mohit *et al.*, 2010), Slovenia (Grum and Grum, 2014), Nigeria (Ilesanmi, 2010; Ibem and Aduwo, 2013), China (Xi, 2018), Serbia (Milić and Zho, 2018), Australia (Smith, 2011), Chile (Krellenberg *et al.*, 2014), Estonia (Kährrik *et al.*, 2012) are consistent with the current findings in that HC, HSS, RP, SE, EF, NF and DUF are the predictors' variables in residential satisfaction research. Regarding the socio-demographic and socio-economic factors, the current research found that homeowners are more satisfied than renters. This is consistent with Elsing and Hoekstra's (2005) comparison study investigating residential satisfaction in the UK, Sweden, Austria, Germany, Spain, and the Netherlands and reasoned that due to housing being a basic human need, people are motivated to own their own homes. This may also be because homeowners are at a better opportunity to alter their housing conditions through behavioural manifestations, as suggested by Morris and Winter (1975). The results concerning age are consistent with van Praag *et al.* (2003), who argued that residents below the age of 35 are more likely to be dissatisfied with their place of residence than those above 35 years. This has been evident in the study where Csepel residents aged 36-45 years were more satisfied with their estate.

Moreover, unlike previous studies like Tao *et al.* (2014), Hur and Morrow-Jones (2008), and Krūmiņš *et al.* (2018), the level of education in Hungary plays an essential role in predicting residential satisfaction and thus supports past literature (e.g. Ibem and Aduwo, 2013; Biswas *et al.*, 2021). Duration of stay in residence has also been argued to positively influence overall residential satisfaction as residents who have stayed longer tend to form place attachment and social interactions with their neighbours (Parkes *et al.*, 2002). However, current findings found that residents who have lived in the estate 6-10 years were more satisfied than those with a duration of more than 20 years which supports Li and Song (2009) in that as one stays longer in residence, satisfaction decreases due to changing needs. Similar to other socio-demographic variables, the literature surrounding the influence of household dependents is diverse. For instance, contrary to the current findings, Krūmiņš *et al.* (2018) found households with children below 18 years positively affected residential satisfaction in Riga, Latvia. In line with Lu (1999), current findings suggest that women are often less satisfied with their residential environment than men, while Krūmiņš *et al.* (2018) did not find gender significant. And finally, the current research found that marital status, number of dependents, ethnicity, and occupation do not predict residential satisfaction in Hungary.

7.5 Chapter conclusion

The section aimed to develop and test a model to determine residential satisfaction in housing estates of Budapest, Hungary. Thus, three different, yet interrelated, analysis tools were utilised to this end. First, habitability index, satisfaction index and residential satisfaction index were calculated to find the satisfaction scores of each variable, entire component and overall residential satisfaction in the housing estate, respectively. Second, pre-analysis was conducted using two types of normality tests that found that the data was normally distributed; hence the next step followed. Finally, the results of the multiple linear regression models prove that exogenous variables influence the endogenous variable (i.e., residential satisfaction) and thus support the holistic residential satisfaction conceptual model in that this model can predict residential satisfaction in post-socialist cities. An integration of the results together with the dissertation conclusions are provided in the following chapter.

types: major strategy, key actors and stakeholders, spatial level of activities, economic focus, social content, physical emphasis and environmental approach. In this, the goals of urban regeneration are intricately linked with the sustainable development goals in creating economic viable, socially-coherent and environmentally sustainable communities. In respect to affordable housing, the dissertation indicated through extensive literature that different terms exist to describe the different housing provisions available in countries. Specifically, Section 2.2.3 provided a review of the different forms of housing affordability, and though affordable housing is often referred to those rental housing, affordability is the ability of a household to afford other non-housing needs after paying housing costs. Armed with this understanding, and due to mixed-tenure in Budapest housing estates, the term affordable housing was used to refer to both tenants and homeowners. The last two typologies of interpreting social sustainability, as published by Chiu (2003), were used to place social sustainability in URPs: environment-oriented and people-oriented typologies (see Section 2.3.1). And finally, the conceptual framework of residential satisfaction was deliberated in Chapter 3, where the gaps in the research were also identified.

8.2.1.1 Research objective one

The first theoretical objective revealed how governance practices and structures influence social sustainability. Spanning more than three years, an extensive literature review was done through evaluating how different contexts and researchers explore the process of urban regeneration. Furthermore, the different forms of justice under socio-spatial justice were critically reviewed to reveal their intricacies and relation with social sustainability.

8.2.1.2 Research objective two

To improve the concept of residential satisfaction by building on empirical findings was the second theoretical objective. An extensive literature search and review was conducted by the main researcher over 12 months. It is important to emphasise that although several conceptual models have been developed on RS, these models have often been disjointed, partly due to the researcher's objective. The partiality towards specific determinants, as opposed to the negligence of others, point towards the lack of a multifaceted framework that is enshrined within the sustainability framework so to make cities more liveable and sustainable. Moreover, previous models of RS have been superseded by newer models that aimed to meet the gaps of earlier models. This is because models follow a three-phase process: (1) evaluation, (2) disconfirmation and (3) improvement. As such, by identifying the lack of a primarily employed model to evaluate RS in ex-post urban regeneration projects, the paper introduced a model that post-socialist cities can utilise. Finally, the gaps selected in the research was due to the innate need to incorporate social sustainability and socio-spatial justice in ensuring sustainable communities.

8.2.2 Methodological research objectives and questions

The methodological research questions were threefold. First, it was to understand stakeholders' role in promoting community participation in housing projects. Second, it was to comprehend the residents' perceptions and expectations in regard to the urban regeneration projects in their neighbourhood. Third was focused on the factors that influence the residents' residential satisfaction. By adopting the critical realism philosophy, the research looked at reality as being independent but underlying structures that cause events to occur. Notably, the researcher understood that there exist several interpretations to URPs and thus conducted an explorative process gleaned from the theoretical to the empirical research. This paradigm allowed for methodological flexibility that other paradigms might not have gained to study both the social and real world. Thus, critical realism allowed the researcher to look for causal mechanisms in the data and to understand how and why events occurred as they did in the URPs.

8.2.2.1 Research objectives three and four

The first methodological objective investigated stakeholders' role, perception, and participation in promoting community engagement in urban regeneration programmes. The second methodological objective was also concerned with the URP but assessed the socio-economic impacts of these programmes based on the residents' perceptions and conditions before and after implementing the programmes. Interviews were conducted with key stakeholders involved in the various projects, while questionnaires were administered with residents living in the housing estate for more than five years. Findings were that stakeholders were not satisfied with the overall programmes as public participation, which was supposed to be the main focus due to the nature of the programmes, was superficial. In this case, these results corroborated those by the residents. However, when looking at the reasons by both the stakeholders and residents – differing views arise. First, stakeholders responsible for projects argued that even though residents were invited to participate in the projects, there was scant enthusiasm from the residents despite the use of several participation methods to involve them. On the other hand, most of the residents stipulated that they were not directly invited to participate in the projects. In several instances during the fieldwork, the researcher and research assistants were informed by residents that it was their first time they were hearing about the URP even when they had lived in the area since before the conception of the programme. Second, the issue of housing unaffordability in Hungary, particularly in Budapest, echoed through the narratives. This was also reflected in the questionnaire when residents in one location paid more than 50% of their income towards housing costs. High housing costs and the inability to afford them often results in energy poverty and, thus, eviction. Third, one of the objectives of the URP was to improve the overall aesthetics of the neighbourhood, and although residents found public spaces to be much worse before the URP, some stakeholders mentioned that all those renovations were superficial as there is not much difference. Finally, similar shortcomings of the URP can be found: corruption and inadequate public participation. Therefore, results from the urban regeneration programmes were mixed.

8.2.2.2 Research objective five

The third and final methodological objective was to develop and test a model to determine residential satisfaction in housing estates in post-socialist cities. A closed-ended questionnaire was administered to the residents living in four estates in Budapest, Hungary. After conducting an extensive literature review on existing literature, the selected components reveal the research gaps. Four components were chosen from the literature: dwelling unit, neighbourhood, housing conditions, housing support services. The following components were the gaps discovered in the published literature: social environment, resident participation and environmental features. The seven components totalled 71 variables and ten socio-demographic characteristics of residents, including age, gender, education, marital status, ethnicity, dependents, occupants, occupation, housing costs and duration of stay in residence. The conceptual model was tested using MLR, and findings reveal that the holistic model proposed in this dissertation was successfully validated in that the use of both subjective and objective attributes can predict residential satisfaction in post-socialist Budapest.

8.2.3 Practical research objective and question

The first and only practical objective was to identify the best practice initiatives implemented in the communities in major urban regeneration programmes and provide relevant recommendations that can be adopted for other similar programmes. As expected, there were no best practice initiatives in the programmes as it is essential to realise that each community is different and often respond differently to projects. However, although no one-size-fits-all good practice has been identified, there are several elements of the initiatives studied that should be taken into account when designing similar interventions elsewhere. These include both public participation and transparent and accountable stakeholder engagement. The practical recommendations are provided in the following sub-section.

8.3 Contributions and Recommendations

8.3.1 Theoretical

Residential satisfaction studies in post-socialist cities have grown exponentially in the last decade. Researchers have often opted to choose a different combination of components to measure and predict residential satisfaction despite this growth. However, with incorporating social sustainability and environmental consciousness in urban policies and structures, researchers must place themselves in the most-recent urban debates to relate their work better with residents. Thus, the current research contributed to the existing literature by corroborating state-of-the-art literature with a validated holistic model and components. Furthermore, relatively few published works have purposely separately measured neighbourhood features, social environment features and environmental features due to them being interrelated and interconnected. However, this study revealed that these components are, in fact, interrelated but need not be combined to adequately and accurately measure residents' satisfaction with them. So, the detailed methodology applied in the current research may guide those interested in investigating residential satisfaction in post-socialist cities.

In continuation, through the lens of socio-spatial justice, as promoted by social sustainability, the current research also took an extensive literature on the different forms of justice and how each ensures that all members of the society have the equal distribution and availability of socio-cultural and economic opportunities, resources and services to reduce marginalisation and inequality. As previously mentioned, socio-spatial justice questions the capitalist, "winner-takes-all" system while encouraging society to spatially organise themselves sustainably. In this sense, socio-spatial justice is essential to encouraging democracy, active participation in decision-making processes, and creating sustainable, resilient cities. Therefore, the refined theoretical framework and the detailed case studies provided rich insights into urban regeneration processes in Hungary, which may guide implementers of similar programmes to help them gain valued knowledge and comprehension in the complex interplay of stakeholders and residents.

8.3.2 Methodological

A mixed-method approach was used to gather important information regarding the studied phenomena, which assisted in preparing, organising and administering the questionnaire. Thus, this study's main methodological contribution was its ability to combine two different yet interrelated concepts (i.e. quantitative and qualitative) with studying urban regeneration processes plus residential satisfaction within Hungary. The use of mixed-method is highly advised, whether qualitative first and then quantitative or vice versa, due to its unique foundation. Furthermore, valuable details have been gained by the researcher adopting the critical realism paradigm and an embedded multiple-case design, especially during fieldwork.

8.3.3 Practical

First and foremost, the detailed insight provided by the four study sites has been an eye-opening experience. The case studies reveal no one-fits-all cookie cutter for URPs exists. Despite this, the locations speak about the importance of having one voice as a community to increase the chances of success. In the same vein, the holistic model results are planned to be disseminated to the community to ensure that residents are aware of their neighbours and neighbourhoods and could motivate them to reach out, thus ensuring sustainable communities whether through organising open festivals or advocating for a dog park.

Interviews suggest that Hungary's continued absence of a national housing policy remains a breeding ground for housing unaffordability and socio-spatial injustice. These urban regeneration programmes often portray themselves as for the people and by the people; however, project managers and other leading consortium leaders are often misguided and concentrate more on delivering physical goals (mostly because physical indicators are easier as compared to social ones), forgetting that the social revitalisation of the

community is also of paramount importance. Results from the URP are planned to be submitted to key stakeholders involved in the different projects in that it may help them plan and deliver sustainable programmes and understand the critical criteria that should take priority when undertaking URP are. Thus, for the consortium leaders, it is highly recommended to prioritise local participation through thoroughly researching the needs of the community (conducting a social impact assessment) and then utilising tailor-made participation instruments to maximise residents' participation as results have shown that residents do want to be actively engaged in the processes affecting them. Moreover, the most easily-accessible level of government to the neighbourhoods, local municipalities are in better positions to apply for grants and ensure sustainable cities; thus, the onus is on them to ensure stakeholder engagement and public participation. Although it may sound absurd, environmental, social and economic objectives can co-exist in one neighbourhood: it just needs the patience to see the bigger picture and efforts. Finally, in as much as governments are responsible for ensuring housing affordability, citizens have great power as it is difficult for municipalities to win votes as most voters do not support helping vulnerable populations. Thus, NGOs, academics, media and other stakeholders have a gargantuan task of raising public awareness about housing affordability has the current pandemic as shown that this issue is no longer only for low-income families.

8.4 Limitations

The current study has contributed valuable knowledge; however, several limitations were experienced.

- Though they may be part of the same country, cities have characteristics that are unique to them. More than that, due to the political circumstance of the districts of Budapest, housing projects procedures may have differed.
- Due to research funding restrictions, only one city was included in the research.
- Due to the lack of ethnic representation, there was considerably less comparison. Furthermore, the respondents were primarily homogenous with a large proportion of White, European, which means that the results may not be generalised with other culturally diverse communities.
- Even though all the methodological tools used are prevalent within this field, significant criticism has been given to them. There is no consensus regarding the number of interviews required regarding the qualitative research. In contrast, several models and equations are provided to calculate the sample size for quantitative studies.
- Although a considerable effort was made to collect information and literature on housing affordability in Hungary, the language barrier was a persistent issue. This means that literature published in Hungarian may not have caught the researcher's attention. Moreover, specific stakeholders could not be interviewed due to the language barrier with the researcher. Noteworthy, although one interview was entirely conducted in Hungarian, the researcher believed this method (as supported by other authors) could not capture the stakeholder's thoughts appropriately due to back-translation.
- As a result of the integration of tenure within all the case locations, most of the respondents were homeowners. And as argued in the current research and previous studies, homeowners are often more satisfied with the residential environment than tenants. This means that the results may have yielded biased statistics.
- Great care was made in selecting the case studies regarding their location, size design and urban regeneration processes. However, caution must be taken as each case study is unique in form and residents.
- Due to the scope of the research, survey responses were not cross-referenced with other data such as energy consumption.
- Furthermore, as the programmes were completed more than five years ago, responses were selective memory of both residents and stakeholders. Furthermore, all the responses are subjective on individual experience and opinions.

8.5 Directions for future research

In the context of regenerated affordable housing, residential satisfaction research is currently expanding with great emphasis on the emerging issues within this field. Thus, the current research attempted to discuss these issues; however, undeniably, the research is far from comprehensive. The following includes directions for future studies:

- The philosophical lens plays a vital role in the research, and thus, researchers within housing research are advised to go beyond electing paradigms that merely “fit” within their research, but rather to understand that several institutional factors shape urban studies and thus require an explicit philosophical approach which may guide their research methodology.
- Future studies can research the determinants that predict residential satisfaction in housing projects found outside Budapest (i.e. Szeged, Pécs, Debrecen). Staying true to the three-phase model process, only through the holistic model in various contexts in post-socialist cities can an accurate comparison of the different results be conducted.
- Location affordability has been linked intricately with housing affordability in recent literature; thus, it is worth researching residents’ trade-offs between location affordability and housing affordability as developers often choose to build low-cost housing in the peripheral of the city due to the cheap land prices despite the high negative impact on the residents.

8.6 Concluding remarks

Urban regeneration processes have the potential to eradicate, if not alleviate, urban injustices through engaging with local communities and key stakeholders to ensure the improvement of physical and social infrastructures. This dissertation aimed to uncover the perceptions of these programmes from both the stakeholders’ and residents’ sides of the story and then measure and predict the satisfaction residents now have with their residential environment, ex-post. A literature search was conducted for more than three years to build the conceptual and theoretical frameworks, which laid an essential foundation for empirical research. Thereafter, using the critical realism paradigm to explore, guide and explain the ex-post urban regeneration processes in Hungary, the mixed-method approach was decided upon as it was the most relevant line of inquiry to base the rest of the methodology on. The findings of the research were twofold. First, implementers of URP must agree and understand the actual definition of public participation, which is the centrepiece of such programmes to ensure sustainable programmes. Furthermore, stakeholders are different; thus, their roles vary; therefore, consortium leaders must provide an open and transparent dialogue mechanism to minimise conflict and increase cooperation. Second, a seven-factor model was developed and then validated to holistically measure and predict residential satisfaction in housing estates of Budapest. The final part of the dissertation focused on the value-added contributions made theoretically, methodologically and practically. And while the limitations and future research prospects are linked to this current research and offer deeper insights into the urban processes, some conclusions had to be drawn as a done Ph.D. is a finished Ph.D. as there will always be further analysis to conduct.

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Abstract

The notions of housing crisis have been used to refer to affordability (increase in rent in the private and public housing sectors), supply or demand; however, it is vital to understand housing as both a home and a financial investment. In unpacking the concept of “housing crisis”, various socio-economic implications also emerge, such as the continuous increase of intra-and-intergenerational inequity whereby the previous generation receives higher salaries, which means they can purchase homes and generate further wealth to acquire additional wealth properties. In this sense, as a global phenomenon, the current housing crisis has different characteristics from country to country and from one urban region to another. To alleviate the crisis of housing, several housing affordability typologies exist. Generally, affordability is the ability of a household to afford other non-housing needs after paying housing costs. With the phrase housing affordability having replaced that of “housing needs”, there has been a surge of literature on the topic. Several scholars have defined “affordability” in affordable housing from the basis of a “ratio” where the differences in the household costs are measured against the total housing income. Threshold percentages have often been suggested of housing expenditures-to-income ratio, and this has variedly set at 25%, 30% and 35%. These thresholds are then considered as indicators and normative standards of housing affordability. Once households exceed this amount, there are said to experience housing unaffordability.

Affordable housing, throughout history, has seemingly assuaged the housing crisis; however, these housings are often dilapidated and thus require major housing-led urban regeneration interventions. With some countries now faced with the deteriorated housing estates predicament, sustainable housing started to be the new focus hence the need for new, innovative ways to address massive urbanisation. Both urban regeneration and urban restructuring processes are geographical phenomena used to prevent further socio-economic decline and the physical degradation of the buildings. Area-based urban policies, strategies and funding projects have focused on problematic housing estates. Historically, urban renewal is referred to as removing slums in urban areas to redevelop the area. This term has been used interchangeably with urban regeneration, urban rehabilitation and urban development, depending on which country one is in. However, these terms are an approach to meeting socio-economic objectives, repairing urban decay, and improving social networks, primarily through integrating previously segregated vulnerable groups. Thus, it is worth looking at the issue from a geographical perspective.

The negative experiences with affordable housing, and the new urban development trends that have emerged in recent decades, make it necessary to examine the sustainability of affordable housing developments. Environmental, economic, and social sustainability is a fundamental requirement for urban development, and affordable housing plays a vital role in achieving this. Moreover, the social, environmental and economic pressures that cities have experienced in the past few decades have had an immense impact on the urban neighbourhood. Tackling these urban issues has required a new take on URPs through incorporating social sustainability. Various stakeholders and residents have been involved in achieving sustainable communities in Hungary; however, published research focused on housing concerning space has mostly looked at issues concerning segregation and gentrification. Still, many of these studies have primarily relied on quantitative data to back up their findings, with a few exceptions. Furthermore, studies that have investigated the impacts of urban regeneration in Budapest have focused mainly on the economic and physical benefits of the programmes, with a few exceptions. These studies have extensively contributed to the growing knowledge of the development and history of housing studies; however, further investigation from the perspectives of the stakeholders and residents is required.

Residential satisfaction studies have been used to determine the factors contributing to a resident being either satisfied or dissatisfied with their overall residential environment. As a tool, residential satisfaction has also been used to evaluate the extent to which the programmes delivered and met their set objectives. However, the type of determinants chosen to evaluate satisfaction are often tailored made to the specific case study, researcher and overall aim of the research as this concept is based on perception. Criticism of

these questionnaires have centred around issues: (1) lack of validated questionnaires, (2) scant information of psychometric variables, (3) lack of questionnaires that have integrated the interrelated three levels of the residential environment (dwelling, neighbourhood and social), (4) easily adoption to similar context.

Moreover, developing new questionnaires to fit specific settings is not discouraged; however, experts in the field have encouraged authors to adapt existing models to contribute to the knowledge of psychometric data. Specifically, within the context of Hungary, residential satisfaction research in housing estates has received scant attention in Hungary, with the available works looking at housing satisfaction in Havanna (Budapest); however, this data was collected nearly 20 years ago. Thus, there exist a gap in the literature with current studies of residential satisfaction as the theory of residential satisfaction is continually evolving and improving. Therefore, it is worthwhile to conduct such studies to investigate residential satisfaction with a better theoretical basis and a more comprehensive range of attributes. Finally, the current research develops a conceptual framework that has been adopted and altered from existing questionnaires of residential satisfaction. Due to no known recent published questionnaire and model suitable for studying residential satisfaction in ex-post housing-led URPs in post-socialist cities, this research attempts to fill this gap.

Thus, due to the importance of ensuring the sustainability of urban development and affordable housing developments, it is vital to assess the opinions of residents and key stakeholders in urban regeneration programmes while at the same time investigating the residential satisfaction of residents in regenerated housing estates. The latter analysis is vital as with the surge of urban regeneration programmes in Hungary, specifically in Budapest, there is a great need to find out if the housing estates that were renovated with the partial funding of residents, local municipality and EU are satisfactory from the view of the residents.

One of the most important aspects of any research is the paradigmatic framework that a researcher uses throughout the research project. Due to the nature of the research aim, objectives and questions, critical realism was selected as the appropriate paradigm. In this sense, the current research has three methodological objectives. First, it was to investigate the role, perception, and participation of stakeholders in promoting community engagement in affordable housing projects. Here, 30 semi-structured interviews were conducted with stakeholders either involved in the URPs or the overall housing sector in Hungary. The exploratory and in-depth interviews were often supplemented with relevant documents that the key stakeholders have supplied. Validation strategies of the qualitative research included credibility, transferability, dependability, and confirmability. Whether subjective or objective, the epistemological position governs the entire research process, so the method used for the analysis of the dataset must be compatible with the epistemological position. Thus, critical thematic analysis was used. A significant limitation of this stage was the language barrier.

Second, it was to assess the socio-economic impacts of affordable housing based on the residents' perceptions and conditions before and after urban regeneration programmes. A semi-structured questionnaire (n=197) was administered to the residents of affordable housing flats that were renovated during the social URPs. To understand both the negative and positive impacts of URPs in the study locations, long-term residents who have been living in the buildings for more than five years – with five years chosen as that is when the URPs were completed – were eligible to answer the questionnaire. The exclusion criteria included residents that have lived in the buildings for less than five years. This part of the questionnaire was informed by the literature and interview findings from the qualitative research. To meet the objectives of this questionnaire, the response format was a rating scale (“1” = very bad to “5” = very good), multi-interval, dichotomous, and open-ended questions. Data were analysed using SPSS. Moreover, a pilot with approximately 12 Hungarians was conducted before the commencement of the data collection.

And finally, it was to develop and test a model to determine residential satisfaction in housing estates. Similarly, a structured questionnaire was administered (n=307) to the residents to uncover the key variables that determine their residential satisfaction. The holistic residential satisfaction conceptual model comprised of 7 latent variable constructs with 70 measurement variables: dwelling unit features had eight

measurement variables, neighbourhood features had 13 measurement variables, housing support services included 12 measurement variables, housing condition features had eight measurement variables, the social environment included 13 measurement variables, resident participation included seven measurement variables, environmental sustainability included nine measurement variables, and finally, overall residential satisfaction had five variables. Cronbach's alpha was satisfactory. Data were analysed using SPSS with the habitability index, satisfaction index and residential satisfaction index (Ogu, 2002) calculated in Excel while the multiple linear regression on SPSS. Limitations for the questionnaires may have included: interpreter bias, social desirability bias and response bias.

Data analysis from the urban regeneration showed that stakeholders were not satisfied with the overall programmes as public participation, which was supposed to be the main focus due to the nature of the programmes, was superficial. In this case, these results corroborated those by the residents. However, when looking at the reasons by both the stakeholders and residents – differing views arise. First, stakeholders responsible for projects argued that even though residents were invited to participate in the projects, there was scant enthusiasm from the residents despite the use of several participation methods to involve them. On the other hand, most of the residents stipulated that they were not directly invited to participate in the projects. In several instances during the fieldwork, the researcher and research assistants were informed by residents that it was their first time hearing about the URP even when they had lived in the area since before the conception of the programme. Second, the issue of housing unaffordability in Hungary, particularly in Budapest, echoed through the narratives. This was also reflected in the questionnaire when residents in one location paid more than 50% of their income towards housing costs. High housing costs and the inability to afford them often results in energy poverty and, thus, eviction. Third, one of the objectives of the URP was to improve the overall aesthetics of the neighbourhood, and although residents found public spaces to be much worse before the URP, some stakeholders mentioned that all those renovations were superficial as there is not much difference. Finally, similar shortcomings of the URP that can be found are corruption and inadequate public participation. Therefore, results from the urban regeneration programmes were mixed.

Next, from an extensive literature review, four components of residential satisfaction were selected: dwelling unit, neighbourhood, housing conditions, housing support services. The following components were the gaps discovered in the published literature: social environment, resident participation and environmental features. The seven components totalled 71 variables and ten socio-demographic characteristics of residents, including age, gender, education, marital status, ethnicity, dependents, occupants, occupation, housing costs and duration of stay in residence (Figure 1). The conceptual model was tested using MLR, and findings reveal that the holistic model proposed in this dissertation was successfully validated in that the use of both subjective and objective attributes can predict residential satisfaction in post-socialist Budapest.

Unsurprisingly, there were no best practice initiatives in the programmes as it is essential to realise that each community is different and often respond differently to projects. However, although no one-size-fits-all good practice has been identified, there are several elements of the initiatives studied that should be taken into account when designing similar interventions elsewhere. These include both public participation and transparent and accountable stakeholder engagement. However, the current research does provide relevant contributions and values. First, through the lens of socio-spatial justice, as promoted by social sustainability, the current research also took extensive literature on the different forms of justice and how each ensures that all members of the society have the equal distribution and availability of socio-cultural and economic opportunities, resources and services to reduce marginalisation and inequality. As previously mentioned, socio-spatial justice questions the capitalist, “winner-takes-all” system while encouraging society to spatially organise themselves sustainably. In this sense, socio-spatial justice is essential to encouraging democracy, active participation in decision-making processes, and creating sustainable, resilient cities. Therefore, the refined theoretical framework and the detailed case studies provided rich insights into urban regeneration processes in Hungary, which may guide implementers of similar

programmes to help them gain valued knowledge and comprehension in the complex interplay of stakeholders and residents.

Second, a mixed-method approach was used to gather important information regarding the studied phenomena, which assisted in preparing, organising and administering the questionnaire. Thus, this study's main methodological contribution was its ability to combine two different yet interrelated concepts (i.e. quantitative and qualitative) with studying urban regeneration processes plus residential satisfaction within Hungary. The use of mixed-method is highly advised, whether qualitative first and then quantitative or vice versa, due to its unique foundation. Furthermore, valuable details have been gained by adopting the critical realism paradigm and an embedded multiple-case design, especially during fieldwork.

And finally, first and foremost, the detailed insight provided by the four study sites has been an eye-opening experience. The case studies reveal no one-fits-all cookie cutter for URPs exists. Despite this, the locations speak about the importance of having one voice as a community to increase the chances of success. In the same vein, the holistic model results are planned to be disseminated to the community to ensure that residents are aware of their neighbours and neighbourhoods and could motivate them to reach out, thus ensuring sustainable communities whether through organising open festivals or advocating for a dog park. Interviews suggest that Hungary's continued absence of a national housing policy remains a breeding ground for housing unaffordability and socio-spatial injustice. These urban regeneration programmes often portray themselves as for the people and by the people; however, project managers and other leading consortium leaders are often misguided and concentrate more on delivering physical goals (mostly because physical indicators are easier as compared to social ones), forgetting that the social revitalisation of the community is also of paramount importance. Results from the URP are planned to be submitted to key stakeholders involved in the different projects in that it may help them plan and deliver sustainable programmes and understand the critical criteria that should take priority when undertaking URP are. Thus, for the consortium leaders, it is highly recommended to prioritise local participation through thoroughly researching the needs of the community (conducting a social impact assessment) and then utilising tailor-made participation instruments to maximise residents' participation as results have shown that residents do want to be actively engaged in the processes affecting them. And finally, as the most easily-accessible level of government to the neighbourhoods, local municipalities are in better positions to apply for grants and ensure sustainable cities; thus, the onus is on them to ensure stakeholder engagement and public participation. Although it may sound preposterous, environmental, social and economic objectives can co-exist in one neighbourhood: it just needs the patience to see the bigger picture and efforts.

Összefoglalás

Doktori kutatásom fő célja az volt, hogy modellezem: a lakások jellemzői, a lakókörnyék jellemzői, a lakhatást támogató szolgáltatások jellege, a lakhatási körülmények, a lakossági részvétel, a társadalmi jellemzők és a környezettudatosság milyen mértékben jelzik előre egy adott városrész lakóinak lakhatással kapcsolatos elégedettségét. A kutatás során arra fókuszáltam, hogy a szociális lakhatási beavatkozások által vezérelt városrehabilitációs programokat hogyan értékelik a lakosok, illetve milyen mértékben vesznek részt az ilyen programokban (vagy maradnak ki azokból). Kiemelt figyelmet fordítottam a helyi lakosok szerepére és lakhatási beavatkozásokkal kapcsolatos véleményére, mivel részvételük vizsgálatán keresztül jobban megérthetőek a közösség igényei.

A kutatási célok és kérdések jellege miatt a kritikai realizmust választottam kutatási paradigmaként, amely megfelelő alapot biztosított ahhoz, hogy kritikai megközelítéssel elemezsem a tudástermelési folyamatot és a társadalmi gazdasági hatásokat a vizsgált városfejlesztési beavatkozások esetében. A kutatás keretében négy olyan budapesti mintaterületet választottam, amelyekben a városrehabilitációs programok középpontjában a lakhatás állt: Havanna, Újpalota, Kis-Pongrác és Csepel déli lakóközpont. Annak érdekében, hogy megvizsgáljam az egyes érdekelt (stakeholderek) szerepét, véleményét és részvételét a szociális lakhatási célú projekteken való közösségi szerepvállalás előmozdításában, feltáró jelleggel félig-strukturált mélyinterjúkat készítettem a budapesti városfejlesztés és a fenti mintaterületek szempontjából releváns szakértőkkel, amely interjúkat utána tematikus elemzésnek vetettem alá. Továbbá, a megfizethető lakhatásra irányuló beavatkozások társadalmi-gazdasági hatásait értékeltem kérdőíves felméréssel a mintaterületek lakosainak megítélése és a városrehabilitációs programok előtti és utáni állapotok alapján. Az eredmények szerint az érdekelt felek és a lakosok nem voltak teljes mértékben elégedettek a városrehabilitációs programokkal, mivel a nyilvánosság részvétele – amely a programok jellegéből adódóan a fő hangsúlyt kellett volna, hogy kapja a fejlesztések során – felszínes volt. Végezetül, a lakók elégedettségével kapcsolatos eredmények azt mutatják, hogy a disszertációban javasolt holisztikus modell használhatóságát sikerült igazolni, mivel az a szubjektív és objektív jellemzők figyelembevételével képes előre jelezni a lakók lakhatással kapcsolatos elégedettségét a poszt-szocialista Budapest esetében.

Appendices

Appendix A: Picture box of Havanna

Havanna housing estate showing public space (top left), housing flats (bottom left), green spaces (top right), community services space (middle right) and playground (bottom right). Source: own.



Appendix B: Picture box of Csepel-déli

Csepel déli housing estate illustrating playground (top left), non-renovated lift (bottom left), housing flats (top right), public space (middle right) and green space in front of flats (bottom right). Source: own



Appendix C: Picture box of Kis-Pongrác

Kis-Pongrác housing estate illustrating car park and side walk (top left), green space front of blocks (bottom left), dog park (bottom right), playground (middle right) and street camera (top right). Source: own



Appendix D: Picture box of Újpalota

Újpalota housing estate pictures showing spiral house (top left), high-rise flats (bottom left), playground (bottom right), low-rise flats (middle right) and green space (top right). Source: own



Interview Questions

How many years do you have in this profession?

Based on your experiences, please briefly explain the overall urban regeneration process and planning in Budapest.

What was your main role and responsibilities in the urban regeneration programme?

Is co-operation with central and local government bodies challenging? How?

Did you work with communities before and after the project? How?

What methods did you use to involve communities?

What were some of the main conflicts or challenges that you experienced from planning to the closing of the programme? How were these issues resolved?

How would you define public participation?

Are you aware of any legislation mandating public participation in Hungary?

What are policy recommendations do you have regarding participatory planning in Hungary?

Why do you think needs assessments are not widely used in Hungary?

There was a needs assessment conducted before the implementation of this programme. Do you think it was effective? How? Were any of the suggestions of the communities taken into consideration? How?

Looking at the public participation process, did the community's participation positively or negatively impact the planning and implementation phases of the programme? How?

What can you think can involve the community members in the different sub-projects that exist in the programme?

Did the involvement of the different key stakeholders such as NGOs positively or negatively contribute towards the success of the sub-projects?

How was the co-operation between different private and public stakeholders?

If a similar programme could be implemented in another district or city, what would you suggest be done differently?

General questions

Who would you recommend I talk to regarding this programme, and who played an essential role in the project?

Is there anything you feel you would like to add?

Appendix F: Interviewees' profile
 Profiles of the interviewees (n= 30)

Number	Role of interviewees	Code	Duration of interview
<i>Category 1: Public sector (representing regional, national, local)</i>			
1	Employee in municipality	RL1	1 hour, 30 minutes
2	Ex-employee in municipality	RL2	49 minutes
3	Regional policy evaluator	RR1	2 hours
4	National employee	RN1	1 hour, 20 minutes
5	Community centre leader	RL3	1 hour, 40 minutes
6	Employee in municipality	RL4	1 hour, 36 minutes
7	Employee in municipality	RL5	
8	Ex-employee in municipality	RL6	
9	Employee in municipality	RL7	1 hour
<i>Category 2: Tenders awardees</i>			
10	NGO	TA1	1 hour, 30 minutes
11	NGO	TA2	2 hours, 15 minutes
12	Researcher involved in project	TA3	3 hours, 5 minutes
13	Researcher involved in project	TA4	46 minutes
14	NGO	TA5	1 hour, 20 minutes
15	Designer	TA6	1 hour, 15 minutes
16	Architect	TA7	
17	NGO	TA8	1 hour, 16 minutes
<i>Category 3: Private sector</i>			
18	Local community newspaper	PS1	3 hours, 5 minutes
19	Resident involved in project	PS2	33 minutes
20	Resident involved in project	PS3	25 minutes
21	Resident involved in project	PS4	21 minutes
22	Blocks representative	PS5	E-mail interview
23	Blocks representative	PS6	E-mail interview
24	Housing expert	PS7	1 hour, 10 minutes
25	Housing expert	PS8	1 hour, 15 minutes
26	Housing expert	PS9	1 hour, 20 minutes
27	Housing expert	PS10	50 minutes
28	Housing expert	PS11	1 hour, 40 minutes
29	Housing expert	PS12	1 hour, 20 minutes
30	Housing expert	PS13	1 hour



29 May 2021

Dear Havana resident,

You are requested to participate in a research study conducted by Ntombifuthi Precious Nzimande, a Ph.D student in the Doctoral School of Geoscience at the University of Szeged, Hungary. Ntombifuthi's project title is 'socio-economic impacts of urban regeneration programmes as a tool of housing in the post-socialist era: a comparison of Hungarian case studies'.

Your participation in this study would be extremely beneficial to this study and is completely voluntary. If you wish to participate, it will involve answering a questionnaire survey consisting of open and closed-ended questions regarding the research at hand. The questionnaire will take approximately 15 minutes to complete.

Thank you,
Ntombifuthi Precious Nzimande
Szegedi Tudományegyetem
ntombifuthi.nzimande@geo.u-szeged.hu

Section A: Housing information

1. Overall, do you like to live in your current place of residence?

1.1 Yes	
1.2 No	

2. Where did you live before moving to this neighbourhood?

2.1 Elsewhere in the district	
2.2 In another district in Budapest	
2.3 In another Hungarian city	
2.4 In another Hungarian village	
2.5 In another country	
2.6 Other (please specify)	

3. Why did you decide to live in this neighbourhood? Please indicate which of the following was the most important factor in choosing your place of residence.

3.1 Born here / has lived here since childhood	
3.2 Affordable rental price	
3.3 Recommended by family or friends	
3.4 I had no choice	
3.5 I inherited an apartment here	
3.6 Other (please specify)	

4. What part of your income is needed to cover your total housing costs (rent, gas, water, etc.)?

4.1 Less than 10%	
4.2 11-30%	
4.3 31-50%	
4.4 More than 50%	
99. I do not know	

5. What is the tenure of your apartment?

5.1 Own apartment	
5.2 Private rental property	
5.3 Municipally owned rental property	
5.4 Other (please specify)	

6. If you live in a municipal rental housing, please rate the following.

	1. Really bad	2. Bad	3. Appropriate	4. Good	5. Very good
6.1 Application conditions for access to housing					
6.2 Eligibility of the application process					
6.3 Duration of tender feedback					

6.5 Arrangement of rooms.					
---------------------------	--	--	--	--	--

7 How long have you lived in your current place of residence?

7.1 Less than 5 years	7.2 6–10 years	7.3 11–15 years	7.4 16–20 years	7.5 More than 20 years

If you have been living in Havana for less than 5 years, please continue by completing Section C.

If you have been living in Havana for more than 5 years, please continue by completing Section B.

Section B: Socio-economic impacts

The following questions ask about the situation before the integrated social rehabilitation of the Havana housing estate (2013-2015).

8. Please rate what was/were the Havana housing estate prior to the integrated social rehabilitation of the Havana housing estate

	1. Much worse	2. Worse	3. Unchanged	4. Better	5. Much better
8.1 Level of crime					
8.2 Level of rents					
8.3 Utility charges					
8.4 Community cohesion					
8.5 Composition of the population of the housing estate					

9. Please rate what it was like in your apartment before the social urban rehabilitation of the Havana residential centre...

	1. Much worse	2. Worse	3. Unchanged	4. Better	5. Much better
9.1 Proximity to markets and shopping units					
9.2 Community Events					
9.3 Quality of the dwelling					
9.4 The water supply					
9.5 The power supply					
9.6 Natural light					
9.7 Quality of ventilation					

10. Please rate what it was like before the integrated social rehabilitation of the Havana housing estate in your neighbourhood...

	1. Much worse	2. Worse	3. Unchanged	4. Better	5. Much better
10.1 Public safety					
10.2 Cleanliness of public spaces					
10.3 Public waste management					
10.4 Quality of green areas					
10.5 Quality of public spaces					
10.6 Condition of car parks / sidewalks					

The following questions ask about the situation during the period of integrated social rehabilitation of the Havana housing estate (2013-2015).

11. In which areas did the Havana housing estate expect improvements from integrated social rehabilitation? (You can mark more than one answer)

11.1 Exterior of buildings	
11.2 Transport and traffic	
11.3 Community spaces	
11.4 Public Services	
11.5 Job Opportunities	
11.6 Business Opportunities	
11.7 Other (please specify)	

12. Have you voiced what results you expect from the integrated social rehabilitation of the Havana housing estate?

12.1 Yes (If yes, please continue by answering question 12.a.)	
12.2 No (If not, please continue by answering question 12.b.)	

12.a How did you express your opinion and expectations? (Please choose all that apply)

Method	Please tick ✓
12.a.1 In person, at customer service	
12.a.2 At a public meeting or forum	
12.a.3 Written letter	
12.a.4 Online interface	
12.a.5 Other (please specify)	

12.b If you did not express your opinion and your expectations, then why did you not do so?

Reasons	Please tick ✓
12.b.1 I didn't care, I didn't consider it important	
12.b.2 They didn't contact me	
12.b.3 Other (please specify)	

The following questions ask about the state following the integrated social rehabilitation of the Havana housing estate (2013–2015).

13. How do you see your current living conditions compared to those before the integrated social rehabilitation of the Havana housing estate?

13.1 Much worse	
13.2 Worse	
13.3 Unchanged	
13.4 Better	
13.5 Much better	

14. Please describe briefly how you think the integrated social rehabilitation of the Havana housing estate has served the needs of the local population.

1.
2.
3.

15. Please describe the three things you liked best about the Havana Housing Integrated Social Rehabilitation Programme.

1.
2.
3.

16. Please describe three things that could have made the programme better or more effective.

1.
2.
3.

Section C: Level of residents' satisfaction with housing

Please indicate your satisfaction or dissatisfaction with each characteristic using the scale provided.

17. Please rate the characteristics of the dwelling according to the following criteria.

Dwelling unit	1. Very dissatisfied	2. Dissatisfied	3. Neutral	4. Satisfied	5. Very satisfied
17.1 Number of rooms					
17.2 Size of the apartment					
17.3 Existence of a private sphere in the apartment					
17.4 The degree of light in the apartment					
17.5 Ventilation quality					
17.6 Floor level quality					
17.7 Physical appearance of the apartment					
17.8 Size of the balcony					
17.9 Flat natural temperature in summer					
17.10 Flat natural temperature in winter					

18. Please rate the characteristics of your neighbourhood according to the following criteria.

	1. Very dissatisfied	2. Dissatisfied	3. Neutral	4. Satisfied	5. Very satisfied
18.1 Location of the apartment					
18.2 Cleanliness of the area					
18.3 Public transport options					
18.4 Parking / sidewalks					
18.5 Micromobility options (cycling, scootering)					
18.6 Proximity to health care					
18.7 Proximity to Schools					
18.8 Proximity to the workplace					
18.9 Proximity to markets and shopping units					
18.10 Proximity to the place of religious practice					
18.11 Level of crime					
18.12 Public safety					
18.13 Street lighting					

19. Please evaluate the characteristics of the building and the apartment according to the following aspects.

	1. Very dissatisfied	2. Dissatisfied	3. Neutral	4. Satisfied	5. Very satisfied

19.1 Exterior of a building					
19.2 Quality of interiors					
19.3 Sanitary quality (toilet, sink and shower)					
19.4 Plumbing quality					
19.5 Quality of interior painting					
19.6 Number of electrical connections					
19.7 Location of electrical connections					
19.8 Quality of doors					
19.9 Quality of windows					
19.10 Wall quality					
19.11 Floor covering quality					
19.12 Heating system					

20. Please rate the following housing services related to your location.

	1. Very dissatisfied	2. Dissatisfied	3. Neutral	4. Satisfied	5. Very satisfied
20.1 Sewer system					
20.2 Disposal					
20.3 Fire protection					
20.4 Water supply					
20.5 Power supply					
20.6 Gas supply					
20.7 Joint representation, housekeeper					
20.8 Mobile / Internet Service Coverage					

21. Participation of residents in the planning of the integrated social rehabilitation programme of the Havana housing estate

To what extent do you agree with the following statements?

Residents must be consulted	1. I do not agree at all	2. I do not agree	3. Neutral	4. I agree	I completely agree
21.1... on the renovation of dwellings.					
21.2... on the interior design and layout of the dwellings.					
21.3... on the external design and appearance of the dwellings.					
21.4... From planning to complex management of housing problems from inception to implementation.					

21.5... .on house management, maintenance.					
21.6... Renovation of courtyards and public spaces.					
21.7 ... on social programs (eg education, employment and community programs).					

22. Social environment

To what extent do you agree with the following statements?

	1. I do not agree at all	2. I do not agree	3. Neutral	4. I agree	5. I completely agree
22.1 I feel like Havana is my own, I strongly identify with this area.					
22.2 I actively participate in community meetings.					
22.3 Living in this neighbourhood says a lot about who I am.					
22.4 There are many opportunities for community activities.					
22.5 I pay my monthly bills on time.					
22.6 I talk to my neighbours often.					
22.7 If I need help, my neighbours will support me.					
22.8 I feel like I have a meaningful relationship with my neighbours.					
22.9 I am away from someone on the housing estate who takes care of my apartment, plants, pets, etc.					
22.10 I take part in community events and activities in the area.					
22.11 I have a neighbour who understands important events or emergencies in the area.					
22.12 I attend events when invited by my neighbour.					
22.13 I trust my neighbours.					

23. Environmental satisfaction

To what extent do you agree with the following statements?

	1. I do not agree at all	2. I do not agree	3. Neutral	4. I agree	5. I completely agree
23.1 I believe that climate change is having an impact on the environment.					
23.2 I make significant efforts to recycle the things I use.					
23.3 I don't really pay attention to the amount of energy used in my household.					
23.4 The area is full of people.					
23.5 I am pleased with the number of open spaces around the housing estate					
23.6 The air in the area is very clean.					
23.7 There are many green areas in the area.					
23.8 There is not too much noise in the area.					
23.9 I have the opportunity to garden around my apartment.					

24. The following statements relate to your satisfaction with your living environment.

To what extent do you agree with the following statements?

	1. I do not agree at all	2. I do not agree	3. Neutral	4. I agree	5. I completely agree
24.1 I am satisfied with life here.					
24.2 I will recommend to my friends and relatives that they also live in this area.					
24.3 I do not intend to move elsewhere.					
24.4 I maintain my apartment properly.					
24.5 I take proper care of my surroundings.					

+++++

Section D: socio-economic information

25. How old are you?

25.1 18–24	25.2 25–35	25.3 36–45	25.4 46–55	25.5 56–65	25.6 66+

26. What is your gender?

26.1 Woman	
26.2 Man	
26.3 Other (please specify	

27. What is your highest level of education?

27.1 Primary school	
27.2 Intermediate (skilled worker)	
27.3 Secondary education (grammar school)	
27.4 Higher education (degree)	
27.5 Postgraduate	
27.6 Other (please specify)	

28. What is your marital status?

28.1 Single	
28.2 Married	
28.3 Cohabiting	
28.4 Widow	
28.5 Divorced/living separately	

29. Which ethnicity do you identify with?

29.1 Hungarian	
29.2 Roma	
29.3 Mixed	
29.4 Other (please specify	

30. Is this a female-headed household?

30.1 Yes	
30.2 No	

31. How many dependents do you have in this household?

31.1 Zero	31.2 One	31.3 Two	31.4 Three	31.5 More than three

32. How many people live in your household?

32.1 One	32.2 Two	32.3 Three	33.4 Four	33.5 More than four

33. What is your current occupation? (You can choose more than one)

33.1 Employee	
33.2 Contractor	
33.3 Pensioner	
33.4 Student	
33.5 Unemployed	
33.6 Irregular	
33.7 Other (please specify)	

34. Does the apartment cater to your illness or disability? (If not, please go to question 35)

34.1 Yes	
34.2 No	
88. No answer	

34. a) If the answer is yes, does the apartment cater to your illness or disability?

35.1 Yes	
35.2 No	

35. What is/are the main source/s of income in your household?

35.1 Salary/wage	
35.2 Revenue from entrepreneurial activity	
35.3 Old-age pension	
35.4 Unemployment grant	
35.5 Disability grant	
35.6 Family allowance	
35.7 Other (please specify)	

Thank you so much for completing this questionnaire!

Appendix H: Descriptive statistics

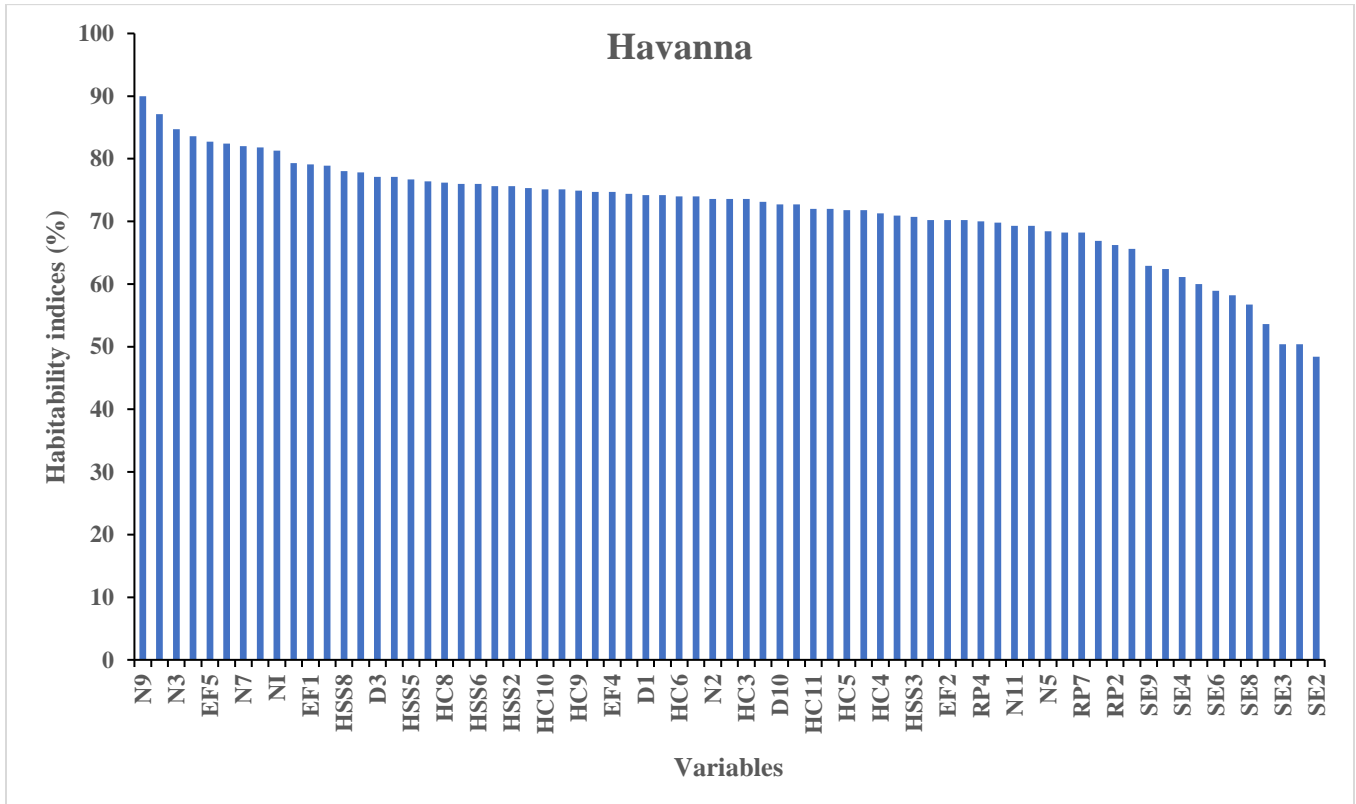
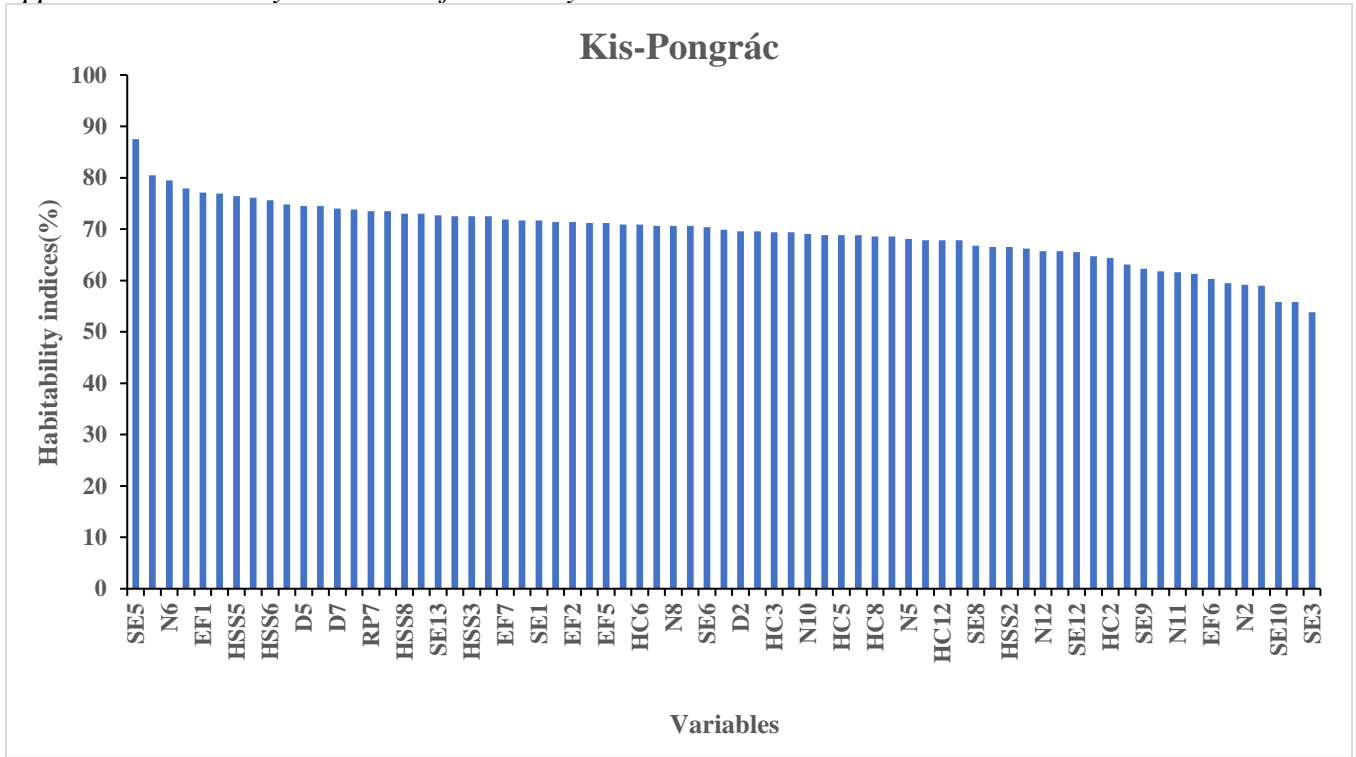
Variables	Urban regeneration				Residential satisfaction				
	Havanna (%)	Újpalota (%)	Csepel (%)	Kis-Pongrác %	Havanna (%)	Újpalota (%)	Csepel (%)	Kis-Pongrác (%)	
Overall likeness									
Yes	82.8	90.9	81.4	91.5	-	-	-	-	
No	17.2	9.1	18.6	8.5	-	-	-	-	
Previous place									
Elsewhere in the district	19	27.3	30.5	14.9	-	-	-	-	
In another district in Budapest	46.6	45.5	40.7	70.2	-	-	-	-	
In another Hungarian city	17.2	12.1	16.9	4.3	-	-	-	-	
In another Hungarian village	12.1	9.1	6.8	4.3	-	-	-	-	
In another country	5.2	6.1	1.7	6.4	-	-	-	-	
Other	0	0	3.4	0	-	-	-	-	
Factors									
Born here / since childhood	22.4	31.3	32.2	19.1	-	-	-	-	
Affordable rental price	29.3	9.4	25.4	21.3	-	-	-	-	
Recommended by family or friends	10.3	28.1	16.9	12.8	-	-	-	-	
I had no choice	19	15.6	16.9	19.1	-	-	-	-	
I inherited an apartment here	8.6	3.1	3.4	8.5	-	-	-	-	
Other	10.3	12.5	5.1	19.1	-	-	-	-	
Housing cost									
Less than 10%	0	0	6.8	19.1	1.1	2	8.9	14.3	
11-30%	36.2	75.8	42.4	34	32.2	64	41.1	44.2	
31-50%	41.14	18.2	27.1	27.7	45.6	26	25.6	28.6	

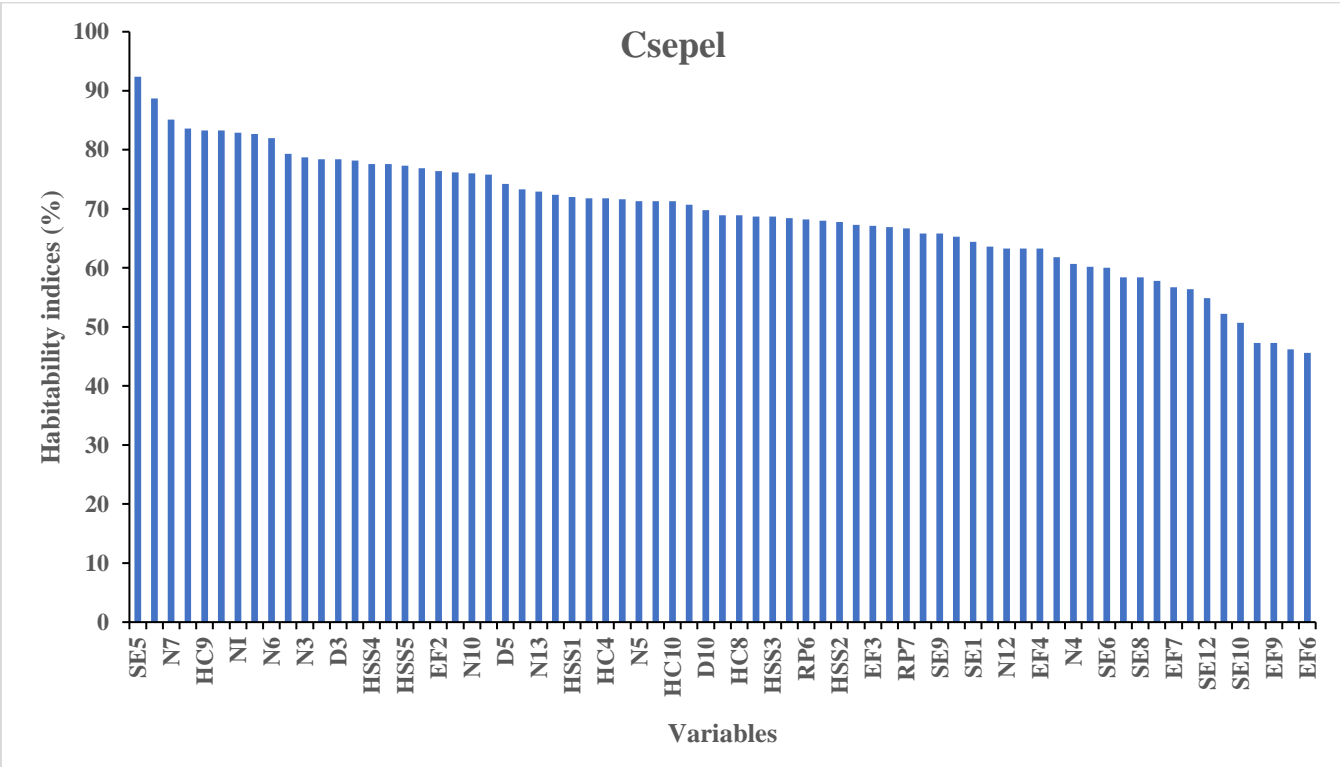
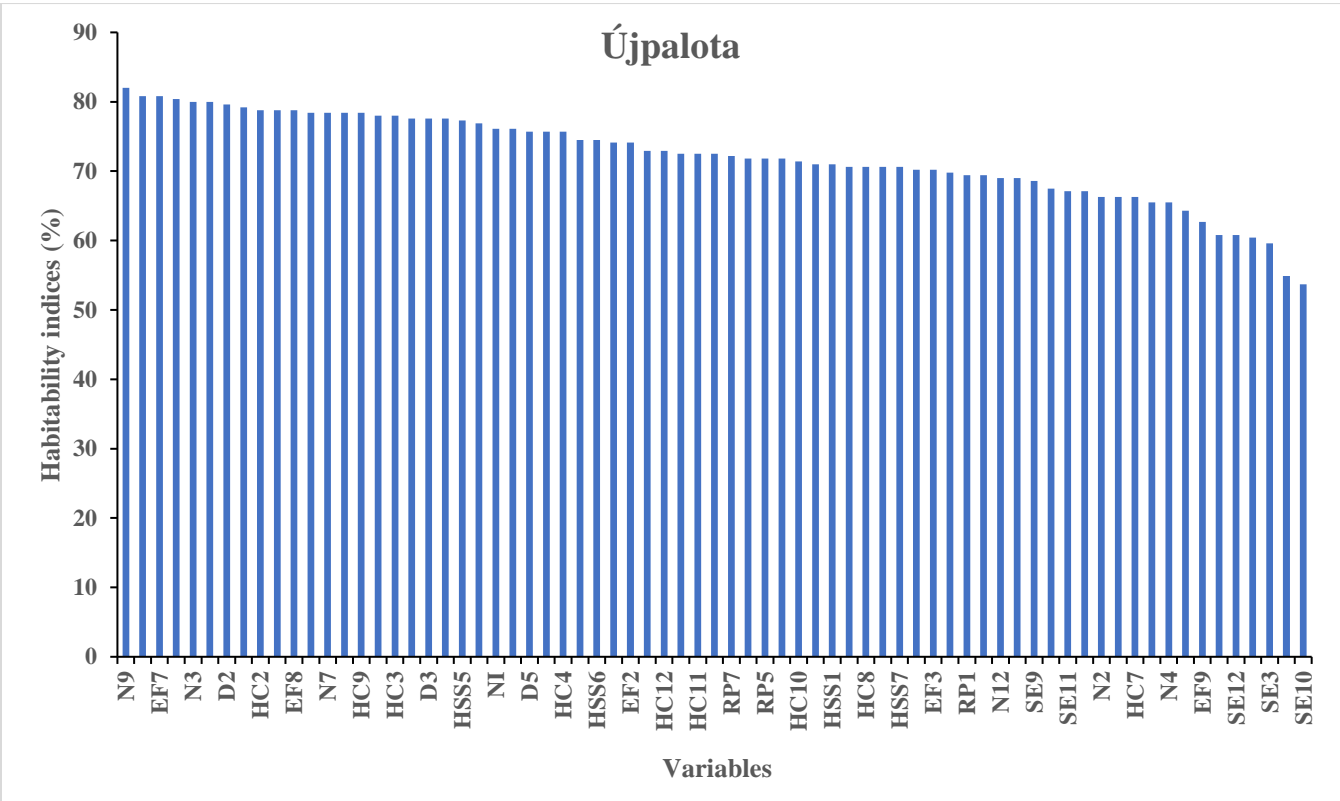
More than 50%	19	6.1	20.3	17		16.7	4	20	11.7	
I don't know	3.4	0	3.4	2.1		4.4	4	4.4	1.3	
Tenureship										
Own apartment	72.4	84.8	88.1	76.6		66.3	86	76.7	75.3	
Private rental property	10.3	15.2	10.2	12.8		16.9	14	22.2	11.7	
Municipally owned rental property	15.5	0	1.7	10.6		15.7	0	1.1	13	
Other	1.7	0	0	0		1.1	0	0	0	
Length of stay										
Less than 5 years	-	-	-	-		35.6	34	34.4	39	
6-10 years	19	21.2	11.9	36.2		12.2	14	7.8	22.1	
11-15 years	20.7	18.2	20.3	17		13.3	12	13.3	10.4	
16-20 years	15.5	3	11.9	10.6		10	2	7.8	6.5	
More than 20 years	44.8	57.6	55.9	36.2		28.9	38	36.7	22.1	
Age										
18-24	3.4	9.1	3.4	0		4.4	6	11.1	2.6	
25-35	6.9	0	10.2	10.6		18.9	8	21.1	26	
36-45	24.1	27.3	18.6	29.8		25.6	28	17.8	27.3	
46-55	13.8	15.2	13.6	23.4		14.4	18	12.2	18.2	
56-65	8.6	15.2	54.2	25.5		6.7	10	37.8	16.9	
66+	43.1	33.3	0	10.6		30	30	0	9.1	
Gender										
Woman	69	54.5	57.6	59.6		62.2	58	54.4	53.2	
Man	31	42.4	42.4	40.4		37.8	40	45.6	46.8	
Other	0	3	0	0		0	2	0	0	
Education level										
Primary school	8.6	9.1	3.4	6.4		5.6	6.1	2.2	3.9	
Intermediate	34.5	24.2	30.5	23.4		36	16.3	26.7	19.7	
Secondary	39.7	30.3	40.7	31.9		37.1	34.7	38.9	30.3	
Higher education	17.2	33.3	25.4	38.3		21.3	40.8	31.1	42.1	
Postgraduate	0	0	0			0	2	1.1	3.9	
Other	0	3	0	0		0	0	0	0	
Marital status										
Single	24.1	24.2	13.6	21.3		25.6	20	18.9	31.2	
Married	44.8	30.3	44.1	36.2		46.7	34	44.4	33.8	

Cohabiting	3.4	18.2	6.8	12.8		8.9	14	8.9	15.6	
Widow	19	21.2	27.1	12.8		12.2	22	22.2	9.1	
Divorced/living separately	8.6	6.1	8.5	17		6.7	10	5.6	10.4	
Ethnicity										
Hungarian	86.2	96.9	96.6	89.1		84.4	97.9	96.6	89.6	
Roma	6.9	0	1.7	0		11.1	0	1.1	1.3	
So-so	1.7	3.1	1.7	10.9		1.1	2.1	2.2	7.8	
Other	5.2	0		0		3.3	0	0	1.3	
Female-headed household										
Yes	34.5	24.2	33.9	44.7		25.6	32	28.9	41.6	
No	65.5	75.8	66.1	55.3		74.4	68	71.1	58.4	
Dependents										
Zero	63.8	60.6	64.4	66		61.1	54	63.3	68.8	
One	15.5	9.1	23.7	23.4		18.9	16	20	22.1	
Two	15.5	27.3	8.5	10.6		15.6	28	12.2	6.5	
Three	1.7	3	1.7	0		2.2	2	2.2	1.3	
More than three	3.4	0	1.7	0		2.2	0	2.2	1.3	
Household occupants										
One	24.1	36.4	30.5	31.9		22.2	30	26.7	36.4	
Two	41.4	21.2	39	38.3		40	24	36.7	36.4	
Three	17.2	15.2	19.6	21.3		22.2	20	21.1	19.5	
Four	13.8	21.2	8.5	8.5		12.2	20	11.1	6.5	
More than four	3.4	6.1	3.4	0		3.3	6	4.4	1.3	
Source of income										
Salary/wage	-	-	-	-		56.7	58	45.6	76.6	
Revenue from entrepreneurial activity	-	-	-	-		4.4	4	5.6	3.9	
Old-age pension	-	-	-	-		28.9	36	37.8	13	
Unemployment grant	-	-	-	-		3.3	2	6.7	0	
Disability grant	-	-	-	-		1.1	0	0	2.6	
Family allowance	-	-	-	-		5.6	0	3.3	3.9	
Other	-	-	-	-		0	0	1.1	0	

Disability										
Yes	31	21.2	32.2	21.7						
No	69	72.7	67.8	78.3						
Decline to answer	0	6.1	0	0						

Appendix I: Habitability index scores for all study sites





Appendix J: Parameter estimates results of MLR for Havana predictor variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
38	(Constant)	10.217	1.080		9.456	.000			
	S13	.544	.104	.113	5.258	.000	.766	.605	.041
	D1	.783	.090	.105	8.692	.000	.338	.782	.068
	S12	1.047	.094	.189	11.171	.000	.739	.850	.087
	D6	.749	.126	.094	5.923	.000	.532	.650	.046
	C6	.938	.112	.110	8.406	.000	.469	.772	.066
	E8	.295	.082	.044	3.623	.001	.338	.463	.028
	N3	1.106	.123	.106	9.000	.000	.037	.792	.070
	S4	.847	.083	.133	10.188	.000	.546	.827	.080
	C10	.683	.134	.080	5.102	.000	.491	.593	.040
	H3	.729	.111	.076	6.572	.000	.241	.688	.051
	C3	1.076	.104	.125	10.353	.000	.495	.831	.081
	R2	.713	.063	.118	11.381	.000	.205	.854	.089
	S8	1.086	.107	.201	10.164	.000	.758	.826	.080
	N10	.728	.093	.086	7.783	.000	.214	.747	.061
	H7	.467	.088	.065	5.306	.000	.512	.608	.042
	E5	.363	.128	.035	2.830	.007	.229	.378	.022
	N13	.617	.095	.077	6.478	.000	.435	.683	.051
	Woman	-.669	.147	-.048	-4.554	.000	.126	-.549	-.036
	S1	.530	.070	.093	7.521	.000	.508	.736	.059
	C11	.247	.122	.028	2.030	.048	.595	.281	.016
	Primary school	-1.657	.269	-.058	-6.164	.000	.142	-.665	-.048
	E9	.381	.069	.067	5.493	.000	.252	.621	.043
	E2	.229	.070	.035	3.291	.002	-.084	.429	.026
	N7	.452	.093	.054	4.859	.000	.134	.574	.038
	E6	.548	.083	.079	6.574	.000	.258	.688	.051
	C5	.290	.124	.033	2.331	.024	.540	.319	.018
	56-65 years	-.566	.244	-.022	-2.317	.025	.014	-.317	-.018
	N8	.319	.084	.042	3.823	.000	-.057	.483	.030
	Zero dependents	.491	.154	.036	3.192	.002	.143	.418	.025
E3	.153	.061	.026	2.491	.016	-.019	.338	.020	
H6	.766	.176	.063	4.357	.000	.312	.532	.034	
D10	.242	.092	.037	2.624	.012	.509	.354	.021	
Single	.631	.179	.041	3.522	.001	-.172	.453	.028	
N2	.280	.101	.034	2.787	.008	.244	.373	.022	
Age_D1	-.746	.350	-.024	-2.130	.038	-.039	-.294	-.017	
H2	.241	.118	.022	2.048	.046	.078	.284	.016	

Dependent variable = Havana's RSI

Adjusted R² = 0.995

Appendix K: Parameter estimates results of MLR for Csepel predictor variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
33	(Constant)	10.974	1.250		8.779	.000			
	N11	1.122	.166	.149	6.743	.000	.511	.680	.107
	S10	.507	.117	.098	4.321	.000	.462	.510	.068
	E8	.924	.097	.175	9.569	.000	.430	.796	.151
	D3	.767	.158	.112	4.868	.000	.465	.556	.077
	C8	1.020	.139	.159	7.346	.000	.400	.710	.116
	N3	.851	.118	.150	7.223	.000	.383	.704	.114
	S6	1.103	.130	.205	8.493	.000	.367	.759	.134
	H5	.535	.200	.071	2.677	.010	.183	.345	.042
	C5	.912	.195	.124	4.679	.000	.460	.541	.074
	C12	.953	.159	.127	5.980	.000	.354	.635	.095
	Homeownership	1.180	.306	.076	3.859	.000	.280	.468	.061
	H8	.838	.118	.140	7.110	.000	.222	.699	.112
	R7	.687	.122	.126	5.622	.000	.313	.611	.089
	S1	.926	.132	.151	6.998	.000	.476	.693	.111
	H6	1.026	.198	.136	5.177	.000	.304	.580	.082
	N6	.442	.156	.060	2.829	.007	.285	.362	.045
	R2	.751	.121	.151	6.193	.000	.188	.648	.098
	D6	.921	.169	.151	5.457	.000	.471	.600	.086
	N10	.687	.179	.088	3.839	.000	.129	.466	.061
C4	.616	.152	.099	4.048	.000	.349	.486	.064	
36-45	1.304	.309	.078	4.215	.000	.062	.501	.067	
E2	.377	.151	.051	2.490	.016	.315	.324	.039	
N13	.397	.135	.062	2.938	.005	.506	.374	.046	
C10	.484	.165	.072	2.930	.005	.485	.373	.046	
C11	-.374	.163	-.066	-2.288	.026	.424	-.300	-.036	
Dependent variable = Csepel's RSI Adjusted R ² = 0.981									

Appendix L: Parameter estimates results of MLR for Kis-Pongrác predictor variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
28	(Constant)	6.816	.916		7.444	.000			
	E7	1.114	.121	.141	9.221	.000	.720	.818	.089
	S13	1.277	.131	.164	9.717	.000	.463	.832	.093
	H8	1.012	.136	.111	7.422	.000	.410	.753	.071
	R2	.876	.104	.124	8.394	.000	.534	.792	.081
	H6	1.010	.185	.084	5.462	.000	.399	.644	.053
	C8	1.255	.130	.151	9.641	.000	.636	.830	.093
	C10	1.286	.110	.158	11.641	.000	.477	.874	.112
	N7	.665	.143	.062	4.640	.000	.301	.582	.045
	H1	.416	.174	.046	2.386	.022	.590	.346	.023
	S10	1.028	.115	.136	8.916	.000	.502	.809	.086
	D6	.885	.152	.093	5.822	.000	.590	.668	.056
	E2	.585	.106	.065	5.494	.000	.262	.647	.053
	N9	.834	.101	.104	8.294	.000	.138	.788	.080
	D4	.996	.149	.101	6.689	.000	.391	.718	.064
	R7	1.049	.149	.103	7.049	.000	.364	.736	.068
	N11	.711	.130	.079	5.473	.000	.418	.645	.053
	Private rental	1.909	.347	.067	5.505	.000	.165	.647	.053
	S6	.523	.118	.067	4.429	.000	.337	.564	.043
	Three occupants	-.839	.272	-.039	-3.081	.004	-.111	-.429	-.030
	D7	.529	.166	.054	3.184	.003	.513	.441	.031
	N2	.445	.134	.049	3.311	.002	.455	.455	.032
D5	.489	.144	.047	3.401	.001	.466	.465	.033	
H4	.731	.165	.074	4.422	.000	.628	.564	.043	
S1	.444	.140	.046	3.184	.003	.398	.441	.031	
R3	.255	.101	.036	2.517	.016	.434	.362	.024	
Intermediate education level	-.508	.245	-.024	-2.072	.044	-.055	-.305	-.020	

Dependent variable = Kis-Pongrác's RSI
Adjusted R² = 0.994

Appendix M: Parameter estimates results of MLR for Újpalota predictor variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
15	(Constant)	6.975	1.310		5.323	.000			
	D7	2.269	.273	.236	8.324	.000	.679	.835	.132
	C12	1.151	.206	.145	5.589	.000	.597	.714	.088
	C4	1.962	.216	.197	9.075	.000	.604	.856	.144
	H8	1.972	.203	.206	9.701	.000	.432	.871	.154
	S3	1.067	.164	.167	6.489	.000	.525	.764	.103
	H6	2.199	.289	.182	7.619	.000	.413	.812	.121
	S10	1.386	.188	.196	7.371	.000	.516	.803	.117
	C10	.959	.194	.118	4.943	.000	.499	.670	.078
	R6	.735	.171	.082	4.297	.000	.290	.617	.068
	E6	1.425	.213	.155	6.697	.000	.345	.774	.106
	N3	1.423	.223	.151	6.379	.000	.418	.759	.101
	R2	.670	.145	.093	4.627	.000	.249	.645	.073
	More than 50%	3.651	.857	.105	4.259	.000	-.230	.614	.067
S7	.482	.174	.075	2.777	.009	.614	.452	.044	
D4	.485	.205	.054	2.369	.024	.537	.397	.037	
Dependent variable = Újpalota's RSI Adjusted R2 = 0.989									