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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**

Theses of Ph.D. Dissertation

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1. Introduction

1.1 Research problem one and justification

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 privatisation led higher-status residents to leave 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 financialisation 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 urban neighbourhoods. Tackling these urban issues has required a new take on urban regeneration programmes (URPs) through incorporating social sustainability. Notably, URPs have fundamentally contributed towards new residential mobility processes in post-socialist cities like Budapest. 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. Furthermore, through the application of the concepts of social sustainability and socio-spatial justice, a new perspective in urban studies is opened.

1.2 Research problem two and justification

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 studies have centred around issues such as (1) lack of validated questionnaires, (2) scant information about psychometric variables, (3) lack of questionnaires that have integrated the interrelated three levels of the residential environment (dwelling, neighbourhood, and social), (4) easy 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 Havana neighbourhood (Budapest); however, this data was collected nearly 20 years ago. Thus, there exists 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 an improved 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. Noteworthy, although a few studies have investigated residential satisfaction in

other post-socialist cities (e.g. Milić and Zhou, 2018; Krūmiņš *et al.*, 2018), no known published questionnaire and conceptual model suitable for studying residential satisfaction in ex-post housing-led URPs in post-socialist cities exist. Therefore, this research attempts to fill this gap and further develop the conceptual model of residential satisfaction in relation to urban regeneration.

1.3 Aim and objectives

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

1.4 Research questions

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?

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 regards to the urban regeneration programmes in their neighbourhood?
- iv. Which factors influence the residents' residential satisfaction in the housing estates of Budapest?

2. Theoretical underpinnings

2.1 Theoretical framework

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 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”.

Due to the historic uneven development processes in post-socialist cities, socio-spatial injustices have been evident through time and space. From this, URPs 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 in which direction a development occurs (Zhou, 2017). An example of this division occurred in Fishtown (USA), 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 essential 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 racialised exclusion. In a study by Danley and Weaver (2018), they found that residents of Camden (NJ, USA) 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.

This research looks at URPs in Budapest that were developed to mitigate injustices at the local neighbourhood scale through the socio-spatial lens. 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.

2.2 Conceptual framework of residential satisfaction

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 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. Remarkably, residential satisfaction studies have been focused on various housing settings. Moreover, 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".

Several residential satisfaction models, such as Weidemann and Anderson (1985), reveal that 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). However, three main research gaps within residential satisfaction studies have been found in literature: social environment, environmental satisfaction, and resident participation features. Although several previous models have included some questions within the stated gaps, none of these studies have 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 difficult 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 1).

Figure 1. Holistic residential satisfaction conceptual model. Source: own

3. Methodology

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. 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. This research study adopted the critical realist approach to understand the experiences of residents’ and stakeholders in the different URPs. 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.

3.1 Case-study selection

Several study sites that provide rich information about the studied phenomena were purposely selected to meet the current research objectives. The current study required the researcher to conduct an extensive search of URPs in Hungary with these programmes that were then severely cut down to only include housing programmes as its main driving force. Programmes that did not have the social part of the regeneration process were also excluded. Furthermore, included case studies were argued to have been associated with “crime and grime” before the regeneration processes and generally found in the capital city’s peripheral areas. Thus, only four housing estates in Budapest were chosen for this study: Havanna, Újpalota, Kis-Pongrác and Csepel déli (Figure 2).

Figure 2. Location of study sites. Source: own

The methods undertaken are thus suitable for the set research objectives as stipulated below.

3.1 Theoretical objectives

An extensive literature review was conducted using several secondary sources such as journal articles, book chapters, and conference proceedings to achieve both of the theoretical objectives.

3.2 Methodological objectives

3.2.1 To investigate the role, perception, and participation of stakeholders in promoting community engagement in affordable housing projects

30 semi-structured interviews were conducted with stakeholders either involved in the urban regeneration projects or the overall housing sector in Hungary. All the interviews were open-ended, with the shortest being 43 minutes and the longest being over 3 hours. 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, as proposed by Lincoln and Guba (1985). 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, critical thematic analysis was used. A significant limitation of this stage was the language barrier.

3.2.2 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 5 years – with 5 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 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. Data were analysed using SPSS. Moreover, a pilot with approximately 12 Hungarians was conducted before the commencement of the data collection.

3.2.3 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 included five indicator 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 (MLR) on SPSS. Limitations for the questionnaires may have included: interpreter bias, social desirability bias and response bias.

4. Results

4.1 Theoretical research objectives and question

The first research question sought to understand the conceptual frameworks of urban regeneration, affordable housing, social sustainability, and residential satisfaction. Urban reconstruction, revitalisation, renewal, redevelopment, rehabilitation, and regeneration are recognised as different yet interrelated concepts. The conceptual understanding of urban regeneration was directed by Roberts’s (2000) work on tracking urban development whereby there exist seven key policy 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 economically 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, 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 was conducted. 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. And finally, the gaps in the research were also identified within the conceptual framework of residential satisfaction.

4.1.1 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.

4.1.2 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 different scholars' objective. The partiality towards specific determinants, as opposed to the negligence of others, points 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 URPs, the paper introduced a model that post-socialist cities can utilise. Finally, the gaps selected in the research were due to the innate need to incorporate social sustainability and socio-spatial justice in ensuring sustainable communities.

4.2 Methodological research objectives and questions

The methodological research questions were threefold. First, to understand stakeholders' role in promoting community participation in housing projects. Second, to comprehend the residents' perceptions and expectations in regards to the URPs in their neighbourhood. Third, to reveal 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 been gained to study both the social and real worlds. 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.

4.2.1 Research objectives three and four

The first methodological objective investigated stakeholders' role, perception, and participation in promoting community engagement in urban regeneration programmes. 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 revealed 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.

4.2.2 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 (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.

4.3 Practical research objective and question

4.3.1 Research objective six

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.

5. Research contributions and recommendations

5.1 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 encourage 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.

5.2 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 adopting the critical realism paradigm and an embedded multiple-case design, especially during fieldwork.

5.3 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 to meet as compared to social ones), seemingly forgetting that the social revitalisation of the community is also of paramount importance. Results from the URPs 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. 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. 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 if 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 as the current pandemic has shown that this issue is no longer only for low-income families.

6. Research 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 in residents' composition.
- Due to the scope of the research, survey responses were not cross-referenced with other data such as energy consumption.
- 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.

7. Future research prospects

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. Publications used in the dissertation (MTMT ID: 10065300)

Nzimande, N.P. 2022. Conceptual model for measuring and predicting residential satisfaction in housing-led urban regeneration in post-socialist cities. *Bulletin of the Serbian Geographical Society*. (*Accepted*).

Nzimande, N.P. 2022. COVID-19 and Homelessness: Response of South African Municipalities During First Wave of the Pandemic. *African Journal of Development Studies*, 12 (1). 7-23.

Nzimande, N.P. and Fabula, S., 2020. Socially sustainable urban renewal in emerging economies: A comparison of Magdolna Quarter, Budapest, Hungary and Albert Park, Durban, South Africa. *Hungarian Geographical Bulletin*, 69(4), 383-400.

Nzimande, N.P. Does size really matter in the social environment of high-rise and low-rise housing estates? A Budapest case study. (*Revised and resubmitted*).

Nzimande, N.P. Residential satisfaction in large housing estates of Budapest: is age really just a number? (*Under review*).

Nzimande, N.P., Royimani, L. and Lephoto, T. Evaluation of environmental & neighbourhood satisfaction across the socio-demographic gradients using in-situ and geospatial data. (*Under review*)

Nzimande, N.P. Urban regeneration: An application of critical realism. (*Under review*)

Nzimande, N.P. Stakeholders' perceptions of urban regeneration: The case of Kis-Pongrác in Budapest. (*Under review*).

Nzimande, N.P. Urban regeneration in Hungary: a mixed-method payoff. (*Under review*).

9. Other publications

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