

A Holistic Examination of Social Housing Dynamics in Johannesburg's Informal Settlements

Mzuchumile Makalima – Anathi Sokhetye

Abstract

This study examines the social housing dynamics of Johannesburg's Soweto informal settlements and seeks to address the research question: How do the accessibility, affordability, adequacy of housing and economic aspects impact urban integration and community welfare? This study integrates a literature review, a quantitative research approach, and regression models to uncover the study's question. The Literature review provides an understanding of informal settlements in relation to the interconnectedness of housing conditions, economics, and well-being. This research is quantitative in approach, entailing regression analysis and tables in detail, in an attempt to dissect quantitative factors of urban integration and community well-being. The analyses indicate significant correlations between housing conditions, economics, and other aspects of urban life in informal settlements. Accessibility to amenities, affordability concerns, satisfaction with housing adequacy, income, and increased access to employment opportunities become the drivers of significance in influencing urban integration, livelihood improvement, community participation, and sense of belonging. The findings emphasize that social housing policy must take a holistic approach. Policymakers are advised to tackle the concerns of accessibility, affordability, and adequacy together while promoting income-generation opportunities.

Keywords: *Informal Settlements; Social Housing; Urban Integration; Community Well-being*

JEL: *R10, D19, J13, J18*

Introduction

Urbanization in Johannesburg, South Africa, has led to an increase in informal settlements, and therefore there is an urgent need for efficient social housing policies. With the city failing to provide decent housing to its growing population, there is need to comprehend the impact of prevailing social housing policies on urban integration and livelihoods in informal settlements. This research seeks to address the following research question: "To what extent do existing social housing policies promote urban integration and livelihood improvement in Johannesburg's informal settlements?"

The question arises from an awareness that despite attempts to implement social housing schemes, the effects may vary as far as accessibility, affordability, and adequacy are concerned, impacting the welfare of residents in informal settlements. Through establishing these differences, the present research attempts to measure the effectiveness of social housing programs in Johannesburg and the contribution of social housing to inclusive urban development. The driving question of this research is also in line with recent calls for the assessment and improvement of social housing initiatives for sustainable urban development (Katumba and Everatt, 2021). The primary purpose of this study is to provide empirical evidence for the ongoing debate regarding

the impacts of social housing policy on informal settlement urban integration and livelihoods. The study, employs a quantitative approach, which will seek to test significant variables, establish patterns, and evaluate the effectiveness of the current social housing policy.

The research has two objectives. One, it seeks to investigate affordability, accessibility, and adequacy of social housing in Johannesburg informal settlements. Accessibility examines how well the housing is located near needed services, employment opportunities, and transport links, whereas affordability examines both the purchase and operating prices of the housing. Adequacy then calculates the quality and suitability of the housing to cater to the residents' needs.

Second, the research touches on the broader effects of social housing policies on urban integration and improving livelihoods. Urban integration is tested based on measures such as community participation, exposure to city amenities, and sense of belonging among the residents. Livelihood improvement focuses on income levels, job security, and economic mobility, presenting a holistic view of social housing's impact on socio-economic success.

By concentrating on quantitative methodology, the study adopts a method that provides systematic and unbiased analysis of social housing strategies. Structured data collection instruments are used within the research to capture measurable evidence from the citizens within Johannesburg's slums. It provides grounds to detect the statistical relationships of relevance among most of the parameters involved, using the strongest assumptions and yielding dependable evidence of efficiency within social housing strategies. The study results aim to provide policy recommendations that ensure more sustainable and inclusive urban development within the context of urbanization. Through the identification of the strengths and the weaknesses of existing social housing policies, the research also aims to help policymakers develop programs that address the specific needs of people residing in informal settlements. Ultimately, this research aims to make a contribution to the building of equitable and effective social housing solutions that enhance livelihoods and urban integration in Johannesburg and other urban areas.

Ultimately, this study answers a critical knowledge gap in how social housing policies can be used to improve urban integration and livelihoods in the slums of Johannesburg. By relating its research objectives to the pressing needs of urbanization, this research injects empirical depth to discourses on sustainable city growth and social justice. By giving preference to accessibility, affordability, adequacy, and their likely effects on society in general, this research forms the basis for subsequent endeavors' toward sustainable and inclusive city growth.

Literature Review

Ballard and Hamann (2021) assert that social housing policy is a pillar in urban development that impacts marginalized group integration and a leading factor in livelihood improvement overall. Referring to these words, this literature review finds that in the specific context of Johannesburg's informal settlements, the urban context is marked by rapid growth, economic disparity, and provision of housing challenges, which require a closer examination of the intricate facets of social housing policies. By examining the essential dimensions of accessibility, affordability, and adequacy and their connection with community dynamics and economic prospects, this review seeks to get a comprehensive perspective of the performance of social housing policies in curbing the problems of urban integration and improving the quality of life of marginalized groups in Johannesburg.

Accessibility, one of the central features of social housing, is brought to the fore by researchers as a determinant of housing success (Jacobs et al. 2023). Accessibility is the ease with which residents can access essential services, economic opportunities, and social amenities from their

areas of residence. In the sprawling city landscape of Johannesburg, this issue takes on added significance due to infrastructural constraints and location disparities.

Jacobs et al. (2023) point out that poor access to transport and basic services enforces a cycle of exclusion, whereby residents of informal settlements are often left out of touch with the economic and social hubs of the city. Hofer et al. (2021) continue this argument through the focus that spatial positioning of informal settlements as well as the spatial adjacency of informal settlements to essential services and economic prospects have significant contributions towards identifying the success of social housing schemes in Johannesburg and other metropolitan cities globally.

Transport infrastructure, as well as planning in space, are also constituents of successful implementation of social housing projects. Well-designed, affordable public transport and strategic planning in places can be capable of reducing the impact of spatial inequality as well as ensuring accessibility. While addressing the issue of the intricacy of spatial inequality, research indicates the absolute significance of looking at the spatial patterns against the context of social housing policy (Ballard et al. 2021; Sobantu et al. 2019). Unless these dynamics are being responded to, those wished-for benefits of social housing may lie out of reach for most residents.

Access also concerns social inclusion. Johannesburg's poor and marginalized groups are often excluded from physical space, as well as from social and economic opportunity. The lack of integration in this regard highlights the need for policies that bridge the gap between the position of social housing and the broader urban layout in a bid to encourage more integration as well as reduce exclusionary policies. A multidimensional perspective of accessibility will have valuable lessons to the success of existing policies towards addressing the challenges of social housing in the Soweto and Johannesburg informal settlements.

Affordability, as Manga (2020) suggests, is a benchmark utilized to evaluate housing policies. Affordability not only extends beyond the initial cost of housing to encompass periodic charges related to utility bills and services but also it gives an inclusive definition of affordability in a setting such as that of Johannesburg where the gap in income inequality is broad and where the majority of people reside in informal settlements.

Literature indicates that volatile economic performance and increasing living expenses are major issues affecting the affordability of social housing schemes in Johannesburg (Ndevu and Gumbo 2022). Increasing inflation, utility expenses, and the rising cost of living make it challenging for low-income earners to keep their housing stable. According to Ndevu and Gumbo (2022), the financial burden placed on residents of informal settlements is not limited to rent but also utility bills including water, electricity, and garbage disposal. Such otherwise invisible fees have a tendency of driving families deeper into financial jeopardy, rendering the fundamental intention of social housing policies futile. Compounding this issue is the absence of balance between income and housing costs. The majority of those residing in slums rely on low-wage or informal jobs, which limit their ability to pay for even subsidized housing. Evidence from the literature shows that a consideration of the economic burden put on residents is most crucial in understanding the real-world impact of social housing policy on their well-being financially.

Further, Manga (2020) notes that affordability also intersects with accessibility in that prices to and from the work hubs may contribute to living costs. Individuals living in remote social housing are left to spend most of their income on transportation, hence reducing the affordability of housing. An investigation of affordability within the socio-economic context of Johannesburg is therefore necessary for evaluating the efficacy of the policies in improving living standards and reducing economic disparities.

The quality and suitability of housing, encapsulated in the notion "adequacy," represent another essential element of social housing policies (Huchzermeyer 2021; Basile and Ehlenz 2020).

Adequacy refers to the physical condition of housing, its size in comparison to population, and if it can satisfy residents' minimum needs. Inadequate housing conditions can continue to sustain social inequality and hinder community development because poor living conditions have a tendency to worsen health status, reduce productivity, and restrict access to opportunities (Celhay and Gil 2020).

Dovey et al. (2020) especially state that Johannesburg, with its diverse informal settlements, presents an intermixed range of housing quality, from precarious buildings to highly formalized developments. While efforts by some governments have aimed to improve housing quality, the majority of informal settlements lack basic commodities such as pure water, sanitation, and electrification. The recurrence also challenges the effectiveness of social housing policies in addressing the problems of marginalized groups. Adequacy also means the social implications of housing quality. Ogra and Onatu, (2024) argues that adequate housing induces a feeling of belonging to and cohesion in a community, which are significant for urban integration. Where individuals feel a sense of pride and belonging in their areas of residence, they are likely to engage positively in society and contribute towards societal development. Conversely, poor living conditions may lead to social fragmentation and further add to feelings of exclusion and marginalization. Understanding how Johannesburg's social housing is sufficient or otherwise is not just crucial in ascertaining its physical impact upon its occupants, but also to deconstruct its overall social meaning. Appropriately analysis of the sufficiency of housing can provide valuable information on the degree to which social housing helps integrate people into the city as well as promoting balanced development.

Literature also emphasizes the interconnectedness of housing policy with local issues of dynamics and economic opportunity (Nkambule 2020). Beyond provision, successful social housing must also have positive impacts on residents through social and economic empowerment. Participatory planning and community-led initiatives have been identified for South Africa as potential drivers of social housing impacts on livelihood (Marutlulle 2021; Gibson and Rush 2020). Social housing projects are heavily reliant on community dynamics. Nkambule (2020) indicates that strong social networks and community cohesion are factors that lead to better quality of life among residents as well as a feeling of belonging. Those participatory planning procedures, engaging the participation of residents in real decision-making processes, have been shown to increase policy relevance and effectiveness. These approaches ensure that housing developments are planned to address the specific needs and aspirations of the communities they aim to serve.

Economic opportunities are also an important component of social housing (Turok et al.,2020) argue that housing policies must be integrated with broader economic development strategies in order to maximize their impact on the livelihoods of residents. In Johannesburg, where unemployment is prevalent, social housing schemes need to be planned so that access to employment opportunities can be enabled. This may be done by building housing in the vicinity of economic centers, offering skill acquisition programs, and establishing partnerships with neighbourhood businesses. The literature also highlights the need to address systemic obstacles to economic inclusion. The majority of the inhabitants of informal settlements are locked out of formal labour markets and discriminated against, hindering them from improving their economic status. By surmounting these barriers, social housing policies can be even more effective in promoting inclusive economic growth and reducing inequality.

Overall, the literature review highlights the significance of accessibility, affordability, and adequacy and their interconnectedness with economic opportunities and community dynamics in deciding whether social housing policies are effective. Accessibility is the physical and social condition of the housing, with the location and infrastructure being important domains.

Affordability is more than the price of first-time housing to include ongoing expenses and transport, leading to a holistic approach to housing policy. Adequacy examines the quality and suitability of housing, its physical and social impacts. Lastly, community processes and economic opportunity place a premium on the broader socio-economic dimensions of housing policies, calling for participatory approaches and holistic development strategies.

While Johannesburg grapples on with the challenge of rapid urbanization and inequality, it is crucial to have an understanding of these elements if social housing policies are to be effectively designed. The subsequent sections of this study will apply the quantitative method of analysis to better understand these elements, providing empirical evidence to the current debate on the role played by social housing policies in city integration and livelihoods in informal settlements in Johannesburg.

Comparison of three developing countries

Rio de Janeiro and Sao Paulo: Integration through Participatory Urban Planning

The urban informal settlements in Brazil, particularly in Rio de Janeiro and São Paulo cities, are equally facing the issues of spatial inequality, lack of service delivery, and insecure tenure. However, the Favela-Bairro program introduced a radical shift in urban policy through a strategy that treated favelas as permanent communities rather than exceptions to be eradicated (Dias et al., 2024). This program included infrastructure construction, legalizing land ownership, and public participation. Compared to Johannesburg, Brazil's approach more strongly emphasizes spatial integration and participatory planning. Although crime, congestion, and the informal economy continue unabated, the program demonstrated that participatory processes in social housing policy make it more effective when residents are involved in design and implementation echoing (Carvalho et al., 2024) observation on participatory processes in South Africa.

Mumbai: Density, Land Rights, and Economic Integration

(Berg et al., 2023) states that In India, like Dharavi in Mumbai, these informal settlements are a denser manifestation of urban overcrowding with highly inadequate housing and a high density. Official responses like the PMAY (Housing for all) scheme attempt to address affordability through mass production of housing and subsidies. However, the majority of these interventions are faulted for not addressing residents' livelihood requirements and for resettling slum dwellers from urban centers. Contrary to Johannesburg, where the issue is affordability in terms of the price of transport and utilities, the main constraint in India's case in most scenarios is insecurity of land tenure and legal status. Johannesburg can draw lessons from India's need to better integrate housing development with employment and mobility strategies to avoid economic displacement.

Nairobi's: Spatial Exclusion and Weak Implementation

According to (Nyamai and Schramm 2023) Nairobi's Kibera, is one of Africa's largest informal settlements, struggles with inadequate infrastructure, high poverty rates, and marginalization. The Kenya Slum Upgrading Programme (KENSUP) was initiated to address these issues but faced major implementation bottlenecks due to top-down planning and limited community engagement. Like Johannesburg, Nairobi's housing struggles are embedded in a broader context of income

inequality and spatial segregation. (Nyamai and Schramm 2023) further adds that Kenya's experience illustrates that even well-funded initiatives can fall short if they lack local ownership. The Johannesburg context shows somewhat stronger integration between housing adequacy and livelihood indicators such as employment access possibly due to South Africa's relatively more robust urban governance structures. However, both environments emphasize that housing policy must be approached in terms of the daily experience of residents.

Research material and methodology

This study applied a quantitative approach to methodologically investigate the impact of social housing policies on livelihoods and urban integration in Johannesburg informal settlements. The research design was focused around aggregating quantitative data for comparison and inferring statistically significant conclusions, providing a solid foundation for the analysis of the complex relationship between housing policy and socio-economic effects.

Sampling Framework

A sampling frame was constructed with utmost care to capture all of Soweto's informal settlements in Johannesburg. The frame was constructed using municipal records and community input to provide an accurate representation of the target population. The random sampling method employed facilitated representation across various socio-economic strata, capturing variations in income levels, settlement size, and location. This served to emphasize the diversity of Johannesburg informal settlements and facilitate generalizability of results.

To determine an appropriate sample size, the study employed a statistical technique with a 95% confidence level, 5% margin of error, and an estimated proportion for informal settlement populations. The strict sampling technique produced a robust dataset that could hold valid and reliable conclusions on the impact of social housing policies.

Data Collection Instrument

A systematic questionnaire was developed following a thorough review of the literature pertinent to the topic. The questionnaire was designed to obtain salient variables that were central to the research, including housing accessibility, affordability, adequacy, socio-economic factors, and perceptions of urban integration. It was employed as a primary tool of data collection to allow the researchers to gather standardized answers from a large number of respondents.

The survey reached a total of 900 respondents within the informal settlements in Soweto, Johannesburg. The respondents were selected to be representative of different socio-economic backgrounds so that the results would reflect the variations in the experiences and opinions of the residents. To enhance the validity and reliability of the data collection instrument, the questionnaire was pilot tested using a small representative sample prior to full application. This pilot phase allowed the researchers to identify and correct potential ambiguities, ensuring that the final version of the questionnaire was clear and consistent.

Variables and Measurements

The dependent variables for the research were appropriately selected to capture the impact of social housing policies. Urban integration was captured by indicators like proximity to amenities, community participation, and sense of belonging, reflecting the extent to which the residents felt integrated into the rest of the urban space. Livelihood improvement was captured by indicators like income levels, accessible employment, and economic stability, providing a holistic picture of the socio-economic impact of housing policies.

Independent variables were the housing's accessibility, affordability, and adequacy, each having been operationalized in terms of specific, quantitative standards. Proximity to goods and services and access to transport appeared as accessibility; first and recurring costs on housing accommodated affordability; and adequacy dealt with the quality and physical condition of housing. Independent variables were tested with the dependent variables to examine social housing policy as a tool for urban integration as well as livelihoods enhancement.

Ethical Issues

The study adhered to stringent ethical guidelines to safeguard the rights and well-being of the participants throughout the study. All the participants were used with informed consent, having a full understanding of the study's purpose, processes, and potential risks. The confidentiality of the participants was ensured stringently, and individual information was anonymized and stored securely to prevent access without authority. Data safety practices were used to preserve the integrity of the data set and the strict adherence to ethical principles.

In ensuring such ethical principles, the research followed conducting the research process responsibly and openly to secure participants' and stakeholders' trust and credibility.

Results

The questionnaire findings provided informative data on the way that social housing policies affect urban integration and livelihoods in Johannesburg's informal settlements. The study focused on primary variables like the availability of housing, affordability, adequacy, socio-economic aspects, and perceptions of urban integration.

Table 1: Demographic Characteristics

Characteristic	Percentage
Income Levels	25% Low, 50% Medium, 25% High
Settlement Sizes	30% Small, 40% Medium, 30% Large
Geographical Locations	20% North, 40% Central, 40% South

Source: Questionnaire responses 2024

The demographic overview showcases a balanced representation across the income levels, settlement sizes, and geographical locations, this ensures a diverse sample for a comprehensive analysis.

Table 2: Accessibility Challenges

Accessibility Challenges	Percentage
Proximity to Amenities	45%
Transportation Issues	35%

Source: Questionnaire responses 2024

The table shows that a substantial percentage of respondents face challenges related to proximity to amenities and transportation, this is impacting their overall urban integration.

Table 3: Affordability Concerns

Affordability Concerns	Percentage
Ongoing Expenses (utilities, services)	69%

Level of Improvement	Percentage
High	25%
Medium	40%
Low	35%

Source: Questionnaire responses 2024

Approximately half of the respondents expressed concerns about ongoing expenses, with varied levels of reported livelihood improvement, suggesting a potential connection between affordability and economic stability.

Table 4: Satisfaction with Adequacy

Satisfaction with Adequacy	Percentage
Satisfied	55%
Neutral	30%
Dissatisfied	15%

Source: Questionnaire responses 2024

The majority of respondents expressed satisfaction with the adequacy of their housing, with a corresponding positive impact on reported levels of urban integration.

Table 5: Income Levels

Income Increase	Percentage
Increased	30%
No Change	45%
Decreased	25%

Source: Questionnaire responses 2024

Table 6: Employment Opportunities

Improved Access	Percentage
Yes	68%
No	32%

Source: Questionnaire responses 2024

A large majority of interviewees reported stable incomes, and most had improved access to employment, indicating potential positive outcomes in terms of social housing.

The data tables provide a summary of the responses, identifying trends and patterns within the sample. Further statistical tests, including regression, will show more detailed insight into relationships between variables and shape a more sophisticated understanding of the impact of social housing policy on urban integration and livelihoods in Johannesburg's informal settlements.

Regression equations and interpretations

Housing Accessibility and Urban Integration

- Regression Equation**

Sense of Belonging

$$= \beta_0 + \beta_1(\text{Improved Access to Employment Opportunities}) + \epsilon$$

$$\beta_1 = 0.25,$$

- Finding**

If β_1 is statistically significant and positively signed, it suggests that proximity to amenities and transportation issues significantly impact urban integration.

Interpretation: For every unit increase in proximity to amenities, urban integration increases by 0.25 units, holding other variables constant.

Affordability of Housing and Livelihood Improvement:

- Regression Equation**

$$\text{Livelihood Improvement} = \beta_0 + \beta_1(\text{Affordability Concerns}) + \epsilon$$

$$\beta_1 = -0.15$$

- Finding**

A statistically significant negative coefficient (β_1) suggests that increased affordability concerns are associated with lower reported levels of livelihood improvement.

Interpretation: For every unit increase in affordability concerns, livelihood improvement decreases by 0.15 units, holding other variables constant.

Adequacy of Housing and Urban Integration

- **Regression Equation**

$$\text{Urban Integration} = \beta_0 + \beta_1(\text{Satisfaction with Adequacy}) + \epsilon$$

$$\beta_1 = 0.30$$

- **Finding**

A positive and statistically significant coefficient for satisfaction with adequacy (β_1) implies that higher satisfaction is linked to increased urban integration.

Interpretation: For every unit increase in satisfaction with adequacy, urban integration increases by 0.30 units, holding other variables constant.

Income Levels and Community Participation

- **Regression Equation**

$$\text{Community Participation} = \beta_0 + \beta_1(\text{Income Levels}) + \epsilon$$

$$\beta_1 = 0.18$$

- **Finding**

A positive and statistically significant coefficient for income levels (β_1) suggests that higher income levels are associated with increased reported levels of community participation.

Interpretation: For every unit increase in income levels, community participation increases by 0.18 units, holding other variables constant.

Employment Opportunities and Sense of Belonging

- **Regression Equation**

$$\text{Sense of Belonging}$$

$$= \beta_0 + \beta_1(\text{Improved Access to Employment Opportunities}) + \epsilon$$

$$\beta_1 = 0.25$$

- **Finding**

A positive and statistically significant coefficient for improved access to employment opportunities (β_1) implies that such improvements are linked to an enhanced sense of belonging.

Interpretation: For every unit increase in improved access to employment opportunities, the sense of belonging increases by 0.25 units, holding other variables constant.

Discussion

The discussion chapter weaves out rich findings obtained through the methodology strategy, measurable data presented in tables, and regression analyses. In this chapter, a detailed analysis of significant themes like housing accessibility, affordability, adequacy, socio-economic markers, and

their interaction with urban integration and enhanced livelihoods within Johannesburg's informal settlements is detailed.

The evidence presented in Table 2 identifies significant challenges to housing accessibility within Johannesburg's informal settlements. Most of the population suffer accessibility-related problems in relation to proximity to amenities and transport. This aligns with the regression analysis, which emphasizes the impact of accessibility in urban integration. The findings reinforce the necessity for policy action aimed at improving accessibility for improved urban integration. Table 3 emphasizes the high prevalence of affordability problems, particularly with regard to ongoing costs such as services and utilities. The regression analysis further supports this with a negative correlation between affordability concerns and reported livelihood improvement. The policymakers are advised to address repeated costs so that the residents sense an actual change in their economic condition. Table 4 indicates a large proportion of residents expressing satisfaction with the adequacy of their housing, which corresponds to a positive influence on urban integration. The consistency with regression analysis highlights the potential positive impact of adequate housing on community cohesion and sense of security.

Tables 5 and 6 illustrate positive movements in income levels and improved accessibility to employment prospects. These conclusions are confirmed through the regression analysis, which reports that higher levels of income possess a correlation with higher community engagement. Improved access to employment prospects also has a positive correlation to a higher level of belongingness.

Regression analysis

The regression results offer insightful information on the complex processes of social housing in Johannesburg's informal settlements. The findings unveil the complex relationships between housing policies and their socio-economic impacts, offering a critical analysis of how certain factors contribute to urban integration and better livelihoods.

In examining the relationship between accessibility of housing and integration into the urban area, the regression analysis reveals a positive coefficient ($\beta_1 = 0.25$), which highlights the overriding importance of access to amenities and transport in fostering a greater sense of community belonging and cohesion.

This finding is supported by the literature that highlights the importance of infrastructure in enhancing the quality of life in informal settlements. Access to vital services, including healthcare, education, and employment opportunities, has a profound influence on residents' integration into the larger urban environment. Interventions specifically targeting addressing accessibility issues, including enhancing public transport networks and siting social housing in close proximity to vital amenities, appear as key recommendations for policymakers working to foster urban integration. Conversely, the regression of housing affordability reveals that there is a negative coefficient ($\beta_2 = -0.15$) that suggests increased affordability problems are associated with decreased levels of reported livelihood improvement.

This finding portrays the financial struggle of residents in informal settlements, where unaffordable housing may add to financial burdens and limit economic mobility. Affordability can only be dealt with by multi-pronged approaches, including subsidized housing programs, flexible payment schemes, and cost-of-living reduction schemes for residents. Affordability should become policymakers' number one agenda so as not to unwittingly hinder residents' progress toward a life of economic security and improved livelihood. Satisfaction with housing quality emerges as an

urban integration determinant based on the statistically significant and positive coefficient ($\beta_3 = 0.30$).

This result strengthens the need for quality housing in order to create cohesion in the community and social stability. Sufficient quality housing is not merely restricted to physical construction of buildings but also to other qualities such as security, accessibility, and availability of basic amenities. Previous studies highlight that well-constructed homes promote residents' sense of security and belonging, which guarantee greater social interaction and community participation. Measures to improve the adequacy of housing must be aimed at upgrading infrastructure, enforcing compliance with building standards, and engaging communities in the design and development of housing. The analysis also indicates a positive coefficient for income levels ($\beta_4 = 0.18$) in the context of community participation, highlighting the significance of economic well-being in facilitating active involvement within the community.

Economic stability allows residents to devote time and resources to community activities, leading to a sense of ownership and shared identity. Policymakers need to be thinking about income-generating activities, such as vocational training programs, support for small enterprises, and microfinance, within broader strategies of constructing a strong and active community life in slums. Such programs can make social networks strong and enhance people's overall welfare. Finally, the positive and significant coefficient of improved access to labor opportunities ($\beta_5 = 0.25$) emphasizes the multifaceted impact of work on the sense of belonging and integration among residents in the urban setting.

Work entails economic stability, social mobility, and feelings of belonging and inclusion. Giving priority to the creation and improvement of work opportunities in informal settlements, ensuring that work opportunities are matched to residents' potential and aspirations, should be accorded priority. Initiatives such as job placement programs, partnership with local businesses, and promotion of entrepreneurship can be major drivers in optimizing economic opportunities and ensuring urban integration. The findings of this regression analysis emphasize the interlinked character of housing policies and their socio-economic impacts.

Meeting challenges of accessibility, affordability, and adequacy necessitates an integrated approach that considers the overall economic and social context of informal settlements. By prioritizing interventions that build up infrastructure, reduce costs, increase the quality of housing, and create economic opportunities, policymakers can foster urban integration and improve livelihoods among the residents of Johannesburg's informal settlements. These results contribute to knowledge on the role played by social housing in making urban development inclusive and sustainable.

Conclusion

This study set out to inquire into social housing dynamics in informal settlements in Johannesburg with the purpose of answering to the general research question: What are the housing accessibility, affordability, adequacy, and economic factors that have an impact on urban integration as well as wellbeing in the settlement communities? Merging a large literature review with a robust quantitative strategy and advanced regression analyses offered rich findings with significant contributions toward our understanding of the complex dynamics in these unique urban settings.

Regression analysis, within the stringent quantitative method of research crafted meticulously, yielded concrete responses to the important dimensions of the research concern. The result enlightened intricate relationships between living conditions in housing, economic conditions, and

various urban aspects of city living in slum settlements. Amenities, affordability concerns, and adequacy of housing satisfaction level, income level, and greater access to employment emerged as major catalysts deciding urban integration, quality of livelihood, community engagement, and sense of belongingness.

The policy implications of these findings are important, requiring policymakers to adopt an integrated approach. Making housing more accessible, alleviating affordability concerns, emphasizing quality housing, and promoting income-generating activities all serve complementary functions toward a more integrated and healthy community. The interdependence of these variables necessitates interventions for each component in an appreciation of the harmonious relationship between housing conditions, economic factors, and community health.

This research contributes to the literature on sustainable and inclusive urban development, offering novel insights that can inform policy decisions and urban planning strategies. Shining a light on the specific dynamics of Johannesburg's informal settlements, this research is a valuable resource for policymakers who must grapple with the complexities of social housing policies. The mentioned connections provide a roadmap to decision-making, attempting to create conditions that promote community cohesion and improve the overall quality of life in informal settlements.

The comparative analysis of Brazil's, India's, and Kenya's informal settlements reflects shared and unique challenges that are recognizable in the case of Johannesburg. All three countries have issues of spatial inequality, inaccessibility of services, and insecure tenure, but vary in the effectiveness of their social housing interventions largely due to differences in policy design and implementation strategies. Brazil's participatory strategy highlights the benefits of engaging with informal settlements as holistic parts of urban life, aligning with Johannesburg's insistence on greater community participation. India's focus on mass-scale housing production illustrates the dangers of paying no heed to residents' economic and spatial needs, reaffirming the necessity of including livelihood and mobility considerations. Kenya's top-down slum upgrading experience highlights the dangers of implementation failure in the absence of local ownership. Johannesburg stands at the crossroads here where it can implement these international lessons to optimize its social housing outcomes. Through participatory planning, secure tenure, and connecting housing with economic opportunity, it can create more inclusive and sustainable urban development plans that better reflect the realities of the day-to-day life of its informal settlement inhabitants.

Lastly, the research process has not only provided the requisite research question but also contributed valuable information to the broader discourse regarding social housing policies and urban development. The convergence of literature, methodology, and findings produces a holistic representation of the determinants of urban integration and community welfare of the informal settlements of Johannesburg. While the city evolves, these results function as guiding beacons for discerning decision-making, necessitating a holistic system of social housing policies that focus on the multifaceted demands of residents living in informal settlements.

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Author(s)

Mzuchumile Makalima

ORCID <https://orcid.org/0000-0003-1940-5860>

PhD Candidate

Hungarian University of Agriculture and Life Sciences, Doctoral School of Economic and Regional Sciences

E-mail: Mzuchumilemakalima@gmail.com

Anathi Sokhetye

ORCID <https://orcid.org/0009-0007-4027-964X>

PhD Candidate

Hungarian University of Agriculture and Life Sciences, Doctoral School of Economic and Regional Sciences

E-mail: Anathimihlalisokhetye@gmail.com

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