



SPATIAL PATTERNS OF POVERTY AND SOCIAL SEGREGATION IN METROPOLITAN AREAS

Ahmad Fauzi

Universitas Islam Negeri Alauddin Makassar

correspondence: ahmadfauzi157@gmail.com

Abstract

This article develops a conceptual discussion of spatial patterns of urban poverty and social segregation in metropolitan areas. It argues that poverty often becomes geographically concentrated in particular neighbourhoods, shaped by land markets, housing policies, and long-term urban development decisions. Such concentrations are closely related to patterns of social separation between low-income groups and more affluent residents, as daily interactions, institutional access, and social networks tend to remain within distinct territories. The paper explores how residential clustering of low-income households affects access to public services, labour markets, information, and symbolic recognition within the city. It further considers how large-scale redevelopment and infrastructure projects may displace poor residents and reproduce new pockets of deprivation at the urban fringe. By treating the metropolis as a spatial structure that organises unequal life chances, the article highlights the need for planning perspectives that explicitly address questions of spatial justice. The conceptual framework offered here is intended as a basis for subsequent empirical work and for reflection among planners and policy makers concerned with urban poverty and segregation.

Keywords: spatial poverty pattern, social segregation, metropolitan area, urban inequality, residential clustering, neighbourhood, spatial justice.

Introduction

Metropolitan areas grow as major hubs of economic, social, and cultural activities, with dense transportation networks, diverse public service centres, and high population diversity. On the surface, this image presents a sense of progress with office buildings, commercial areas, and modern housing scattered across various points. However, beneath the surface, urban spaces contain a stark diversity in quality of life. Within a relatively short travel distance, one can move from areas with complete infrastructure and organized environments to densely populated settlements with limited facilities and fragile housing conditions. Such contrasting views indicate that poverty and well-being are not evenly distributed in metropolitan spaces, but rather tend to form specific patterns. These patterns are reflected in the concentration of low-income groups in certain areas, while economically empowered groups gather in other areas with very different spatial characteristics (Surya et al., 2020). The inequalities that emerge in urban space also indicate that development processes often bring different impacts to different social groups (Mardikaningsih, 2021).

The daily experiences of metropolitan residents reveal that residential addresses often serve as unofficial markers of social status and life opportunities (Šveda & Barlik, 2018). A child growing up in a well-organized environment, with easy access to quality schools, green open spaces, and healthcare services, faces a very different life prospect compared to a child living in a densely populated settlement, near riverbanks, or in narrow alleys with limited services. These differences do not stand alone but are linked to long-standing economic structures and spatial policies. As a result, poverty often clusters in residential pockets that can be geographically mapped, and this condition creates increasingly visible patterns of social separation. Urban space functions as a mirror of power relations, access to resources, and unequal opportunities for social mobility (Alves, 2016). When the surrounding environment has limited facilities and social networks, the opportunity to improve quality of life also becomes more restricted (Fajar, Zakki, Darmawan, & Evendi, 2021).

In metropolitan areas, residential segregation based on economic status often intertwines with other dimensions such as access to education, environmental quality, and social networks (Buck et al.,

2021). Planned residential areas with high land prices tend to be occupied by upper-middle-class groups who have the financial capacity to choose strategic locations. Meanwhile, low-income groups are pushed to more affordable areas, often located in zones less favoured by the market, such as near old industrial areas, riverbanks, or leftover spaces between large infrastructures. The concentration of poor groups in these locations results in their daily social interactions occurring within a relatively economically homogeneous circle. In the long run, this housing pattern reinforces the tendency for social segregation, where geographical distances that are actually not too far feel wide due to differences in opportunities and life experiences (Dwyer, 2010). The existence of these sectors often becomes a support for the welfare of poor households, although their position within the urban economic structure remains relatively vulnerable and unstable (Rojak & Putra, 2021).

Social segregation in metropolitan areas is not only manifested in differences in addresses but also reflected in differences in connectivity to opportunity networks (Phillips et al., 2021). Residents in established areas can more easily access extensive work networks, scholarship information, or quality public services because their surroundings have become nodes of various institutions. Conversely, residents in slum areas or informal settlements are often disconnected from the same flow of information and opportunities. Schools in their environments may face limited facilities, health services are farther away, and transportation options are inadequate. This situation fosters a cycle of experiences that strengthens feelings of marginalization. The spatial patterns of poverty ultimately not only depict the distribution of poverty rates but also indicate the social distance that separates urban population groups. When social protection systems do not operate optimally, this vulnerability can recur from one generation to the next (Aidan Bin Abdullah, 2021).

Amid the dynamics of rapid urbanization, city governments and regional planners face challenges in understanding the relationship between spatial patterns of poverty and inherent social inequalities (Marques, 2015). The development of new infrastructure, revitalization projects, and the expansion of residential areas often bring consequences for the displacement of poor groups from one location to another. Sometimes, spatial planning aimed at improving environmental quality actually drives

up land and rent prices, ultimately resulting in the subtle eviction of low-income groups to new pockets on the outskirts. These changes create a new map of poverty concentration, which may be farther from city service centres. Therefore, spatial patterns of poverty in metropolitan areas need to be understood as a dynamic process, not as a static condition. A sustainable development approach can help create a more inclusive city for various social groups (Mardikaningsih & Hariani, 2021).

The emerging problem relates to the tendency of urban planning to inadequately anticipate the formation of new poverty pockets when development projects are implemented (Forte et al., 2019). Policy focus often targets increasing the economic value of areas and improving physical infrastructure, while the spatial distribution of poor populations is not seriously considered. As a result, groups that are already in a weak position experience repeated displacement from one marginalized location to another. They seem to move along the leftover spaces remaining after the development process. This pattern weakens the ability of poor households to build stable social networks and reinforces intergenerational vulnerability. Urban space changes, but inequality persists in new forms. Management approaches that consider social values and the diversity of community conditions become important to ensure that development is not only economically efficient but also oriented toward broader social welfare (Hariani & Mardikaningsih, 2021).

Another problem concerns the limited conceptual understanding that links spatial patterns of poverty with social segregation within a metropolitan framework as a whole (Barbieri et al., 2019). Discussions about poverty often stop at the dimensions of income and access to services, while spatial aspects that bring social groups together or separate them remain underexplained. Social segregation resulting from residential patterns is often seen as a natural consequence of individual choices, rather than as the outcome of a combination of policies, land markets, and opportunity structures. Furthermore, studies on inequality between city areas are sometimes fragmented, viewing wealthy and poor areas separately without unpacking the interconnections between them in metropolitan space. This conceptual gap complicates efforts to formulate spatial planning policies sensitive to social justice dimensions. Differences in the

ability to meet living needs and maintain certain lifestyles often reinforce social distance between community groups (Gani et al., 2021).

The urgency of studying spatial patterns of poverty and social segregation in metropolitan areas arises from the need to understand how urban space can reinforce or reduce inequalities among population groups (Bettencourt et al., 2019). In an era of rapid urbanization, decisions regarding the location of affordable housing, development of basic infrastructure, and public space planning have long-term implications for the social structure of cities. Without adequate theoretical understanding of how poverty is geographically concentrated, policies risk worsening the separation of poor groups in certain areas, thereby hindering social mobility. Conceptual studies linking spatial and social dimensions are needed as a foundation for formulating more equitable spatial planning policies. In addition, attention to family conditions and social environments is important because various social changes can impact household life, including child-rearing and family stability, which ultimately affect community welfare more broadly (Fajar, Darmawan, & El-Yunusi, 2021).

The purpose of this writing is to develop a systematic conceptual discussion of spatial patterns of poverty and social segregation in metropolitan areas, emphasizing their relation to inequalities across city areas. Specifically, this writing aims to depict how poverty can be geographically concentrated, explain how this concentration relates to the separation of social groups within urban space, and elaborate on the theoretical implications of the linkage between spatial structure and inequality. From a theoretical perspective, this study is expected to enrich the discourse on the social geography of poverty and metropolitan dynamics. From a practical perspective, this discussion is expected to serve as a reference for planners and decision-makers in considering urban spatial planning that is more sensitive to spatial justice.

Method

As a study oriented toward the development of conceptual understanding, this paper is prepared using a qualitative literature review approach. This type of research seeks to conduct a systematic reading of previous works in order to build structured arguments, particularly within advanced social

science scholarship. Pickard (2013) emphasizes that in the field of information studies, qualitative literature reviews require careful selection of sources, systematic tracing of key terms, and thematic categorization to develop a rich understanding of an issue. Research methodology focused on theoretical analysis must pay attention to logical consistency, clarity of definitions, and the ability to connect various perspectives. Following these guidelines, this study does not collect field data; instead, it examines books, journal articles, and policy documents that discuss urban poverty, spatial patterns, social segregation, and metropolitan dynamics, and then synthesizes them into a coherent conceptual framework.

The dimensions of spatial organization and metropolitan governance are key elements in interpreting the literature reviewed. This perspective can be applied to the metropolitan context by viewing the city as an entity managed through spatial planning policies, infrastructure investment, and land regulation. This literature study is therefore directed toward developing a conceptual argument on how policies and the dynamics of metropolitan spatial organization relate to the concentration of poverty and social segregation.

Result and Discussion

Spatial patterns of poverty in metropolitan areas can be understood as the tendency of low-income groups to cluster in certain zones that have distinctive spatial characteristics (Moga, 2020). These zones are generally marked by high residential density, limited basic infrastructure quality, and inadequate access to proper urban services. This concentration does not emerge by chance, but is related to lower land prices, proximity to informal work areas, and a history of spatial policies that are less favourable to vulnerable groups. When this concentration persists over a long period, a pattern emerges that can be mapped at the city scale, showing poor areas as pockets relatively separate from prosperous neighbourhoods (Dwyer, 2010).

Social segregation within metropolitan cities is closely intertwined with these spatial patterns. When poor groups cluster in certain areas, social networks, schools accessed, and healthcare services used tend to be similar. Meanwhile, groups with greater resources tend to reside in physically separated areas, with more complete facilities and different

social networks. This spatial separation limits encounters between groups from different social backgrounds. In the long term, this fosters differences in perspectives, aspirations, and knowledge regarding life opportunities. Social segregation deeply rooted in urban space ultimately creates invisible boundaries between groups living in different areas (Cashin, 2021).

The concentration of poverty in metropolitan space is closely related to land market structures and housing policies (Agheyisi, 2018). Areas with low land value are usually located in less strategic locations or face environmental risks, such as flood threats or proximity to pollution sources. Poor groups who cannot afford housing in safer areas are pushed into these locations due to limited choices. In many cases, lax oversight in these areas facilitates the formation of informal settlements. As such settlements become denser, negative social labels sometimes attach, which ultimately influence how other city residents perceive the inhabitants there. This process reinforces social distance while solidifying the spatial pattern of poverty.

On the other hand, commercially oriented urban development projects often trigger the displacement of poor groups from areas considered economically strategic (Marques, 2015). When a slum area is revitalized into a modern residential or commercial hub, low-income groups previously living there often lose access to housing due to rising rent and land prices. They then move to more affordable areas, usually farther from the city centre or main transportation routes. This displacement does not eliminate poverty but rather relocates it on the metropolitan map. In this way, the spatial pattern of poverty shifts, but the character of its concentration remains.

Social segregation amplifies the impact of spatial poverty patterns on inequalities between city areas (Kempen, 2002). In poor neighbourhoods, social networks and local institutions are often limited in their ability to provide access to the formal labour market or quality education. Schools located in poor settlements may face constraints in facilities and attractiveness for qualified educators, affecting the quality of educational services. In contrast, affluent areas have excellent educational institutions, modern healthcare facilities, and environments that support children's potential development. These differences in daily living environments

create widening gaps between city areas in terms of opportunities to improve quality of life.

Inequalities between city areas are reflected not only in differences in infrastructure but also in social perceptions and stigma (Méndez & Otero, 2018). Metropolitan poor neighbourhoods are often portrayed as crime-prone areas, disease hotspots, or sources of disorder. Such images influence how officials, financial institutions, and business actors treat these areas. Investments are reluctant to enter, credit is difficult to obtain, and public services may be of lower quality. Conversely, prosperous areas are seen as safe for investment and residence, thereby continuing to receive a flow of resources. This pattern of evaluation locks in inequality, as underdeveloped areas find it increasingly difficult to catch up.

Spatial patterns of poverty are also related to the daily mobility patterns of metropolitan residents (Gan et al., 2020). Residents living in poor areas often have to travel longer distances to reach formal work centres, as their settlements are located in areas less proximate to office districts or modern industrial zones. High time and transportation costs reduce the net income that households can enjoy. In addition, long and tiring commutes can affect the quality of family life and social participation in the residential environment. Thus, the location of poor settlements within the urban structure not only reflects poverty but also becomes a factor that exacerbates daily living burdens.

Social segregation impacts the formation of uneven information patterns across areas (Pasternak & Bógus, 2010). Residents in affluent neighbourhoods often have easier access to information about quality job vacancies, training programs, and business opportunities because they are in environments connected to key economic actors. Their social networks may include people with access to various resources. Conversely, residents in poor areas tend to be within limited information circles, mostly revolving around informal employment opportunities with unstable income. This difference in information access reinforces inequality because it affects residents' ability to make decisions that could improve their economic fate.

The concept of social segregation in relation to spatial patterns of poverty in metropolitan areas also touches upon the symbolic dimension of space (Bourdieu, 2018). Certain areas are known as elite

neighbourhoods, with images of luxury and high status, while other areas are known as slums or vulnerable zones. These names and images influence how outsiders interact with these spaces. For example, financial institutions may be more cautious in providing loans to residents of stigmatized areas, even if individually they have good track records. This shows that residential addresses are not merely geographic information but also social labels that affect access to resources.

Spatial patterns of poverty are also related to power structures in urban management. Decisions regarding the location of infrastructure projects, placement of public facilities, and service priorities are often influenced by the interests of groups with higher political bargaining power. Areas inhabited by influential groups tend to receive faster road improvements, expansion of open spaces, or better transport services (Barnett, 2018). Poor neighbourhoods, whose residents are less organized in advocating their interests, are often left behind in these matters. Thus, urban spatial patterns reflect power relations, and poverty concentrated in certain areas becomes part of a maintained structure of inequality.

In the long-term perspective, spatial patterns of poverty and social segregation affect the process of intergenerational reproduction of inequality (Kempen, 2002). Simply put, the environment in which we grow up greatly influences how we learn and socialize every day (Evedi et al., 2021). Children born and raised in poor areas with limited access to education and healthy environments have a smaller chance of achieving upward social mobility. This is because children's basic rights to proper education and healthcare are often difficult to fulfil in less supportive areas (Hariani et al., 2021).

Meanwhile, children in affluent areas enjoy environments that support growth and development, with richer resource support. Beyond facilities, family and peer interactions also play an important role in shaping behaviour and emotional balance (Safira et al., 2021). These differences make urban space an arena where life opportunities are inherited. Poverty is not merely transmitted from parents to children through material inheritance, but also through the location of settlements and accompanying social environments. In other words, quality environments and healthy social relationships can serve as important foundations for children to have better life opportunities.

Discussion of spatial patterns of poverty also needs to take into account the diversity within the poor groups themselves. Not all poor settlements are homogeneous in terms of social structure and support networks. Some areas, although materially poor, have strong local solidarity networks, active religious communities, or civic organizations, enabling them to provide certain social protection. Other areas are weak in terms of community organization, making residents more vulnerable to external pressures. This internal diversity influences how the area responds to city policies, development projects, and crises affecting the metropolitan area (De Balanzó & Rodríguez-Planas, 2018).

Spatial patterns of poverty and social segregation are also related to ethnic, religious, or regional backgrounds in some metropolitan areas (Surya et al., 2020). Groups with certain identity backgrounds may cluster in the same areas, due to factors such as migration history, residential preferences, or informal grouping processes. In some situations, this concentration of identity strengthens internal solidarity and facilitates community organization. However, at the same time, if the group is economically disadvantaged, this concentration can reinforce stigma and social boundaries toward other groups. Urban space thus becomes a mirror of both identity and economic status separation simultaneously.

Once spatial patterns of poverty and social segregation have formed, policy interventions that do not take these structures into account risk producing unintended consequences (Kempen, 2002). For example, affordable housing programs located too far from urban activity centres may reinforce the isolation of poor groups, even if they physically improve housing quality. Similarly, large-scale infrastructure development without protection mechanisms for long-term residents can displace them to more marginalized locations. Therefore, a strong conceptual understanding of the relationship between space, poverty, and segregation is important as a foundation for thinking before physical interventions are implemented.

Amid this complexity, metropolitan areas can be seen as arenas of competition and negotiation among various interests, which have implications for spatial patterns of poverty. Entrepreneurs, property developers, governments, and residents interact in determining the function of urban space. Groups with greater economic and political resources are able to influence the development trajectory of areas in ways

that benefit their interests (Harmes et al., 2018). Meanwhile, poor groups are often in a reactive position, responding to changes after decisions are made. The spatial patterns of poverty visible on city maps are thus the result of a combination of interconnected decisions, not merely individual residential choices.

Viewing spatial patterns of poverty and social segregation conceptually opens the opportunity to rethink how metropolitan development success is assessed (Shirazi & Keivani, 2019). Success has often been measured through economic growth, increased investment, or the number of infrastructure projects (Grimes, 2021). However, if these indicators are not accompanied by monitoring of poverty distribution within urban space and levels of social separation between areas, inequalities may be obscured behind statistics of progress. A more spatially just approach encourages attention to questions of where poor groups live, how they access services, and how urban space affects their opportunities to improve their lives.

Spatial patterns of poverty and social segregation in metropolitan areas challenge the notion that cities are neutral spaces where everyone has equal opportunities (Luisa Maffini & Maraschin, 2018). Reality shows that location strongly determines opportunities. By understanding the relationship between poverty distribution, social separation, and inequalities across city areas, planners and researchers gain a stronger conceptual foundation for formulating questions and policy directions. Literature reviews play an important role in compiling diverse theoretical perspectives on the relationship between space and poverty, which can then serve as a basis for empirical studies and the design of interventions that are more sensitive to justice.

Conclusion

The spatial pattern of poverty in metropolitan areas is closely related to the geographical concentration of low-income groups in certain areas that possess distinctive spatial characteristics. This concentration is not neutral, as it intersects with land market mechanisms, spatial planning policies, and power dynamics in urban governance. Social segregation emerges when the concentration of low-income groups in one area occurs alongside the concentration of affluent groups in another, limiting

interactions between groups and creating separate opportunities for life advancement. Inequality across urban areas then becomes visible through differences in access to public services, environmental quality, social networks, and neighbourhood reputation. In this framework, metropolitan space becomes an arena where social inequality is structured and reproduced across generations through residential location and the surrounding social environment.

The implications of this study highlight the importance of incorporating considerations of spatial justice into the discourse of metropolitan development. Planners and policymakers need to recognize that decisions regarding land use planning, infrastructure development, and the placement of public facilities will influence patterns of poverty concentration and social segregation in the long term. A normative recommendation that can be proposed is the need to develop a planning framework that explicitly asks who will benefit or be disadvantaged by spatial change, and where vulnerable groups will reside after interventions are implemented. In addition, further empirical research is needed to examine the spatial patterns of poverty in various metropolitan regions using spatial analysis tools and social geography approaches, in order to complement and critically evaluate the conceptual framework presented here so that the discourse on spatial justice becomes stronger within urban planning.

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