

The Cumulative Multiplier Effect on the Strategic Emergence and Expansion of Collective Action: A Case of Medellín

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Abstract. This study examines strategic collective action fostering social-environmental justice through the cumulative multiplier effect, using Medellín as a case study. It analyzes three principles of strategic action planning—reinforcing synergies, expanding room for manoeuvre, and periodic consensus—to highlight urban governance transitioning from distributive to institutional justice through iterative processes. Results indicate collaborative governance, institutional flexibility, and civic engagement drive long-term urban equity. Medellín’s transformation, exemplified by the Metrocables system and Integrated Urban Projects (PUI), demonstrates strategic interventions creating self-reinforcing cycles of social inclusion and participatory governance. As collective action progresses, the multiplier effect amplifies strategic initiatives, ensuring resource distribution and institutional justice continuously reinforce one another. This research underscores that achieving social-environmental justice requires an adaptive and inclusive urban planning approach. The Medellín model provides valuable insights for cities in the Global South, emphasizing the importance of synergistic collaboration, sustained political participation, and iterative governance reforms in fostering sustainable and equitable development.

Keywords: Cumulative Multiplier Effect, Strategic Action Planning, Medellín.

1. Introduction

Urban planning has long served as a vital mechanism for shaping urban environments and addressing societal challenges. Nonetheless, traditional planning approaches have frequently proven inadequate in fostering equity, inclusivity, and sustainable urban development. Accelerating urbanization, especially in the Global South, places increasing stress on cities through escalating social inequalities, environmental degradation, and economic instability, demanding innovative governance structures and planning methodologies prioritizing justice and resilience. Consequently, strategic action planning has emerged as an alternative framework aimed at coordinating multiple stakeholders, optimizing resource allocation, and implementing transformative strategies for sustained impact [1]. Since the 1990s, strategic action planning has increasingly informed governance strategies in large urban and metropolitan areas, notably becoming prominent in cities across the Global South [1].

However, while strategic planning emphasizes long-term goals and cross-sector coordination, its origins in business management often introduce top-down governance logic that can create tensions within democratic urban planning frameworks. This is because strategic planning, when applied to cities, often reflects market-driven visions shaped by policymakers, planners, and experts, which may conflict with grassroots demands for social justice [1, 2]. Therefore, planning strategies should generate a multiplier effect that extends beyond equitable resource distribution to include institutional reforms that enhance political participation and civic inclusion.

Over the past few decades, Medellín, Colombia has undergone significant socio-economic transformations. Through urban initiatives such as the Metrocables project and the Integrated Urban Projects (PUI), the city has successfully restructured public space and increased social inclusion, setting an example for other cities in the Global South. This study takes Medellín as an example and adopts Levy’s three key principles of strategic action planning—reinforcing synergy, expanding room for manoeuvre, and the cumulative multiplier effect—to analyze how these mechanisms contribute to social-environmental justice [2].

2. Cumulative Multiplier Effect and Strategic Planning Principles

2.1. Multiplier Effect

At its core, strategic planning prioritizes actions and resource allocation to maximize social impact in resource-constrained environments. As urban challenges grow increasingly complex, purely technical-rational planning approaches have proven insufficient in addressing deep-rooted social inequalities. Instead, strategic planning offers an alternative by coordinating multiple stakeholders and shaping long-term visions. However, because the concept of “strategic” originates from military and business management, it inherently reflects goal-oriented, market-driven, and expert-led approaches, which may create tensions in urban governance [1, 2].

Young argues that social justice should extend beyond distributive justice to institutional justice, aimed at dismantle systemic inequalities [3]. Merely mechanizing equality without acknowledging diverse social needs can lead to ineffective solutions. Therefore, effective strategic planning must not only redistribute resources equitably but also drive institutional reforms to sustain long-term justice.

The cumulative multiplier effect plays a crucial role in this process. By reinforcing synergies, expanding room for manoeuvre, and deepening civic recognition, strategic planning fosters a positive feedback loop between institutional justice and political participation [2, 4].

2.2. Strategic Planning Principles

2.2.1 Reinforcing Synergies

The interaction between different power actors is a fundamental aspect of strategic planning, as it determines the effectiveness of policy implementation, governance coordination, and long-term social development. In Global South cities, where governance structures are often fragmented and shaped by historical inequalities, achieving synergistic cooperation among different actors is particularly crucial. Evans suggests that the complementarity and embeddedness between the state and society can facilitate synergistic governance, enabling more inclusive urban development by leveraging state capacity, community engagement, and market-driven efficiency [5]. Furthermore, Ostrom highlights that collaborative relationships between governments, the private sector, and civil society can lead to co-production, where different sectors work together to shape social justice [6]. This multi-actor collaboration ensures that governance decisions are contextually grounded and responsive to diverse urban challenges.

According to Levy, this synergy is not static but rather reconstructed over time through “periodic consensus” [2]. Given the inherent contradictions between different power structures, consensus-building is a dynamic and iterative process that allows stakeholders to find common ground despite competing interests. While such agreements may be temporary, they create opportunities for collective action, especially when actors recognize shared benefits in addressing urban inequalities. These phases of consensus are particularly significant in cities undergoing rapid transformation, as they allow governance structures to adjust to changing socio-political dynamics while maintaining a long-term vision for equitable development [4, 7].

2.2.2 Expanding Room for Manoeuvre

Traditional rational urban planning models have often been criticized for their rigidity and technocratic approach, thus overlooking the structural inequalities embedded in urban development [8, 9]. Safier constructed a four-dimensional model to assess how planners can increase their ability to drive social justice, consisting of technical and behavioural, institutional and inter-organisational, social relations and mobilisation, and strategic response [9]. By integrating these dimensions, strategic planning moves away from rigid, prescriptive frameworks and instead fosters dynamic and context-sensitive urban development.

By expanding room for manoeuvre, strategic planning allows marginalized communities to gain greater agency in shaping their urban environments, fostering political participation and economic inclusion. This shift from rigid, top-down governance to adaptive, participatory planning helps ensure

that urban development strategies are not only more inclusive but also more responsive to the lived realities of disadvantaged populations. Institutional flexibility enables governments to continuously refine planning strategies, incorporating feedback from diverse social groups to better align with evolving urban challenges. Additionally, expanding room for manoeuvre facilitates cross-sectoral partnerships, encouraging collaborative decision-making between public authorities, private stakeholders, and civil society organizations. This multi-actor approach enhances policy effectiveness and social legitimacy, creating an environment where urban policies are not only more equitable but also more sustainable in the long term.

2.2.3 Cumulative Multiplier Effect

The cumulative multiplier effect emerges from the interaction between reinforcing synergies and expanding room for manoeuvre, allowing strategic planning to generate long-term and expanding social impacts. When power actors establish temporary consensus, it creates an opportunity for collective action to produce broader institutional changes. However, for these changes to be sustained, institutional frameworks must remain adaptive to social needs, ensuring that justice-oriented reforms are not temporary but become embedded within urban governance structures. This adaptability allows cities to respond dynamically to socio-economic challenges, reinforcing inclusive governance and expanding the impact of social justice initiatives over time.

Specifically, when different social groups are recognized within strategic planning processes and institutional flexibility increases, collective action fosters an accumulation of justice, progressively strengthening social-environmental equity. Over time, the interplay between fair distribution, civic recognition, and political participation forms a self-reinforcing cycle, where each phase of progress builds upon previous achievements. This iterative process ensures that distributive and institutional justice continuously support one another, leading to the gradual and sustained expansion of social-environmental justice within urban governance.

3. Case Study in Medellín

3.1. Background of Medellín

Medellín is located in the Aburrá Valley in northwestern Colombia and has a population of over two million people [10]. Since achieving industrialisation in the early twentieth century, the city has undergone rapid population growth and urban expansion. During this period, the elites played a significant role in speculation. Meanwhile, the impoverished, displaced by elitism, began to expand the informal settlements on the hillsides [11].

By the 1990s, Medellín underwent deindustrialization due to economic liberalization, leading to high unemployment and a shift to the informal economy [11]. In addition, the rise of the drug economy exacerbated the city's crisis, making it one of the most violent cities in the world. Gang violence, armed conflicts between militias and the government, and struggles for territorial control intensified [11, 12]. Meanwhile, social divisions deepened as wealthy residents retreated into gated communities with private security, further widening urban inequalities.

In response to these challenges, the Medellín government launched a series of urban transformation projects in the early 21st century, with the Metrocables system and PUI emerging as central initiatives [10]. Although the success of the Medellín Model is often seen as the result of aggressive strategic interventions by municipal governments, strategic development does not occur simply as a result of the efforts of a single mayor or municipality but as the result of a complex collective effort.

3.2. Reinforcing Synergies

Medellín's Metrocables system was first conceptualized by the Metro Company in the 1990s as a way to connect informal settlements with the city center, improving accessibility for marginalized

communities. However, it was not until 2001, when Mayor Luis Pérez publicly endorsed the project, that construction officially began [10, 13].

Initially, the project faced public skepticism, but Pérez's vision of "building for the poor as if it were for the rich" gradually gained traction. A trust fund was established to secure project financing, which increased public confidence. Even local gangs, recognizing the project's broader social benefits, ceased their resistance to land acquisitions, allowing for the successful completion of Line K of the Metrocables system [10].

In this process, public space governance became a focal point of Medellín's strategic planning. Since the 1990s, the city promoted the idea of "winning back public space", yet lacked clear implementation strategies [14]. The municipal government's commitment to a shared vision not only fostered public engagement in urban transformation but also enabled cross-sector cooperation.

Since then, mayors Sergio Fajardo and Alonso Salazar, who took office in 2004 and 2008, respectively, have focused visioning's construction on aesthetics and social change, and they also put forward the slogan "commitment" and "solidarity and competitiveness" to continue the advancement of the Metrocables project [10]. Throughout the Metrocables project, the Metro Company participated in constructing the cable car as a fully independent, self-financing commercial company, which facilitated the active participation of the private sector in terms of economic benefits. The technical and financial efficiency of the project is ensured. This, in turn, increased the residents' recognition of the project and their sense of belonging to the city. Residents of the outer informal settlements began to recognise themselves as citizens of Medellín, which makes them more actively participate in Medellín's long tradition of participatory planning [10].

The three mayors have worked together to construct visions for transforming public spaces. Starting from the Fajardo government, the vision is to weave a story through the concept of historic debt, redefining the relationship between the inner city and the informal settlements outside the city. Public perceptions are changed through the narration of the causal story, and phased consensus and recognition of the fair use of public space between conflicting power organisations are facilitated. However, this recognition has also been shaken by the progress of the PUI project proposed by the Fajardo government. Although the PUI still aims to provide more equal services and infrastructure to the public, the government's land occupation, the displacement of some residents, and the violence and conflict in the community during the project progress have been affected; as a result, residents in different regions have changed their attitudes towards PUI projects, reflecting that their periodic consensus may be shifted and changed [10].

3.3. Expanding Room for Manoeuvre

Safier's four-dimensional framework—technical and behavioral, institutional and inter-organizational, social relations and mobilization, and strategic response—provides a useful lens for evaluating how Medellín expanded its institutional flexibility [9].

Mayor Luis Perez set up a municipal foundation to fund insurance, established a partnership model with the private sector, such as the Metro Company, and, while advancing the PUI project, The Urban Development Corporation (EDU) was restructured and enabled as a fringe public administration [10]. These interventions expand the municipal government's operational space and reduce the project's possible obstruction by other departments, such as the central government. The Metrocables system became a key technological intervention, facilitating the integration of informal settlements into the broader urban network. In addition, the municipal government used clear visioning strategies to engage the public in planning discussions, fostering increased participation through forums, workshops, and roundtable discussions.

Through these measures, Medellín expanded political and economic opportunities for marginalized communities, ensuring that social justice was not only redistributive but also institutionally embedded.

3.4. The Formation and Expansion of the Cumulative Multiplier Effect

From the Metrocables system to the PUI projects, Medellín exemplifies how strategic collective action generates a cumulative multiplier effect.

In the 1980s and 1990s, intellectuals, social activists, government officials, and different groups of residents had conflicting and contradictory visions of the city's future [14]. The shared vision of the three mayors of the early 21st century recognised the importance of informal residents as the owners of the city and created a greater room for manoeuvre through active institutional restructuring and technological innovation and application. The city government completed the construction of the cable car, integrating the residents living on the hillside into the planning, providing them with accessible services, and creating more high-quality public resources for public use in the PUI project.

This creates mutual recognition between the poor, who were once excluded from the city and the municipal government, and the private sector, which gains profits from the construction process, is more willing to participate in public construction due to the creation of successful precedent-setting. After mutual recognition and equal respect are formed between different organisations with contradictions, residents are more willing to participate in the urban planning process because they have identified themselves as urban residents and have the pride of being a member of the community [15]. As participatory planning is a Medellín tradition, the public can participate in the planning process through forums, workshops and round tables, which enables equal political participation and further enhances the public's identity as a member of the city. This, in turn, leads to a particular caring civic culture that is inclusive, caring and united [15]. In turn, the united society has led to the further pursuit and attention to fairness in allocating public resources to PUI projects.

Ultimately, the Medellín case demonstrates that strategic collective action extends beyond single policy interventions. Instead, it fosters an iterative process, where synergies between different actors, institutional reforms, and public engagement continuously reinforce one another, driving long-term social-environmental justice.

4. Conclusion

By examining the relationships among the three principles of strategic action planning, this study demonstrates that periodic consensus, reinforcing synergies, and expanding room for manoeuvre collectively facilitate the transformation of urban governance through a cumulative multiplier effect. Using Medellín as a case study, the research identifies that strategic interventions, equitable resource distribution, and reciprocal recognition enhance political participation, social cohesion, and institutional adaptability.

The findings indicate that collective action generates iterative processes in which distributive and institutional justice mutually reinforce each other, ultimately shaping socio-environmental justice outcomes. Establishing periodic consensus among power actors promotes inclusive and adaptive decision-making, thereby strengthening collaborative synergies between governmental institutions, private stakeholders, and local communities. Additionally, expanding the room for manoeuvre enhances institutional flexibility, enabling urban planning to remain responsive to evolving social needs rather than constrained by rigid bureaucratic frameworks.

As collective action advances, the multiplier effect amplifies the impacts of strategic urban initiatives, fostering sustained equity and civic engagement. Through iterative interactions, equitable resource distribution and institutional justice continually reinforce each other, ensuring socio-environmental justice is an evolving, self-sustaining outcome rather than a static target. The Medellín example underscores the importance of integrating inclusivity, adaptability, and civic participation within urban planning, providing a model applicable to other cities aiming for sustainable and equitable development.

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