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Do Global Cities Make Green Cities? How Global Governance Impacts Transportation In Bogotá and Medellín

Eleanor Jackson

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Do Global Cities Make Green Cities? How Global Governance Impacts Public Transportation in Bogotá and Medellín

GLOBAL STUDIES HONORS THESIS
Eleanor E. Jackson

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Second Reader: Professor Britt Halvorson

Abstract

This thesis examines how global and local governance has combined to deliver effective and sustainable public transportation in cities by comparing Bogotá's bus rapid transit (BRT) system, TransMilenio, with Medellín's mass transit system, STIMVA, often referred to as Metro de Medellín. After considering the rationales used to justify local and global authority over climate change, this analysis problematizes the supposed benefits of empowering global and local actors by highlighting the conflicts of interest that plague the elites who mediate the global and the local. In analyzing the global and local interactions, this work draws from extensive literature to highlight three potential risks of global governance that inhibit the benefits of empowering local actors to govern on climate change issues. The *technocratic risk*, where global actors encourage local governments to emphasize technical planning to the detriment of reading local opinion, the *political risk*, when political leaders hinge their careers on the transport system while also drawing on global validation that sets the system on precarious ground, and the *neoliberal risk*, where cities brand themselves to the point of emphasizing symbolic over systemic change in order to compete in the global capital market. Examining these risks helps to explain how the presence of multilateral governance during the creation of TransMilenio may have contributed to the lack of local support for the system as mayors relied too heavily on the political authority and technocratic rationales of global institutions. In contrast, the cases of Medellín and the Enrique Peñalosa's second term in Bogotá, showcase the neoliberal risk as the multilevel governance system promotes city branding and empowers elite and private actors.

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Chapter One

Introduction

A Brief History of Global Climate Change Governance

At the 1992 United Nations Conference on Environment and Development in Rio, local authorities and subnational actors were identified as key stakeholders with a direct link to the public and ability to govern climate change for the first time.¹ By 1993, the International Alliance of Local Governments for Sustainability created the Cities for Climate Protection (CCP) and by the 2000s, multiple transnational municipal networks (C40, Covenant of Mayors, Cities for Climate Protection) formed to tackle issues that the United Nations (UN) struggled to find consensus and motivate to change.² The emergence of cities as key partners in climate change governance not only represented a shift in the global governance system, but also raised new questions about what the role of these cities would be.

In the 1980s and 1990s, climate change governance adhered largely to a multilateral model of global governance. The multilateral model was hierarchical and functioned through the accepted authority of nation states who used treaties to make international law that translated back to national regulation and to local action.³ Institutions like the World Bank, the United Nations (UN), and the Inter-American Development Bank (IDB) were all central actors during this period who gained their capital and authority from nation states that were the centers of power. The rise of neoliberalism in the 1980s began a slow “hollowing out of government,”

¹ Liliana Andonova, *Governance Entrepreneurs: International Organizations and the Rise of Global Public-Private Partnerships*, Business and Public Policy (Cambridge: Cambridge University Press, 2017).

² Jennifer Bansard, Phillip Pattberg, and Oscar Widerberg, “Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance.” *International Environmental Agreements* 17 (2016): 229-246.

³ Harriet Bulkeley, Liliana Andonova, Michele M. Betsill, Daniel Compagnon, Thomas Hale, Matthew J. Hoffmann, Peter Newell, Matthew Paterson, Charles Roger, and Stacy D. VanDeveer, *Transnational Climate Change Governance* (Cambridge: Cambridge University Press, 2014), <https://doi.org/10.1017/CBO9781107706033>.

given that neoliberal economic policies promoted by the Washington Consensus focused on privatization, austerity, deregulation, free trade, and reductions in government spending.⁴ Unable to provide goods as easily, national governments began to lose their authority and private actors used this shift to form new alliances and push for further deregulation. As the overlap in dates suggests, this process was by no means linear or all encompassing.

In this new context, scholars like Foucault began to ask how actors could govern without the legal authority derived from the nation state and conceptualized less hierarchical, more networked form of governance.⁵ Foucault's term, *governmentality*, any activity meant to shape, guide, or affect the conduct of citizens, helped explain the potential role of new subnational actors by expanding the idea of what it means to govern. Building on Foucault, the neoliberal world order did not mean less *government*, but just meant more *governmentality* as the state hollowed out and non-state actors gain new influence.⁶ To understand how new actors exercised governmentality, scholars like Weiss look at how actors constructed legitimacy based on a "logic of appropriateness," where compliance can come from self-imposed obligation to do the "right" thing, which is determined by a socially constructed understanding of what is right.⁷ This logic of appropriateness undergirded the rise of normative governance and soft-law mechanisms such as goal setting, prize giving, and benchmarking. While this new model of global governance has many possible names, Hooghe and Marks' *multilevel governance*, provides the best base for understanding the new system. Their conception of multilevel governance developed in response to the emergence of the European Union (EU) and looks beyond levels (national, local, global) to

⁴ Peter Brand, "Green Subjection: The Politics of Neoliberal Urban Environmental Management," *International Journal of Urban and Regional Research* 31, no. 3 (September 1, 2007): 616–32, <https://doi.org/10.1111/j.1468-2427.2007.00748.x>.

⁵ Rosenau, J. N., & Czempiel, E.-O. (1992). *Governance without government: Order and change in world politics*. Cambridge, UK: Cambridge University Press.

⁶ Peter Brand, "Green Subjection: The Politics of Neoliberal Urban Environmental Management"

⁷ T.G. Weiss, *Global Governance: Why? What? Whither?* (Malden: Polity Press, 2013).

observe the multiple spheres of governance where climate change governance takes place.⁸ They argue that multilevel governance is both a means to achieve collective benefits by coordinating activity *and* an expression of community, given that citizens care about who gets to exercise authority over them.⁹ The ability to govern climate change issues was not only shaped by these systems, but helped to shape them by providing actors with a moral rationale for expanding their authority.

Bulkeley and Betsill built on this multilevel model to include non-state actors like civil society organizations or private companies and emphasize that governance takes place simultaneously at multiple vertical levels (local, national, and global) and horizontal levels (city-city, government-business). In the climate change context, these multilevel governance structures led to new fields of literature on transnational climate change governance (TCCG) and urban climate change governance. Urban climate change governance examines the multilevel governance climate change using municipalities as the central actor.¹⁰ A newer field, transnational climate change governance draws from fields like urban climate change governance. In Bulkeley et al.'s work on TCCG, the authors define it as “a collection of individual initiatives: a mode of governance that is networked, decentralized, self-organized, and often simultaneously public and private, global and local.”¹¹ As the seminal text on TCCG

⁸ Liesbet Hooghe and Gary Marks, “A Postfunctionalist Theory of European Integration: From Permissive Consensus to Constraining Dissensus,” *British Journal of Political Science* 39, no. 01 (January 2009): 1, <https://doi.org/10.1017/S0007123408000409>.

⁹ Ibid.

¹⁰ Harriet Bulkeley, Vanesa Castán Broto, and Gareth A.S. Edwards, *An Urban Politics of Climate Change: Experimentation and the Governing of Socio-Technical Transitions* (London, UK: Routledge, 2015).

¹¹ Harriet Bulkeley et al., *Transnational Climate Change Governance* (Cambridge: Cambridge University Press, 2014), <https://doi.org/10.1017/CBO9781107706033>.

This book, TCCG, published by ten of the most prominent climate change governance and multilevel governance scholars in 2014, is the first to coin the term TCCG and as the seminal work in this emerging field, is the key text I turn to in my analysis.

published by ten of the most prominent scholars in related fields, when I write “TCCG” I am generally referring to this book.

As neoliberal theories began to shape the world, environmentalism simultaneously gained ground on the international stage and the 1987 Brundtland Report codified the need to promote “sustainable development” that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”¹² Combining environmentalism with economic development made the idea of transferring capital to the global south palatable to wealthier nations.¹³ The rise of environmentalism alongside the reorganization of state power and the structural economic changes brought on by neoliberalism gave rise to a set of theories including liberal environmentalism, the marketisation of environmental governance, and green governmentality.¹⁴ These concepts link environmentalism with the construction of new modes of governance that, following Foucault, work at a distance through the internalization of norms of government via technical rules and devices focused on accountability.¹⁵ These links between environmentalism, governmentality, multilevel governance, and neoliberalism are important both for understanding the focus on urban climate change and the potential negative impacts of these new governing systems. For instance, the focus on urban infrastructure in climate change action

¹²Brundtland, G. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. <http://www.un-documents.net/our-common-future.pdf>

¹³ I recognize this term as problematic; however, its widely used and therefore the most intuitive term in the context of this literature. Additionally, using this term reminds the reader that this literature is situated within a certain ideology with inherent biases encapsulated by the use of terms like the “global south.”

¹⁴ Bulkeley et al. *Transnational Climate Change Governance*.

¹⁵Michel Foucault, “Governmentality”, in G. Burchell, C. Gordon and P. Miller (eds) *The Foucault effect: studies in governmentality*, (Chicago: University of Chicago Press, 1991) 87 – 104.

The term “accountability” is also problematic in this context given that it does not articulate who is being held accountable to whom and often backgrounds the uneven power dynamics in the global system.

has been explained by the urban political economy as central focus for capital accumulation.¹⁶

This link problematizes the narrative that cities will successfully engage in urban climate change experiments if given the increased autonomy and power that comes from their position as key climate change governors. This linkage also has the potential to draw resources away from rural areas that already struggle with lower institutional capacity and resources.

Still, creating more sustainable cities is integral to successful global climate change action. The UNEP estimated that cities produce around 70% of greenhouse gas emissions, use 80% of global energy, and consume 75% of natural resources.¹⁷ As the main consumers of resources, producers of pollution, and the home of over 55% of the global population, urban areas should be at the forefront of sustainability and climate change.¹⁸ Of course, climate change governance is widely understood as a global issue given the nature of environmental problems as global public good issues that are subject to the challenges of under provision and overuse because no single actor has an interest in unilaterally preserving resources or preventing pollution.¹⁹ Given these realities and the shift away from a multilateral global governance system towards a multilevel system that empowers subnational actors, the global and local levels of governance emerge as dual keys to successful environmental action. Barber captures an ideal climate change governance system in describing the miracle of civic “glocality” that promises pragmatism instead of politics, innovation rather than ideology and solutions in place of sovereignty.”²⁰

¹⁶ Bulkeley et al. *Transnational Climate Change Governance*.

¹⁷ Bansard, et al. “Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance”

¹⁸ United Nations, “World Urbanization Prospects: The 2018 Revision,” (2018), <http://ieu.unal.edu.co/centro-editorial/publicacionesieu/itemlist/category/17-documentos>.

¹⁹ Robert Keohane, “Beyond the tragedy of the commons.” *Perspectives on Politics* 8, no. 2, (2010), 577–580.

²⁰ Bansard, et al. “Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance.”

While “glocality” in climate change governance could be miraculous in overcoming the geopolitical impediments to pursuing a global climate change agenda and the importance of both local and global actors for motivating climate change actions has been well documented, the literature often does not highlight how these levels of governance should work together or what the optimal mix of global and local influence might be for different actors.²¹ This gap brings us to our central question: what is the ideal mix (both amount and type) of global and local governance when governing urban climate change issues?

Using the public transportation systems in Bogotá and Medellín as case studies, I will explore how the different types of global and local interactions involved in the cities’ transportation systems affect their long-term sustainability. I argue that working more closely with multilateral global governance institutions, characteristic of the 1980s and 1990s, creates a more successful climate change project from a technical standpoint, but can result in negative social and political outcomes that inhibit the long-term sustainability of the system. On the other hand, when local actors appeal to a wider range of global actors in the multilevel governance system, characteristic of the 2000s, cities risk emphasizing symbolic action to the point of discouraging or impeding real action, in the form of new programs or policies, and allowing elites to continue profiting from unsustainable production models by constructing a narrative of individual responsibility while decreasing public and private accountability.²² These findings do not necessarily give a precise definition of the ideal type and scope of global and local authority over climate change action. However, they do move us closer to understanding the implications of different governance tactics and the role of global and local actors.

²¹ When I reference “global actors” I am referring to any actor that cannot be categorized as national or local including multinational corporations, non-governmental organizations, national aid programs working in other countries (USAID), and more traditional international institutions.

²² Peter Brand, “Green Subjection: The Politics of Neoliberal Urban Environmental Management”

Case Selection

To contextualize these ideas, I will examine the public transportation systems in Bogotá and Medellín for insights into the mix of global and local control. This case study will address a few key gaps in the research. While scholars, such as G.C. Homsy, study how diverse cities within a nation respond to national climate change policy, and others including, Bulkeley and Bansard, study the broader patterns and individual cases of global-local climate governance. Yet, few explore how global institutions interact with different cities in the same country. This omission is partly due to the fact that few developing countries (more often the target of classic international governance) have two cities of comparable political and economic status. While Medellín with approximately 2.5 million inhabitants is much smaller than Bogotá at just over 8 million, the two cities have a long history of competition and power struggles in the country that make them an interesting case comparison especially given how close they are to each other on many global scales. By doing a close comparison of two cities in same country in the global south with similar economic and political capital, I can more accurately separate out the effects of global-local interactions from those of national-local or national-global policies.²³

In general, transportation has been understudied in the context of urban environmentalism because, unlike Bulkley and Bestill's *urban climate change experiments*, many transport projects arise to solve different problems, as is the case in Bogotá and Medellín. Despite often arising to solve other urban crises, transportation provides a valuable case study due to its positive environmental effects, its need for intensive capital and infrastructure investments, and its impact on equality and development. Transport projects are also important and visible political projects for local governments, so while neither TransMilenio nor Metro de Medellín started as a climate

²³ This separation is of course, imperfect, and does not fully take into account differences like the intense violence experienced by Medellín.

change projects, we see climate change increase in importance as local actors realize the value climate change can provide to their constructed authority, especially in global markets.²⁴ This evolution gets at the crux of the issue: understanding how local politicians and city elite navigate the conflicts of interest between global and local groups.

Finally, these cities provide particularly powerful changes in “globalness” both across time and between the two cities. Bogotá exhibits a multilateral governance presence as the World Bank and IDB were heavily involved in the development of the city’s bus rapid transit system, TransMilenio, in 1998. Conversely, Medellín’s Metro de Medellín received a loan from a Spanish-German consortium and has almost no multilateral involvement. As a capital city and one of the less violent areas, Bogotá entered into the multilateral global system as a subnational partner prior to Medellín. However, after 2008, Medellín exerted a conscious effort to increase its “globalness” and has since received significant international attention. Finally, Enrique Peñalosa’s second term as Bogotá’s mayor in 2016 showed a renewed global engagement that adhered to Medellín’s use of city branding and drew heavily from the city’s success in that area. These changes over time in global and local orientation allow us to examine the effect of global interactions versus local constructions of transportation systems between the two cities.

Project Overview: Key Differences in Outcomes

In both cities, the aspects of the transportation systems that are the most successful in terms of local praise and in terms of global praise, are those that started prior to an increase the marked increases in globalness and are rhetorically linked to local groups. For Bogotá this means that the bike infrastructure and CicloRutas, are more beloved and more successful than

²⁴ While the proper title for the Metro de Medellín is Sistema Integrado de Transporte masivo del Valle de Aburra (STIMVA), I will use Metro de Medellín interchangeably.

TransMilenio. For Medellín, the Metro de Medellín has a great reputation and strong support while the newer bike system promoted largely by actors with global links has had trouble catching on.

Each system succeeds in some aspects of increasing sustainability and fails in others as seen in Table 1. While both projects have successfully reduced air pollution over time in the cities, their ability to decrease car and motorcycle use appears to have declined. From 2007 to 2016, Bogotá reduced the concentration of particles from 71.6 to 50.²⁵ In Medellín, motorcycle use has increased significantly and in Bogotá, the number of cars increased by 21% between 2014 and 2017. Table 2 provides a full summary of changes in the principal mode of transport in each city. In both cities, they are currently placing an emphasis on reducing car use; however, Bogotá and Peñalosa placed a particularly high premium on the idea and their goal for the system is that even the wealthiest citizen to take pride in using the public transport.²⁶

Looking at the two cities, Medellín appears to struggle with lower transparency and less integration between the public mass transit and other forms of sustainable transportation (bikes and pedestrian paths). Bogotá on the other hand struggles with maintaining local support for TransMilenio and creating a *cultura ciudadana*, a sense of civic duty and community, as well as poor fleet quality. Both cities have seen a rise in car and motorcycle use.

²⁵ “Informe de Calidad de Vida” *BogotáComoVamos.org* (2017).

²⁶ Ortiz, Andres. Interview with Eleanor Jackson. Bogotá, January 2019.

Table 1: Key Aspects of Sustainability in Public Transportation

	Bogotá	Medellín
Air Pollution (Overall Measure)	Decreased	Decreased
Car/Motorcycle Use	Car use continues to rise	Motorcycle use has risen drastically
Fleet Sustainability	Introduction of diesel fleet adds to an already unsustainable fleet	Highly sustainable
Environmental Messaging/Activism	Increasing environmental consciousness	Low environmental consciousness, higher among wealthy
Community Creation	Efforts to increase, but low overall	Strong social cohesion and identity creation, highly linked to Metro
Integration with Other Transport	Higher, bike routes have been extremely successful	Low, while the STIMVA system is very integrated, private buses and bikes are not

Source: Eleanor Jackson

Table 2: Transportation in Each City

	Metro/TransMi	Private Bus²⁷	Car	Motorcycle	Bike/Foot
Medellín 2006²⁸	13%	47%	8%	10%	16%
Medellín 2012	13%	42%	11%	18%	9% ²⁹
Medellín 2018	34% ³⁰	29%	7%	16%	8% (1% Bike)
Bogotá 2002³¹	13%	51%	14%	1%	16%
Bogotá ³²2010	23%	46%	10%	4%	14% (5% Bike)
Bogotá 2018	35%	7%, 16% SITP	13%	8%	16% (9% Bike)

Source: Compiled data from MedellínComoVamos.org and BogotaComoVamos.org polling data responding to “What is your principal mode of transport” in annual “Informe de Calidad de Vida” and/or “Encuesta de Percepcion Ciudadana”

²⁷ This includes “Bus/Ejecutivo, Buseta, Colectivo”

²⁸ Selected 2006 because that is the first years studies are conducted.

²⁹ Does not include bike data.

³⁰ Includes Metroplus

³¹ Principal mode of transport to work.

³² Principal mode of transport to work.

Literature to Date and Expansion of Research Question

Determining what the right mix of global and local governance is in regard to climate change requires examining a number of fields of scholarship surrounding urban governance, global governance, economic development, and climate change governance. To organize these fields, I have identified key questions that will inform my analysis of how and why these global and local interactions shape the sustainability of public transportation projects in Medellín and Bogotá. The first questions revolve around what the key governance gaps are when it comes to climate change and why global and local actors are best suited to fill these governance gaps. After justifying why global and local actors should exercise authority over climate change issues and defining their ideal governing roles, we must ask *how* these actors construct their authority over climate change governance issues in a changing global system. Finally, we turn to what the potential downsides are in empowering local and global actors. At this point, I would like to note that this analysis structure does not do well in accounting for the national government's role in climate change policy or as an intermediary between global and local actors. Because of this, I did not spend time analyzing the national government policies. If this work were to continue to move forward, the framework would need to articulate the national government's role in order to offer a complete justification for proposing an increase in global and local authority over climate change issues

Who Should Govern Climate Change and Why?

New forms of global governance described in the introduction prompted scholars to more fully define why global or local actors should have authority to govern climate change issues. Climate change governance requires overcoming obstacles associated with incentivizing

collective action and controlling global public goods.³³ Because environmental resources like water and clean air are subject to the challenges of under provision and overuse, no single actor has an interest in unilaterally preserving resources or preventing pollution. Bulkeley and Castan-Broto frame these challenges as *socio-technical* meaning that they attempt to change material arrangements and the cultural norms that determine a city's emissions and vulnerabilities.³⁴ For instance, a study of the impact of transportation policy in Medellín asserted that achieving meaningful emission reductions in transportation requires both incentivizing mass transport (social) and developing capacity (technical).³⁵

Scholars argue that global governance initiatives are the ideal level for governing climate change issues because global actors can provide coordination, knowledge sharing, transparency, and resources.³⁶ In contrast, proponents for empowering local actors argue that municipal governments should have more authority because of their institutional capacity to deliver public services and manage infrastructure with better channels of communication.³⁷ Local governments are also favored due to their higher democratic legitimacy that facilitates the social aspects of socio-technical transitions and generates potential for innovation based on the concentration of resources, which are both physical and skill based.³⁸ Table 3 provides a breakdown of the ways that global and local actors would influence climate change governance and overcome the governance gaps in an ideal situation.

³³ Keohane "Beyond the tragedy of the commons."

³⁴ Vanesa Castán-Broto and Harriet Bulkeley, "A Survey of Urban Climate Change Experiments in 100 Cities.," *Global Environmental Change* 23 (2013): 92–102.

³⁵ Martinez-Jaramillo et al. (2016)

³⁶ Klaus Weber and Sara B. Soderstrom, "Sustainability Discourse and Capitalist Variety: A Comparative Institutional Analysis," *Corporate Social Responsibility in a Globalizing World*, January 1, 2015, 218–48, <https://doi.org/10.1017/CBO9781316162354.007>.

³⁷ Harriet Bulkeley, Vanesa Castán Broto, and Gareth A.S. Edwards, *An Urban Politics of Climate Change: Experimentation and the Governing of Socio-Technical Transitions* (London, UK: Routledge, 2015).

³⁸ Ibid.

Table 3: Addressing Governing Problems in Climate Change

Governance Problem	Global/Local Strength in Addressing the Problem
Collective Action Problem	<p>Local</p> <ul style="list-style-type: none"> • Democratic legitimacy (social) • Institutional capacity (technical) <p>Global</p> <ul style="list-style-type: none"> • Coordination with other levels of government (technical/social) • Increasing transparency and accountability (technical/social) • Providing financial incentives (technical/social)
Global Public Good	<p>Local</p> <ul style="list-style-type: none"> • Institutional capacity (ability to communicate, plus local knowledge) <p>Global</p> <ul style="list-style-type: none"> • Coordination • Knowledge sharing and transparency for tracking • Resource provision

Source: Eleanor Jackson

Collective action surrounding the maintenance of these environmental global public goods proves difficult due to three major global governance gaps that Brüh and Rittberger identify. They consider the *jurisdictional gap*, where public policy is assumed to be predominantly national in focus and scope, the *operational gap*, where public institutions lack the information and instruments to respond, and *the incentive gap*, in which global governors struggle to convince local actors to comply with recommendations.³⁹ Effective global and local interactions will build on the strengths of each group to overcome these gaps.

To analyze whether the global and local actors effectively play to their strengths when filling the governance gap, I will build on studies done by groups like the World Resource

³⁹ Brüh, and Rittberger, "From international to global governance: Actors, collective decision-making, and the United Nations in the world of the twenty-first century." In V. Rittberger (Ed.), *Global governance and the United Nations system* (Tokyo, Japan: United Nations University, 2003) 1-47.

Institute (WRI), the UN, and various universities. As seen in Table 1, I will measure the socio-technical outcomes using (1) decreased air pollution over time measured (2) decrease in car/motorcycle use (3) the use of sustainable materials and fuels (electric buses, gas buses, electric Metro) (4) increase in environmental messaging and activism, and (5) the connection to bike and pedestrian routes.⁴⁰ In general, statistics from the transport companies and international groups find larger positive impacts and higher emissions reductions from innovations in urban transportation than those from academic papers.

When analyzing the impacts, it is important to note that the majority of the data on pollution, equality, and even competitiveness all come from global institutions. For instance, the UN defines the sustainable development goals (SDGs) used as benchmarking tools. It also influences how inequality is measured by legitimizing tools like Gini coefficients. Standard measures of success produced by these global reports are in many ways useful. They are based in rigorous research and help to increase collective action by creating concrete goals and provide tools for measuring outcome. However, these methods have been backed into our implicit understanding of success from a Western, capitalist perspective. In analyzing the success of the systems, I will use many standard measures as they are still the most useful way to conceptualize the very real problems created by climate change. However, I will also work to highlight their potential bias and to draw out the more social aspects of the socio-technical changes required for successful climate change action as they are often lost in the standard numerical measurements.

⁴⁰ Hiroaki Suzuki, Roberto Cervero, and Kanako Iuchi, *Transforming Cities With Transit: Transit and Land-Use Integration for Sustainable Urban Development*, Urban Development Series (Washington, DC: The World Bank, 2013).

How Do Global and Local Actors Over Climate Change Issues?

As stated earlier, global and local actors do not necessarily have a classic legal authority to govern climate change issues. TCCG uses discourse analysis to categorize the dominant strategies different initiating actors use to gain authority and legitimacy when carrying out climate change governance projects. Their categories, while not directly applicable to my cases, help construct a framework for understanding potential sources for global actors to gain legitimacy within these systems.

TCCG finds that actors use *ideological legitimation* through a *motivating world view* to show why climate change action should take place. Actors generally use either *market liberal ideology*, based on utility of market for stimulating innovation, *institutionalist ideology*, highlighting the role of institutions in providing protection, *bio-environmentalist ideology*, recognizing the need to address the earth's limited carrying capacity, and *social green ideology*, attempting to address the social importance of the environment for well-being. Second, actors have sources of legitimacy that they appeal to gain the authority to govern climate change issues. Actors may select *moral legitimacy*, on the basis of what the actor stands for, *delegation*, where actors give explicit consent, *expertise*, based on technical knowledge, *democracy*, from citizen representation and participation, *economic resources*, based on the financial ability to act, or *jurisdiction*, when an actor has existing authority over a policy area of geography. Finally, actors must legitimate their actions by indicating why others should comply with the rules they provide. Here initiating actors can appeal to *efficiency*, meaning that if others go along with their idea they will be able to make more with less, *urgency*, change needs to be made immediately to avoid catastrophe, *learning*, their plan allows for an exchange of knowledge, or *justice*, their plan corrects a wrong. Most importantly, Bulkeley et al. found the main legitimating discourses were

market liberal ideology, based on the utility of the market in stimulating innovation. Initiating actors then convinced other actors to comply by emphasizing the *pursuit of efficiency*. Finally, initiating actors grounded their authority in an appeal to *expertise*.⁴¹ These findings indicated a relationship between neoliberalism and environmentalism. As the majority of the initiating actors used in this study were global actors, these discourses represent the dominant global discourses.⁴² Applying the TCCG discourses framework to the local level, this research will use *market liberal ideology*, appeals to *expertise*, and *green discourse* as rhetorical flags that draw attention to how the local actors appeal to global governance and take up these global governing incentives.⁴³

Based on the discourses presented in TCCG, I argue that global governance tends to provide four general incentives for local governments to pursue climate change policy. The prevalence of market liberal ideology and appeals to efficiency and expertise, relate to global actor's ability to provide *immediate financial resources*. Based on Bourdieu's argument that symbolic spatial strategies for can create growth where "symbolic capital" in the form of (mis)recognition of prestige can be exchanged for economic capital, this market liberal and efficiency ideology also appeals to *urban pride*. The use of appeals to learning correlates with their ability to provide *technical resources and knowledge sharing*. Finally, just as the TCCG framework highlighted how local actors appeal to jurisdiction, global actors can provide *political legitimacy* to local governments by aligning them with strong institutions.

⁴¹ Bulkeley et al., *Transnational Climate Change Governance*.

⁴² If this strong link between neoliberalism and environmentalism exists, an increase in global engagement should also lead to an increase in green discourse.

⁴³ Appendix B has lists of example terms for market liberal discourses, appeals to expertise, and green discourses.

Using Carmin et al.'s framework that uses endogenous and exogenous factors to explain a city's ability to act on climate change issues, I identified four key endogenous factors that determine how Medellín and Bogotá act. Local governments' ability to govern climate change action depend on (1) their political and fiscal autonomy, (2) political power of the local government and effectiveness of the municipal bureaucracy, (3) social cohesion of the city, and (4) their technical knowledge.⁴⁴ Table 5 gives some potential indicators for each of these factors. When barriers in these areas impede the local government's ability to govern, that government can attempt to overcome that barrier by calling upon the immense global networks. This option is particularly appealing for cities in the global south in this day and age because global actors (both public and private) have bought into the idea of "sustainable development," if a local government can signal that it is ready to be innovative, competitive, and sustainable, global actors will readily help said government work around its policy barriers.

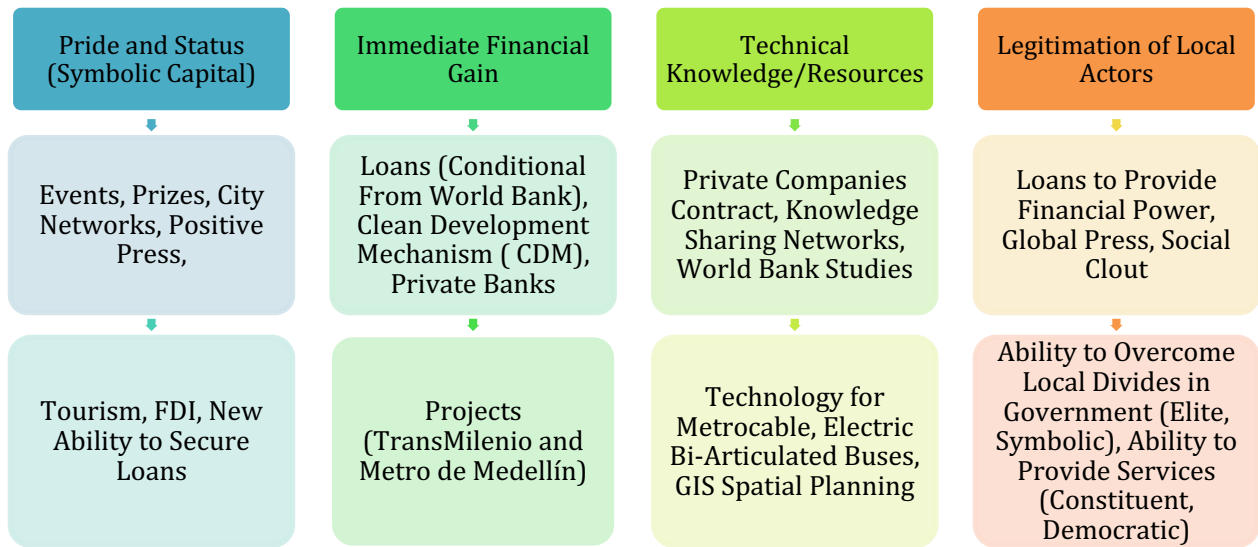
Additionally, in innovation and socio-technical transition studies, theories posit that a trigger, usually a political crisis or shift in financial autonomy, is necessary to provoke change in a system.⁴⁵ While in urban climate change governance, this trigger should have to do with the environment, neither TransMilenio nor the Metro come from a climate change trigger. I argue that the nature of the initial local crisis helps shape how the system interacts with global governance and eventually becomes more focused on climate change. Because neither urban transportation project was initially triggered in response to climate change, but in response to distinct urban issues, the insertion of sustainability issues and environmentalism into the systems

⁴⁴ Carmin J., Anguelovski I., and Roberts D., "Urban Climate Adaption in the Global South: Planning in an Emerging Policy Domain," *Journal of Planning Education and Research* 32, no. 1 (2012): 357–96

⁴⁵ Eric Chu, Isabelle Anguelovski, and Debra Roberts, "Climate Adaptation as Strategic Urbanism: Assessing Opportunities and Uncertainties for Equity and Inclusive Development in Cities," *Cities* 60 (February 1, 2017): 378–87, <https://doi.org/10.1016/j.cities.2016.10.016>.

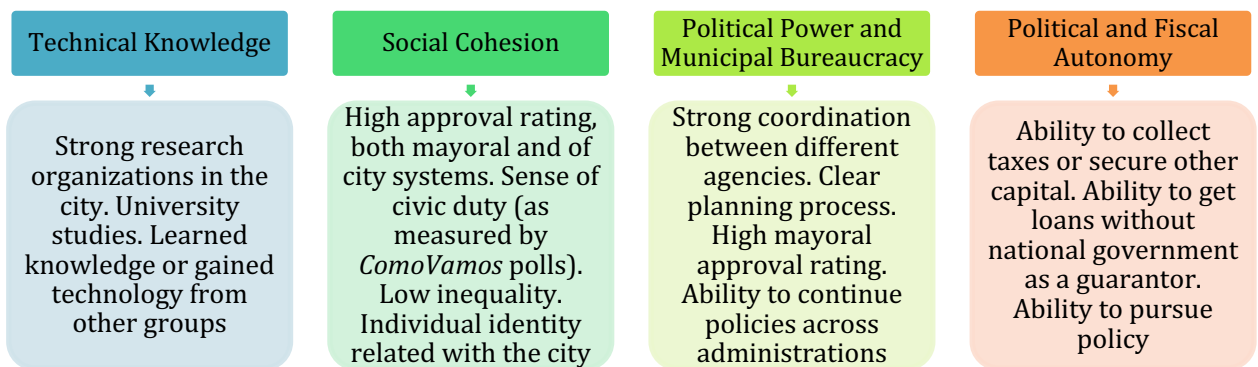
can be seen as a result of the cities taking global actors up on their climate change incentives based on the city's local governing weaknesses. Figures 1 and 2 summarize the global and local interactions set out in the last few sections.

Figure 1: Global Incentives Offered to Influence Local Projects



Source: Eleanor Jackson

Figure 2: Local Incentives to Seek Out Global Actors



Source: Eleanor Jackson

What Are Potential Costs and Benefits of Global Involvement in Local Climate Governance?

Merely matching local endogenous weaknesses with global incentives does not create successful climate change governance. Sometimes taking up the incentives offered at the global level can reduce successful mitigation of climate change by impeding the potential benefits of empowering local actors. Chu et al. finds that the global incentives for climate change governance and research on climate change downplay, and sometimes inhibit, the broader social and cultural changes necessary for transforming entrenched and powerful political and economic regimes that define urban development. To crystalize these ideas in the context of my cases and the larger body of literature, I will look at three types of global governance risk *technocratic*, *political*, and *neoliberal*.

The first risk of global governance will be called *the technocratic risk of global governance*. This technocratic risk occurs when global governance increases the importance of expertise and technocratic values to the point of damaging democracy. This risk has the potential to negate the benefits of empowering local actors by decreasing civic engagement. In their work TCCG, Bulkeley et al. not only find that the initiating actors in multilevel climate change initiatives tend to appeal to “expertise,” often exhibited through technical knowledge in line with global norms, but also that projects appealing to technocratic values rarely also appeal to democratic values.⁴⁶ These trends highlight that the democratic deficit emblematic of global governance that presents a risk to climate change policy in that climate change action, generally, requires a strong sense of community and civic engagement to overcome collective action problems. In line with these findings, Bulkeley and Castan Broto’s study on the types of climate change action—social or technical—undertaken in cities through found that most urban climate

⁴⁶ Bulkeley et al. *Transnational Climate Change Governance*.

change experiments were technical and not social innovations.⁴⁷ One explanation for the prevalence of technical innovation over social innovation in cities could be that cities take on global norms and values due to their place in the global capital market. While technical changes are important, as noted in the introduction, social changes, such as increasing a sense of community or changing consumption patterns, are just as important for overcoming the collective action problems in governing on climate change. This need to increase social climate change initiatives links directly with the initial rationale for including local actors as they were the stakeholders with “a direct link to the public” according to the 1992 UN Conference on Environment and Development in Rio. The disproportionate amount of technical innovations indicates that cities may not be utilizing the local accountability and democratic legitimacy that gives them a key advantage in climate change governance.

Along with the risk of becoming overly technocratic, cities can place too much political legitimacy in global governance problems associated with global legitimation represents the *political risks of global governance*. These political risks largely stem from the relationship between technocracy and democracy noted above. However, they have an added dimension. If the mayor utilized global support as a means for political legitimacy, this incurs the risk of the community turning against said global institution and sending them back to square one. Overall, global legitimation appears to work better when unifying the elites in a city than unifying the entire city. The elites are well connected to global networks, who act as a gate between the local groups and the global stage, and who stand to benefit the most from increased investment. These factors mean that elites take global cues more seriously and, in the case of Bogotá, global incentives can be enough to overcome infighting as they defer to its perceived authority.

⁴⁷ Vanesa Castán-Broto and Harriet Bulkeley, “A Survey of Urban Climate Change Experiments in 100 Cities,” *Global Environmental Change* 23 (2013): 92–102.

However, the elites, both public and private, must then translate the incentives to the entire city. As the key focus of interaction between global and local levels of governance, elite groups in the cities will be central to this analysis.

The third set of risks will be referred to as *neoliberal risks of global governance*, based on Peter Brand's work as well as corporate social responsibility (CSR) theories.⁴⁸ Brand argues that cities engaged in seeking global capital often promote a style of neoliberal urbanism where a green city image helps obtain global capital while allowing elites and private actors to obscure their role in causing climate change.⁴⁹ They instead blame citizen's individual actions, like using plastic bags, and position themselves as the centers of progress by promoting innovation and efficiency. Global and local private companies and politicians can then profit from the appearance of doing good through implementing the "urbanism of spectacle," which functions like "greenwashing" by focusing on show over substance. Brand argues that Medellín's cable cars exemplify this urbanism of spectacle. These tactics not only shift focus away from the main culprits of climate change, but they tend to empower elites and increase inequality which in turn tears at the social fabric necessary for long term growth. Scholars like Brand find environmentalism often acts as a rhetorical, discursive tool for global, local, and private actors to carve out new spheres of authority.

Brand's assessment of neoliberal risk as well his theoretical work linking neoliberal interests with environmental governance, chart nicely onto the CSR literature promoting the ability of private actors to self-govern on climate change issues within a normative environment

⁴⁸ While the term neoliberal is in some ways problematic and often overused, it remains the most straightforward term to use in this context especially given my use of Brand's work for conceptualizing this risk.

⁴⁹ Peter Brand, "Green Subjection: The Politics of Neoliberal Urban Environmental Management"

conducive to sustainability.⁵⁰ Hackworth's theories on neoliberal cities then supports this linkage by arguing that that cities are pushed to act like corporations in the neoliberal world.⁵¹ This neoliberal global governance risk can then be linked to the critiques of CSR.

Table 4: A Definition of Key Global Governance Risks⁵²

	Intention	Negative Impacts	Indicators
Technocratic Risk	Increase transparency Coordinate activity Measure outcomes	Short term solutions Ties to global networks Favors elites and decreases democracy	High numbers of "studies" and planning documents Decreased social support Low local participation
Political Risk	Provide finance Support "good governance"	Lower political power to act Potential to easily lose support when local opinion of global actors change	Rhetorical ties between the system and specific global or globalized actors Local support for the system does not correlate with the global support offered
Neoliberal Risk	Empower new actors Decrease burden on institutions	Empower elites or private companies Encourage greenwashing	Sustainable discourse without links to specific programs or outcomes Increase in corruption or policies that favor certain individuals

Source: Eleanor Jackson

⁵⁰ Meyer, John W., Shawn M. Pope, and Andrew Isaacson. "Legitimizing the Transnational Corporation in a Stateless World Society." In *Corporate Social Responsibility in a Globalizing World*, edited by Kiyoteru Tsutsui and Alwyn Lim, (Cambridge: Cambridge University Press, 2015) 27–72.

⁵¹ Hackworth, Jason, *The Neoliberal City: Governance, Ideology, and Development in American Urbanism* (Ithaca, New York: Cornell University Press, 2007).

⁵² These risks share many similarities in terms of their outcomes; however, I separate them into these categories based on how they are articulated in different ways based how the global incentives align with the local needs. They also differ based on what type of "accountability" they exemplify and how centralized the power structure is.

As seen in Table 4, all three risks, the negative outcomes are associated with an increase in elite power. These links indicate that elites both play a significant role in overcoming the global governance gaps, but their role may negatively affect local governance to the point of negating the potential benefits of local and global interactions.

Methodology

This work builds on both primary resources, namely interviews, and secondary resources, a significant body of literature, to analyze the global and local climate change governance outcomes. Given my time and resource constraints, I will use the office of the mayor, which I will also refer to as and the transportation companies as the focus of this analysis. While I will be looking at other actors, particularly global actors and community-based actors, I will use them to understand how the local governments and the local transportation companies manage their projects. I will use the term “actor” to refer to a diverse range of global and local entities that take up different governing responsibilities.

To analyze responses to the systems, I used both newspaper articles and interviews to gauge the local and global. I draw on extensive polling done by *Com Vamos* in both Bogotá and Medellín. While these polls are incredibly valuable, the questions they ask vary between the cities and from year to year. This inconsistency means that some useful comparisons could not be made. During January of 2019, I traveled to Bogotá and Medellín where I conducted interviews with a number of key actors in each city, observed the physical environment, and use the public transport systems. The interviews were semi-structured. A full list of the interviewees and my connection to each of them can be found in the appendix. I highlight my connections to these people to establish the potential bias in my interviews. Not only am I a white, upper-class,

American university student, but I was connected to most of these people through individuals with significant political power and global connections. This position likely influenced the way interviewees both appealed to global standards and their willingness to critique their city, especially in the case of Medellín.

To understand the constructions of authority I examined language in both World Bank documents and local planning documents. The environmental outcomes of the system and the levels of “globalness” in each city were the most difficult to measure. Understanding the restrictions of the measurements, I will analyze the degree of “globalness” in each city in accordance with neoliberal conceptions of competitiveness codified in global rankings and works by scholars like Greg Clark. To attempt to measure the environmental outcomes of each of these systems, I gathered data from World Bank, World Resource Institute (WRI), studies done by universities, statistics put out by the transport companies, and various newspaper reports.

I would like to note that by framing cities as responders to global incentives, this research implicitly gives global governments more authority over climate change issues than local governments and assumes a top down policy making process (at least linguistically). However, through this work, I hope to highlight how climate change policy making is highly multilevel and cities being able to respond or not respond to global incentives actually means they have significant power over their own policy making, additionally, the cases of the Metro de Medellín as well as the *ciclorutas* in Bogotá will show that an lower level of global governance can have positive impacts on the social outcomes and local sense of ownership, which in turn helps increase sustainability.

Hypothesis and Outline of Arguments

To explain these different outcomes of the systems, the chapters will analyze Bogotá in the late 1990s when TransMilenio forms, Medellín in the late 2000s during its miraculous turn around, and Bogotá in 2016 when Peñalosa returns as mayor and transforms the city again. Across these cases I will analyze the weaknesses in the endogenous environment, the incentives offered by the type global governance available at the time, the effect of said governance on the social-technical climate change components of the public transportation systems, the presence of the three global governance risks, and finally, the presence of buffers that may have reduced the impact of the global governance risk. Within each chapter, the sections will analyze each of these five aspects of global-local dynamics. The framework of global governance risks allows us to conceptualize some specific problems (aka risks) that local politicians run into when attempting to navigate local, global, and even national actors. It also helps to emphasize the power imbalances inherent in the capitalist global systems and the importance of climate change as a mechanism for constructing authority. As this analysis requires a number of moving pieces, I will lay out my key hypotheses as a way to guide your reading.

Starting with the global level, the state of the international system will shape the global incentives offered to the cities. The endogenous environment and the needs of the city will then determine the type of global governance incentive that the local government will respond to. In the late 1990s and early 2000s Bogotá engaged with multilateral global governance because it was a capital city, it needed to fix an inefficient private transportation, its political environment made policy making difficult, and it lacked financial resources. These endogenous factors cause Bogotá's local officials to seek political legitimacy, short term finance, and technical knowledge from global actors (namely the World Bank and the IDB). Medellín did not engage with global

actors when Bogotá did because it was not a capital city or economic powerhouse at the time, and it had to deal with its internal crisis and needed to solve a social problem. In the late 2000s, Medellín engaged with the network of public, private, and non-governmental global actors because it needed long term investment to maintain its social urbanism policies and short-term investment in the projects. These needs led the Medellín authorities to seek global recognition, “symbolic capital,” from a variety of global actors by branding itself and its transportation projects.

The type of global actor the city appeals to will help determine the type of risk. In general, a stronger multilateral system tends to result in technocratic and political global governance risks and a more multilevel system increases the neoliberal global governance risks, Figure 1 shows this progression. During the construction of the systems, Bogotá experienced multilateral global governance in the form of World Bank and IDB loans, while Medellín experienced multilevel governance in the form of international loans, events, and private companies, such as Siemens, working on projects. As the multilateral organizations felt their center of power shifting around the 1990s, they began actively looking to increase municipal authority by promoting decentralization as part of the Washington Consensus and interacted with Bogotá as more of a partner. This partnership increased the initial success of the system, especially in regard to its technical success and innovation. However, the expansion of TransMilenio was hindered by the technocratic risks which decreased local engagement with and support for the system. TransMilenio also exhibited the political risks that tied the system too closely to Peñalosa and global groups after both the World Bank and Peñalosa used the projects to legitimize their authority. While the neoliberal risk is not as prevalent in this stage, the problematic power of the private buses within TransMilenio reveals that regardless of the type of

global interaction, the power of private companies tends to increase with increased global governance. Private groups have presented some of the largest impediments to sustainable transport in all three cases.

When looking at the cases of Medellín and Bogotá today, changes in the global governance system in the late 2000s reshaped the way cities interacted with global actors. The new multilevel system centered less on the traditional multilateral organization and more on a network of public, private, and non-governmental actors. This new global market created more competition for cities like Medellín and required that they sell themselves to global capital. This global-local interaction exhibits neoliberal risks of global governance. Peñalosa's second term as mayor of Bogotá in 2016 exhibits both neoliberal and political risks of global governance; however, his move to mimic Medellín's transportation programs indicates the Metro succeeded in avoiding some of the risks Bogotá incurred. Figure 3 summarizes these relationships.

Figure 3: Overview of Global Governance Risk Process



Source: Eleanor Jackson

In both cities and for each type of global governance risk, stronger local culture and sense of civic duty mitigates the governance risk. While the initial Metro project was a disaster in terms of technical planning and transparency, Medellín avoided the worst consequences of the global risks because the city had to create a strong local community with social cohesion (in part to overcome the cartel violence) before increasing engagement with multilevel global governance. The social support surrounding the Metro helped to mitigate some of the neoliberal risks of global governance despite Brand's skepticism.

Chapter Two

Bogotá and Multilateral Institutions: Technocratic and Political Risks

Introduction

This chapter will explain TransMilenio's strong start and subsequent decline by articulating how the technocratic and political risks of global governance impacted the system. Starting with the initial local crisis where the economic inefficiencies of the private bus system pushed the local government to prioritize new public transport, the first section will explain how the endogenous environment led local actors to interact with global actors. After characterizing the endogenous environment, the next section will look at the global system and explain the key interactions between global actors and the local government. During the creation of TransMilenio, the multilateral model of global governance remained dominant and exerted significant influence over Bogotá in the 1990s through both national and local loans as well as development programs. The multilateral model of global governance favored giving incentives for climate change actions based on immediate financial resources in the form of conditional loans, technical resources, and the provision of authority.⁵³ The last sections will articulate how the successes and failures of TransMilenio can be explained by the technocratic and political global governance risks.

⁵³They also operate through the soft law and normative aspects of global governance; however, the loans and programs represent the focus of their work and differentiate them from the multilevel governance systems. That being said, the multilevel system is also emerging at this time, and the implications of that will be drawn out a bit in this chapter.

Endogenous Environment

The Public Transportation Crisis in Bogotá

As Carmin et al. argues, the endogenous environment in the city determines how well the local government can implement climate change policy and whether or not they will uptake global incentives for climate change governance.⁵⁴ The first aspect of the endogenous environment is the type of crisis that led the city closer to global actors. The crisis that triggered TransMilenio was not environmental but stemmed from a faulty private system. Transportation overhaul was on the mind of mayors in Bogotá almost as long as those in Medellín; in fact, they tried and failed to obtain funding for a metro within a few months of Medellín.⁵⁵ Prior to TransMilenio, the bus system in Bogotá was a private conglomerate that citizens and authorities considered corrupt, environmentally unfriendly, unsafe, unpredictable, and oversupplied. High levels of competition between operators for passengers led to inefficiencies of scheduling and dangerous driving that resulted in *la guerra del centavo* (the penny war) and prompted officials to look for an alternative system.⁵⁶ The economic inefficiencies of the private bus system created the crisis that pushed the local government to invest in new public transportation. The nature of this crisis as a service provision, transport centric problem both shaped the initial goals of the project and made Bogotá more likely to turn to global governments that positioned themselves as economic authorities capable of tackling technical issues.

⁵⁴ Carmin et al., "Urban Climate Adaption in the Global South: Planning in an Emerging Policy Domain"

⁵⁵ Ardila Gómez, "Transit Planning in Curitiba and Bogotá."

⁵⁶ Valderrama Pineda, "How Do We Co-Produce Urban Transport Systems and the City? The Case of TransMilenio and Bogotá," in *Urban Assemblages: How Actor-Network Theory Changes Urban Studies.*, (2010)

Fiscal and Political Autonomy

Bogotá's local autonomy was very low until 1991 when the decentralization policies promoted by international groups increased Bogotá's local budget as well as the municipality's ability to control its allocation. Dietz and Myers claim that the change in financial policy caused an increase in Bogotá's tax revenues. They calculate that the city's tax revenue increased by 77 percent from 1993 to 1994. This increase in tax revenue was particularly important in contrast to 1991 when 23 percent of Bogotá's revenue came from borrowing.⁵⁷ The prevalence of borrowing was particularly problematic as city officials in Bogotá complained that Congress paid little attention to the capital city.⁵⁸ The relative historic weakness of Bogotá's local government may have contributed to the relative strength of private groups, namely the private bus companies, when it came to public-private partnerships. That being said, between 1991 and 1996, capital expenditure increased steadily from around 500 billion pesos annually to 2,000 billion pesos annually. This increase in expenditures indicates that decentralization policies did give the government a renewed ability to implement policy independently of the national government. This change had a more significant impact on Bogotá than Medellín, which relied on revenues from its state companies that will be discussed in the next chapter.⁵⁹

Despite increasing municipal fiscal autonomy, financing a metro project, as was Bogotá's initial goal, remained difficult due to the 1989 Metro Law.⁶⁰ In 1982, the national government agreed to finance Medellín's metro in large part due to President Betancur, a process which will be addressed in the Medellín chapter. However, the national government's decision to finance

⁵⁷ David Myers and Henry Dietz, eds., *Capital City Politics In Latin America* (United States: Lynne Rienner Publishers, 2002).

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

Medellín's metro meant Bogotá would not receive financing and Betancur told them "we will leave this for the next government."⁶¹ After the Metro project went into debt, the national government passed the 1989 Metro Law.⁶² The law allowed local governments to increase taxes by 20% to cover the costs of infrastructure development, but it also stated that the local government must cover 70% of the costs and that the national government would cover 30%.⁶³ Bogotá was constrained by Medellín's mistakes.

Bogotá's low municipal coordination also proved problematic. Low coordination between different municipal branches led to as the lack of consistency between the Territorial Order Plan, *Plan de Ordenamiento Territorial* (POT) and *Zonal* plans.⁶⁴ The four year lag for obtaining approval of land consolidation or construction permits make it hard to implement long term spatial visions and inhibit the private sector to respond to the economic changes brought by the TransMilenio corridors.⁶⁵ The continued lack of horizontal coordination that hinders planning in the city even today reveals how global governance can address short term, technical issues well but struggles with long term, systemic changes.

Democratic Legitimacy and Local Participation

In both Bogotá and Medellín, local governments have suffered from what Carlos Cadena, Academic Coordinator for Urban and Environmental Studies (URBAM) at EAFIT, Director of the World Bike Forum, and co-founder of *La Ciudad Verde*, called the "Adam and Eve

⁶¹ Ardila Gómez, "Transit Planning in Curitiba and Bogotá."

⁶² Echavarría, Rentería, and Steiner, "Decentralization and Bailouts in Colombia."

⁶³ Valderrama Pineda, "How Do We Co-Produce Urban Transport Systems and the City? The Case of TransMilenio and Bogotá."

⁶⁴ Hiroaki Suzuki, Roberto Cervero, and Kanako Iuchi, *Transforming Cities with Transit: Transit and Land-Use Integration for Sustainable Urban Development*.

⁶⁵ Ibid.

complex.”⁶⁶ This Adam and Eve complex is a quintessential Colombian problem where each mayor or president undoes the work done by the mayor before them and starts fresh to prove their policies are better. The national law that prevents mayors from serving consecutive terms exacerbates this Adam and Eve complex. On top of the Adam and Eve complex, in Bogotá, the lack of political consensus was cited as a major issue for the systems more frequently than in Medellín. For instance, Andres Ortíz, head of the Secretary of Planning, argued that Medellín’s mayors win by 40% and govern with 80% approval, in Bogotá they win with 35% and govern with 20%.⁶⁷ Between Antanas Mockus (2001-2004), Lucho Garzón (2004-2007), and Samuel Moreno (2008-2010), the only mayor to increase in favorability over their term was Mockus (from 42% to 58 %).⁶⁸ Overall the tumultuous nature of politics in Bogotá, as well as the emphasis on transportation in politics, hurt Bogotá’s ability to make long term policy and create cohesive municipal transport plan.

The weak social cohesion and the polarized political environment also created a near constant need for local officials to find sources of political legitimacy. In part due to its nature as a capital city and the largest city in the country, Bogotá has a more diverse ethnic and geographic makeup. In my interview with Zoraida Rueda, Advisor to the City Council of Bogotá, she described how the majority of people living in Bogotá did not identify as city natives.⁶⁹ She and many others expressed envy for Medellín’s cohesive *paisa* culture and credited Medellín’s success to this social cohesion. While they often referenced this discrepancy as an unfortunate fact of life, the city has actively worked to change this reality. As the city gained more autonomy, mayors realized that the lack of community engagement and social cohesion would be

⁶⁶Cadena, Carlos. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

⁶⁷ Ortíz, Andres. Interview with Eleanor Jackson. Personal Interview. Bogotá, January 2019.

⁶⁸ Data from annual “*Encuesta de Percepcion Ciudadana*,” by *Bogotá Como Vamos*.

⁶⁹ Rueda, Zoraida. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

a key issue. On the initial 1996 World Bank Municipal Development Program report, they reference this lack of community:

“One of the basic themes of the present Mayor is that the low sense of civic pride and community responsibility in the District contributes to the current chaotic and poor condition of the system. To address this concern, he has initiated several programs involving citizen participation, public education and awareness campaigns and he has also appointed technical experts to review urban transport sector operations, including institutional changes which are aimed at strengthening the strategic planning capability of the District.”⁷⁰

This funding resulted in Mayor Antanas Mockus’s *cultura ciudadana* (citizen culture) programs. *Cultura ciudadana* refers to the norms and values that govern the citizens. These programs did not solve the problem, and the lack of social cohesion contributed to a lack of political strength and an inability to govern, especially as the social makeup of the city became even more diverse during the more intense periods of violence in Colombia as people from rural areas flocked to the safety of the city in search of a better life.

Bogotá’s Responses to Global Governance Incentives: Co-Creation of TransMilenio

The Multilateral Governance System and Bogotá

In part because Bogotá was the capital city, it was pulled into transnational city networks, like the C40, soon after they emerged. This earlier entry meant that Bogotá became more globalized and is still more fully incorporated into global networks than Medellín even today. On these networks’ websites, Bogotá has fairly full pages of information and is included in more studies than Medellín. Similarly, Bogotá is measured in significantly more global city indexes like the AT Kearney global index measuring 135 “global cities.”

⁷⁰ “Projects: Municipal Development Project | The World Bank,” accessed November 24, 2018, <http://projects.worldbank.org/P006852/municipal-development-project?lang=en>.

As mentioned in the previous section, in 1991, the World Bank implemented the “Municipal Development Program” that aimed to improve local government institutions in support of this move towards decentralization.⁷¹ This program complemented the Constitution of 1991, which marked the full adoption of decentralization in Colombia and gave local governments new powers to democratically elect mayors, collect taxes, and allocate funds.⁷² The development program and the constitution as well as the connection between them, emphasized the rise of “good urban governance” in Colombia and particularly in Bogotá. Bogotá exemplified the second wave of global cities, “emerging global cities,” defined as a large capital city whose economic performance is closely indexed with global demand.⁷³

This decentralization process gave Bogotá even more local autonomy than other cities in Colombia. According to a 1996 World Bank report:

“the Government issued a decree in July 1993, which provisions of the Constitution made equivalent to a law - Decree 1421, Statute of Bogotá - through which the District enjoys a special status in administrative, organizational, and fiscal terms... Currently, it receives revenues which in the rest of Colombia only accrue to the departmental governments (i.e. states) and its central administration is subdivided in secretariats and departments which operate with funds handled by the District Treasury (Secretaria de Hacienda).”

This status and increased local autonomy increased the city’s ability to implement “good urban governance.” Becoming a bigger player in the global system at this time meant that, while both Bogotá and Medellín interacted with multinational private companies, international media, and international NGOs, Bogotá was more integrated into the multilateral institutions. For instance, when searching the World Bank document database, the term “Bogota” searched within “Colombia” yields 511 documents and the term “Medellín” yields only 56 disclosed

⁷¹ World Bank “Projects : Municipal Development Project | The World Bank,” May 9, 2001.

<http://projects.worldbank.org/P006852/municipal-development-project?lang=en>.

⁷² OECD, “Sub-National Public Finance in Colombia,” OECD Territorial Reviews: Colombia, 2014.

⁷³ Greg Clark, *Global Cities* (Washington, DC: Brookings Institute Press, 2016).

documents.⁷⁴ While the larger number of documents can in part be attributed to the World Bank's role in funding TransMilenio and implementing the National Urban Transport Program (NUTP) based on the TransMilenio model, these documents indicate a far closer relationship between Bogotá and the World Bank than between Medellín and the World Bank.

The Creation of TransMilenio

TransMilenio was financed by a fuel tax (46%), local revenues (28%), a credit from the World Bank (6%) and grants from the national government (20%). Half of the 25% gasoline tax levied in Bogotá is used for the continued expansion of TransMilenio.”⁷⁵ Despite only 6% of the public financing for TransMilenio coming from the World Bank (because Bogotá struggled to obtain financing for the project until the World Bank intervened) first to increase municipal autonomy through the municipal development programs, then to provide this support for TransMilenio, the World Bank's involvement outstrips the 6% credit.

The system itself was described as an innovative model featuring public private partnerships. Operations are contracted through concession contracts with private operators from local transportation companies associated with national and international investors.⁷⁶ According to Ardila Gómez, the TransMilenio model breaks the traditional public transport system and creates a “bimodal” transit structure that is a “competition for the market” meaning that operators have competitive bids, the contracts expire, but there are barriers to entry to prevent the overcrowding. It is bimodal in that conventional modes of transport compete through price while

⁷⁴ This measures documents in both English and Spanish.

⁷⁵ “TransMilenio: Renewing Bogotá's Transport System,” *Centre for Public Impact (CPI)* (blog), accessed April 19, 2019, <https://www.centreforpublicimpact.org/case-study/TransMilenio/>.

⁷⁶ Edgar E. Sandoval and Dario Hidalgo, “TransMilenio: A High Capacity - Low Cost Bus Rapid Transit System Developed for Bogotá, Colombia,” in *Urban Public Transportation System* (Second International Conference on Urban Public Transportation Systems, Alexandria, Virginia, United States: American Society of Civil Engineers, 2004), 37–49, [https://doi.org/10.1061/40717\(148\)4](https://doi.org/10.1061/40717(148)4).

the TransMilenio mode competes through quality.⁷⁷ Table 5 lays out the basic duties of the private and public aspects of TransMilenio.

Table 5: Division of PPP Powers in TransMilenio

PPP Structure	Powers
TransMilenio	<ul style="list-style-type: none"> • Plan and supervise service • Collect fares through a third party • Pay operators per km logged (not per passenger) • Fare covers system costs • Concessions end when fleet logs 850,000 km on average per bus
Private Concessionaires	<ul style="list-style-type: none"> • Have the right to incentives • Offer good service bc they get 80% of TransSantiago contracts assigned them demand risk • Profit highly

Source: Ardila Gómez, 2004⁷⁸

Because of the World Bank's direct influence through loans as well as technical support through planning and monitoring, the process of creating TransMilenio was in many ways a co-creation between the local government and the global government. Unlike the consortium of Spanish-German banks that provided the loan for the Metro de Medellín with the backing of the national government, the World Bank and the mayor were the key participants in the development of TransMilenio. While the national Ministry of Transportation was involved in the discussions; however, the mayor was more influential. In my interview with Angelica Castro, ex-CEO of TransMilenio and ex-advisor to the National Ministry of Transportation, she noted that the mayor of Bogotá had more sway than the Minister of Transport during the discussions about TransMilenio.⁷⁹ This difference in influence can be attributed to the World Bank's mission as

⁷⁷ Ibid.

⁷⁸ Arturo Ardila Gómez, "Transit Planning in Curitiba and Bogotá : Roles in Interaction, Risk, and Change" (Thesis, Massachusetts Institute of Technology, 2004), <http://dspace.mit.edu/handle/1721.1/28791>.

⁷⁹ Castro, Angelica. Interview with Eleanor Jackson. Personal Interview. Skype, March 2019.

well as its need to actively promote its own authority in the shifting global governance system. The scope and nature of its work generates a greater need for legitimacy than that of the private-national banks or individual corporations.

The type of work the World Bank does in increasing transparency and promoting accountability played a role in the World Bank publicizing and studying TransMilenio to the extent it did. As we will see in the risks sections, creating a narrative featuring a World Bank project legitimizes the system by showing that it adheres to the global norms; paradoxically, this same narrative eventually damages the system within Bogotá as it reduces a sense of local ownership and local responsibility for the system.

Technocratic and Political Global Governance Risks Impact on Sustainability

The Benefits of Multilateral Global Governance

Before discussing the failures, it is important to note there were benefits to the World Bank's involvement as well. Despite these social failures that will be discussed, the World Bank's involvement in Bogotá's transportation system did produce an initially strong system that increased sustainability and solved the transport problem from a technical standpoint. The World Bank's involvement in the system successfully increased transparency, promoted knowledge sharing with other cities in and out of Colombia, and provided financial incentives for programs to reduce emissions, which all contributed to the sustainability of the system. According to a 2013 World Bank report, riding Bogotá's TransMilenio results in average time savings of 32 percent (20 minutes) per trip compared to the traditional bus system. This represents a savings of more than 10 hours per month for the average rider. TransMilenio has also been able to abate 1.9 million tons of carbon dioxide equivalent between 2001 and 2010. The system has scrapped

more than 2,100 old buses since its inception; decreased accident rates by 90 percent in the corridors where the system operates; and reduced noise levels by 3-10 decibels.⁸⁰

Unlike the Metro de Medellín, where poor planning and strong local political power resulted in a corrupt financing process and initial fiscal ruin, TransMilenio exhibited a higher level of planning and transparency. Even today, looking at the budgets online, TransMilenio provides a more detailed account of its finances than the Metro de Medellín. While some, like Fernando Rojas, expert on TransMilenio, indicate the spending on planning may have been excessive, detailed planning helped avoid the crisis of Medellín.⁸¹ This transparency helped increase confidence in the city as well as improve TransMilenio. In 2008, Bogotá became the first city in Latin America to sign a direct loan with the International Finance Corporation (IFC) without guarantee from the central government or any other group.⁸² This loan signified Bogotá's success creating global investor confidence in the city. This increased confidence shows how Bogotá and TransMilenio hit all the right notes for good urban governance; however, even measurable global success does not necessarily translate to local support. Come 2006, just as the project was experiencing the some of the largest local protests yet, TransMilenio became the first massive transport project in the world approved and registered under the Kyoto Protocol to partake in the Clean Development Mechanism (CDM) project.⁸³ Between 2006 and 2007, Bogotá received 2.637 billion pesos (1.3 million USD) for carbon reductions.⁸⁴ An *El Tiempo*

⁸⁰ "Colombian Cities: More Livable, Green, and Inclusive," World Bank, Blog, accessed March 19, 2019, <http://projects-beta.worldbank.org/en/results/2013/04/03/colombian-cities-more-livable-green-and-inclusive>.

⁸¹ Rojas, Fernando. Interview with Eleanor Jackson. Personal Interview. Bogotá, January 2019.

⁸² Luis Eslava, *Local Space, Global Life: The Everyday Operation of International Law and Development* (Cambridge University Press, 2015).

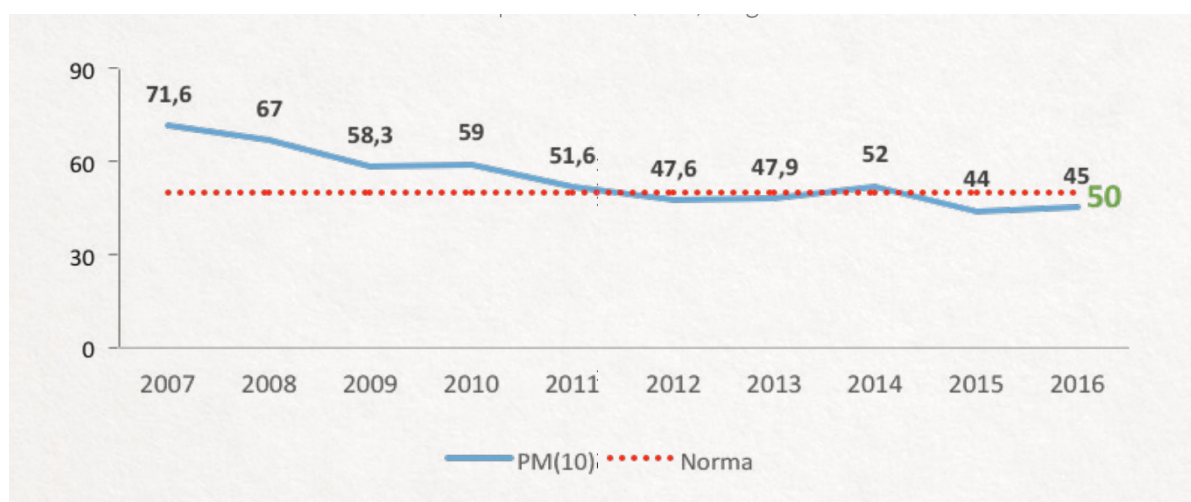
⁸³ "TransMilenio," accessed March 19, 2019, www.TransMilenio.gov.co.

⁸⁴ Casa Editorial El Tiempo, "TransMilenio recibe 1.300 millones por lo que dejó de contaminar durante 2008," *El Tiempo*, November 19, 2009, <https://www.eltiempo.com/archivo/documento/CMS-6632087>.

article boasted that Bogotá landed the front page of the *New York Times* with this news.⁸⁵ This decision further emphasized the importance of global attention and the tension between global and local interests.

Despite initial environmental successes, Figure 2 shows that from 2007 to 2012 Bogotá reduced the concentration of particles from 71.6 to 50, but from 2012 to 2016 the number barely changed. I argue that this flatline in progress came in part from the global governance risks addressed in the next sections and not simply from maxing out the technical capacity for change.

Figure 4: Concentration of Material Particles in Bogotá from 2007-2016



Source: Informe de Calidad de Vida, 2017, BogotáComoVamos.org

The Technocratic Global Governance Risk

Even with the technical successes, TransMilenio still the negative effects of the technocratic global governance risk in the form of low local support and poor communication that led to an eventual backlash. Multilateral intuitions, like the World Bank, have promoted

⁸⁵ The article noted that the Metro and MetroCable in Medellín had applied and received money from the CDM, but their offsets were much smaller.

technocracy and statistics as a measure of good governance, so the Bank's involvement in the project increased the value placed on technocracy. As the Medellín case will also demonstrate, global engagement tends to increase the city's attention to planning and statistics as a means of complying with the emphasis on accountability. These practices not only drew on global resources, but also followed global norms in prioritizing technocratic planning. Given the inverse relationship between appeals to technocracy and democracy that ____ found, the links between global and technocratic values highlights the importance of asking who is accountable to whom in the global system.

In this case the technocratic risk shows how Bogotá became more accountable to the global than the local at the cost of the long-term sustainability of TransMilenio. Hunt looked at the citizen participation and the contestation over TransMilenio. Her work found that technocrats depoliticized policy decisions and demobilized civil society by opting for formulas and disregarding the knowledge of citizens, who drew on relational measurements and experiential information. In general, citizens felt excluded from the planning process and disagreed with technocratic opinions on time, usability, cost, overcrowding, and security.⁸⁶ Zoraida Rueda echoed this sentiment in our interview and explained that the city often practiced surface level participation. Colombia has a strong legal framework for requiring citizen participation in the planning of almost any project. However, all an official must do to prove citizen participation is collect a certain number of signatories saying, "yes I attended this meeting."⁸⁷

This failure in the official public consultation process stands in stark contrast to Medellín where strong planning coalitions between local actors and participatory budgeting processes

⁸⁶ Stacey Hunt, "Conflict and Convergence between Experts and Citizens: Bogotá's TransMilenio," *Latin American Perspectives* 44, no. 2 (2017): 91–110, <https://doi.org/10.1177/009458X16668319>.

⁸⁷ Rueda, Zoraida. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

contribute to local ownership over the system. In Bogotá, the robust political debates taking place in the media, through protests, and through the street art, more readily reflect global norms when it comes to what constitutes public participation. However, while the public outcries over the system look like local engagement, they stem from local dissatisfaction and the sense that citizens do not have a voice in the program. The lack of local investment in the early stages of the program exacerbated by the technocratic risk meant that when the system ran into problems and progress stalled between 2006 and 2014, the public was quick to turn against the project, which in turn increased its problems.

The Political Global Governance Risk

Rhetorical Ownership and Legitimacy

While the rise of CSR initiatives and advertising in the 2010s resulted in an increased the number of private companies and subnational actors involved in “development” projects, the international institutions have traditionally been the ones to both do and promote development work. Because their authority in this work rests on a moral obligation to increase peace and prosperity, international institutions have incentives to promote their work and take ownership over projects as a way to legitimize their authority. In the case of TransMilenio, the World Bank positions itself as the origin of urban transportation projects in Colombia. This initial implementation of TransMilenio was acclaimed by multilateral actors through favorable case studies, reports, and articles on Bogotá’s innovative solution to urban mobility—global recognition that may have undermined local control. In the 1996 “Bogotá Urban Transport Project” report the Bank details its involvement in Colombia as though its projects are the driving force behind development

“The Public Sector Expenditure Review of 1987 first defined a framework for possible urban transport operations in Bogotá and other Colombian cities. Subsequently, the 1993 Country Strategy Paper identified the need to address large-city congestion and included the Project in the FY93-FY96 lending program. The proposed project was initially entered into the Bank's lending program in June 1989, and first appraised in June 1990. A post-appraisal mission was carried out in December 1990 after the District restructured the role of some sector agencies, and negotiations were held in July 1991. After negotiations, the District's failure to implement the proposed betterment levies and its deteriorating financial performance led the Bank and the national government to postpone processing the project... It was only in February 1995 that the loan processing resumed after the newly-elected Mayor of Bogotá requested this and a re-appraisal mission found that the above issues had been satisfactorily resolved.”⁸⁸

In briefs and blogs on the World Bank website, they call TransMilenio as a “Bank-financed program” and highlight the 1996 National Urban Transport Program (NUTP), which now focus on BRT investments in Colombia’s largest cities, as the inspiration for TransMilenio despite the fact that the BRT aspect of the system only came to fruition in 1998.⁸⁹

The importance of perceived local ownership and a higher actual municipal ownership over transport programs can be seen through the success of Bogotá’s bike system. The highly successful CieloRutas and the extensive bike networks in Bogotá provide a great point of comparison for TransMilenio and for Medellín. While the World Bank often references the bike systems success, the creation of these programs predated the 1996 transportation programs. The 1996 World Bank report also highlighted the bike system and encouraged a continuation of it; however, the report credited the bike system to the government saying that “the Government is promoting the use of bicycles” meanwhile, they claim credit for TransMilenio in the previous paragraph saying “the project promoted TransMilenio.”⁹⁰ The local love for bikes was one of the most surprising aspects of my interviews in Bogotá. During my interview with Ingrid Joanna

⁸⁸ World Bank, “Staff Appraisal Report: Bogotá Urban Transport Project” (Environment and Urban Development Division, April 25, 1996).

⁸⁹Ibid.

⁹⁰ World Bank, “ICR Review: Co Urban Transport” (Operations Evaluations Department, 2001).

Portilla Galindo, Director of Transport and Infrastructure for the Secretary of Mobility, she described the different teams in the transport department and the size of the biking group in comparison to the rest was staggering.⁹¹ Walking out of the interview, my brother, who accompanied me to most of my interviews in Bogotá, laughed “they really seem to love bikes here. Like every interview we’ve gone to, you start asking about the buses and they just go *that’s great, but, like, let’s talk about bikes.*” From a quantitative standpoint, citizen satisfaction with bikes ranked the highest of any mode of transport in 2010 and remained the highest with upwards of 85% of the vote until 2018, when walking edged out bikes for frontrunner.⁹² The influence of rhetorical ownership over local sense of ownership over the system can be seen through news articles on the biking programs as well. Articles generally give credit for the bike programs either to Mockus (who is associated more with local pride) or to “Bogotá,” while the articles on TransMilenio almost always mention Peñalosa by name.

Personalization and Politicization

The increase in World Bank engagement in Bogotá took place largely under two mayors, Antanas Mockus (1995-1998) and Enrique Peñalosa (1998-2001). While both were heavily involved in overhauling public transportation and in dealing with the World Bank, Mockus and Peñalosa have very different identities especially when it comes to highlighting their global networks. Exploring their relationship to TransMilenio, with a focus on Peñalosa’s legacy, reveals how appealing too much to the authority of global institutions can undermine the transport system by helping to tie the system to the identity of an individual, in this case

⁹¹ Galindo Portilla, Ingrid. Interview with Eleanor Jackson. Bogotá, Januray 2019.

⁹² “Encuesta de Percepción Bogotá Cómo Vamos 2018,” accessed November 11, 2018, <http://www.bogotacomovamos.org/documentos/encuesta-de-percepcion-bogota-como-vamos-2004/>.

Peñalosa. This personalization then leads to politicization by feeding into the Adam and Eve complex discussed earlier. While tying the TransMilenio to the World Bank played a major role in getting the project off the ground and garnered Peñalosa praise both inside and outside the city, this linkage put local support in a precarious position as well given that locals did not always view global institutions favorably as mayors are less equipped to shape public perception of global actors than public perception of local government.

Peñalosa did recognize the importance of local approval, particularly from the City Council. His second objective in forming TransMilenio was to get the City Council's approval given that he did not think the existing city agencies lacked the capacity to deal with TransMilenio and approval from the City Council "would be a huge political boost."⁹³ Despite this understanding, as a mayor Peñalosa leaned towards global legitimation.

The international institutions provided both symbolic and actual sources of local legitimation. Among the governing elite, Mockus and Peñalosa initially received symbolic legitimacy through the global institution's authority that helped their proposal pass political deadlock. This symbolic legitimacy could then translate to local legitimacy as the World Bank supplied loans and technical assistance that provided the type of concrete outcome that voters care about. After creating TransMilenio, starting the *Pico y Placa*, a program which restricted certain license plates on certain days, and improving parks, Peñalosa ended his first term with some of the highest approval ratings despite low approval in the middle of his term.⁹⁴ Despite actually generating local approval, this type of political legitimacy created a few problems. First, many of the structural and social issues that resulted in Bogotá's political and social divisions

⁹³ Gómez, 2004.

⁹⁴ Laura Daniela Gómez Rodríguez, Ángela María Herrera Puyana, and María Fernanda García Fonseca, "¿Por qué TransMilenio en Bogotá está en crisis?," *Revista Ciudades, Estados y Política* 4, no. 3 (September 1, 2017): 103–18.

were not fixed; they were merely bandaged by the World Bank's money and reputation. Second, because the system became more personalized and politicized through its ties to these mayors, following through on Peñalosa's initial plan, let alone making other improvements, proved extremely difficult due to the heated political debates surrounding the existence of the system in the first place. Third, being further politicized through its ties with global actors, TransMilenio risked losing its legitimacy if local public opinion turned against the global institutions, a problem which Mockus dealt with better than Peñalosa.

Appealing to global authority both elevated the power and prestige of the mayor as well as the ties between mayor and transport system. In both cities, the mayors are extremely powerful national figures. In general, the prestige of the mayor appears much stronger in Bogotá than in Medellín, and this power creates a spotlight around them that fed into the Adam and Eve complex, the tendency for each mayor to want to start from scratch. The political importance of TransMilenio and its ties to Peñalosa, appears to increase the Adam and Eve complex surrounding TransMilenio. While Mockus (2001-2003) and Luis Eduardo Garzón (2004-2006) did not abandon the objectives of the project despite not focusing on it as heavily, in 2007 Samuel Moreno won his office by running on a well-received subway platform that built on the rising backlash against the system.⁹⁵ This win is made more significant in light of the global success TransMilenio experienced in 2006 as one of the first projects to use the CDM mentioned earlier in this chapter.

In our conversation, Angelica Castro said that she believed one of the key weaknesses of TransMilenio is that the system's image is heavily tied to Peñalosa, and thus, to politics.⁹⁶ Peñalosa's aggressive promotion of TransMilenio and the BRT system after his time as mayor

⁹⁵ Rojas, Fernando. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

⁹⁶ Ibid.

certainly exemplifies this view. Interviewees and articles alike link Peñalosa with TransMilenio, calling him “the father of TransMilenio.” In a search of the Proquest Global News Stream, “TransMilenio n/10 Peñalosa” produced 224 results with largely positive news articles. The mayor with the next highest number of hits was Gustavo Petro with 204; however, the majority of the articles were about his responses to protests against the system due to his 2007 campaign against TransMilenio.⁹⁷ During the campaign, Angelica Castro attempted to distribute pamphlets to communicate TransMilenio’s Phase 3 to the citizens; however, because of the highly political nature of the system, she was accused of using the system to back a particular political candidate.⁹⁸ This campaign made it difficult for TransMilenio to help citizens feel part of the system and to create the social investment necessary for long term sustainability. In my interview with Fernando Rojas, he highlighted the how the system’s failure to successfully implement the stages of planning correlated with political divisions.⁹⁹

In comparison with Peñalosa, Mockus managed to appeal to both global and local groups and strike a balance within the political global governance risk. As a mayor, Peñalosa epitomizes the pros and cons of appealing to global governance as a means of legitimizing a project. Not only is Peñalosa tied to the World Bank through the creation of TransMilenio, but he was born in Washington D.C. and attended Duke University.¹⁰⁰ Mockus, one of the most popular mayors in Bogotá, and the only one to increase in favor during his term, also exhibited appeals to international norms, especially technocracy.¹⁰¹ However, Mockus worked hard to promote his

⁹⁷ Ibid.

⁹⁸ Casa Editorial El Tiempo, “Gerente de TransMilenio niega supuesto uso de folleto para favorecer campaña de Enrique Peñalosa,” El Tiempo, September 12, 2007, <https://www.eltiempo.com/archivo/documento/CMS-3720525>.

⁹⁹ Rojas, Fernando. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁰⁰ Ibid.

¹⁰¹ “Mayor Who Mooned Finds His Star Rising In Bogota,” *Washington Post*, June 14, 1995, <https://www.washingtonpost.com/archive/politics/1995/06/14/mayor-who-mooned-finds-his-star-rising-in-bogota/86acff6d-bce9-4dff-b715-ce47e0f0e44c/>.

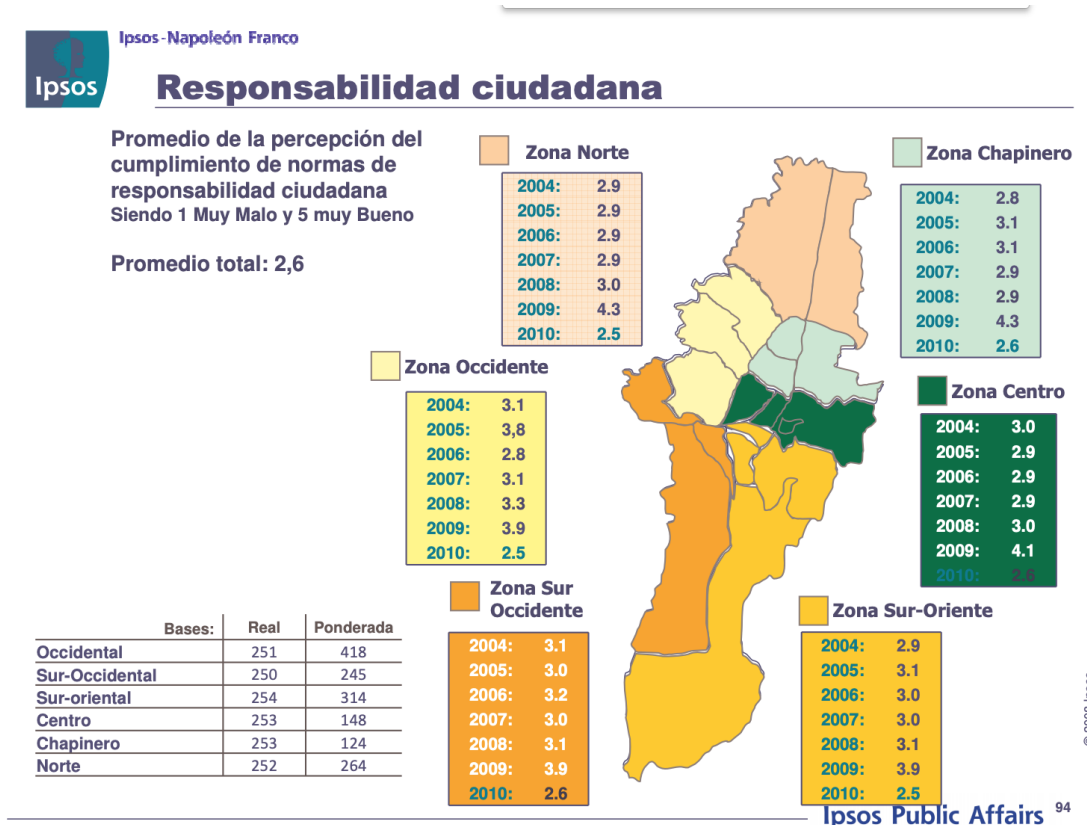
local identity. When talking about their support for Mockus, people like Fernando Rojas referenced his appeal as a professorial figure. This professorial appearance also adheres to technocratic planning norms and reveals there is local support for both technocratic discourse and methods. However, the case of Mockus differs from that of Peñalosa in that Mockus actively promoted his local loyalty. Despite having Lithuanian parents and the right to an EU passport, Mockus carries only a Colombian passport, emphasizing the importance of being perceived as a loyal Colombian.¹⁰² His emphasis on his local identity highlights the political risk in associating too strongly with local institutions.

Evidence of the Low of Local Engagement and Democratic Legitimacy

Fernando Rojas also claimed that one of the main problems with the project was that citizens did not have a sense of ownership. As seen above, this lack of ownership came in part from the technocratic and political risks of global governance. The creation of *cultura ciudadana*, had been one of the main concerns in Bogotá due to its history of social fracture. While the diverse population in Bogotá may help to make it a more global city, the lack of city pride or cohesive identity serve as a major impediment for implementing successful climate change governance. Figure 5 shows that from 2004 to 2008, citizen perceptions that others “complied with the norms of responsible citizenship” were equally low in all regions. While this number improved significantly in 2009, the trend still indicates a low trust in other citizens across all socio-economic and geographic divides.

¹⁰² Personal conversation with Professor Dávila, London, 2019.

Figure 5: Perception of Compliance with The Norms of Civic Responsibilities



Source: BogotáComoVamos, “Encuesta de Percepcion Ciudadana, 2010.

In addition to the low overall perception of civic responsibility, the sense of responsibility to care for TransMilenio itself decreased significantly as the system encountered problems. Between 2004 and 2010, the sense that citizens had a responsibility to care for TransMilenio decreased from 3.7 out of 5 to 2.5 out of 5 with the largest decrease between 2008 and 2010.¹⁰³ The sense of responsibility for every other category including abiding by the *pico y placa* regulations remained roughly the same over the years. Because these other categories held steady while TransMilenio floundered, the lack of progress made largely due to a lack of local political support may have hurt the system.

¹⁰³ Bogotá Como Vamos, “Encuesta de Percepcion Ciudadana” (2010).

As for the other political risk based in the potential for local actors to turn against the global actors themselves, Zoraida Rueda talked about the World Bank and the IDB seeing Bogotá as the “ideal city to in-debt” both because of its high taxes and because they always pay back their loans.¹⁰⁴ While in theory this would be the goal for global cities—prove bankability and secure financing—her intonation indicated that she, among others, believe the money from the bank hurt more than it help. This negative perception of multilateral institutions represents another risk of using global governance as shortcuts for political legitimation. As we will see in Chapter 4, this low opinion of global actors has been made significantly worse due to recent scandals involving diesel buses and unfair auctions under Peñalosa.

Additionally, global actors will not unconditionally support a system. While the conditional nature of multilateral international engagement did help decrease corruption and increase transparency, it also depending on global favor problematic. Despite initially positive reviews, TransMilenio fell out of local, then international, favor. This decline in favor occurred in part because successive mayors did not continue to build on the system due to political and logistical problems. As the system failed to develop according to plan, it also failed to generate local support and engagement. Without a strong base of trust among citizens, a series of crises and bad press took a toll on the system. The key controversies included sexual assault, air pollution from the diesel buses, accidents, and old fleets.¹⁰⁵ Major protests in 2006 and 2012 hurt the system further. Instead of promoting TransMilenio at the local level, Peñalosa toured the world and worked with Volvo to promote BRT systems in other countries. His 2013 Ted Talk on how buses represent “democracy in action” proves highly ironic and highly globalized.¹⁰⁶

¹⁰⁴ Rueda, Zoraida. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁰⁵ Stacey Hunt, “Conflict and Convergence between Experts and Citizens: Bogotá’s TransMilenio”

¹⁰⁶ Enrique Peñalosa, *Why Buses Represent Democracy in Action*, Ted Talk, accessed December 6, 2018, https://www.ted.com/talks/enrique_Peñalosa_why_buses_represent_democracy_in_action.

The Neoliberal Global Governance Risk in Bogotá: Private Bus Companies

While the neoliberal risk is prevalent in Medellín under the multilevel governance system, neoliberalism and the beginnings of multilevel networks existed in the 1990s and also influenced Bogotá beginning with the 1991 Municipal Development Program. Dietz and Myers argue that decentralization promoted by the World Bank allowed for the popular election of mayors created a tendency for mayors to champion the priorities of the “city-oriented groups” (taxi drivers, bus companies, car drivers, night club owners).¹⁰⁷ This phenomenon aligns with Chu et al.’s sense that while multilevel governance entails more democratic power, accountability, and transparency, it can also lead to the consolidation of decision making among elites and disproportionate private power.¹⁰⁸

As for the system itself, although TransMilenio reigned in and controlled private transportation operators, global influence helped private bus companies retain more power within the system. In practice, TransMilenio S.A., coordinates private owners who operate the buses and collect the fares. The CEO of TransMilenio is appointed by the elected mayor of the city and the city government provides all necessary infrastructure (corridors, bus stops, bus stations, garages, and pedestrian bridges) and monitors the system. The private companies retain 93% of each ticket sale and while they technically do not have subsidies, they do benefit from the capital investments made by the state. Many people believe the state deserves more of the revenues. Fonseca et al. goes as far as to say that TransMilenio is really a monopoly of private bus operators that take advantage of the government’s passiveness.¹⁰⁹ While this view may be

¹⁰⁷ David Myers and Henry Dietz, eds., *Capital City Politics In Latin America*.

¹⁰⁸ Eric Chu, Isabelle Anguelovski, and Debra Roberts, “Climate Adaptation as Strategic Urbanism: Assessing Opportunities and Uncertainties for Equity and Inclusive Development in Cities,” *Cities* 60 (February 1, 2017): 378–87, <https://doi.org/10.1016/j.cities.2016.10.016>.

¹⁰⁹ Laura Daniela Gómez Rodríguez, Ángela María Herrera Puyana, and María Fernanda García Fonseca, “¿Por qué TransMilenio en Bogotá está en crisis?,” *Revista Ciudades, Estados y Política* 4, no. 3 (September 1, 2017): 103–18.

extreme, it not only shows a lack of faith in the municipal government, but also reflects the relative strength of the private bus companies. In its effort to promote privatization, the World Bank may have inadvertently favored dysfunction and contributed to global warming.

The power of private bus companies within the system not only makes the logistics of running the system difficult, but also points to an interesting paradox within the public transport system. As seen in Figure 6, according to a C40 assessment of Bogotá's mayoral power over various climate change issues, the mayor has the least authority over public transportation. Despite the highly political nature of the transportation systems, the mayor has a relatively limited ability to control the system and use it to improve their approval ratings. Thus, if a mayor wants to show citizens that they are serious about improving public transport, it may be more appealing to create their own system rather than attempting to assert authority over the existing private powers in the institution.

Figure 6: C40 Assessment of Mayoral Power in Bogotá



Source: C40.org

Conclusion

Weak municipal bureaucracy and low political consensus made Bogotá willing to uptake the World Bank's incentives for climate change governance in exchange for financial resources, the institution's ability to create political consensus among the elite, and its reputation for technical expertise. The multilateral institutions involvement in the creation of TransMilenio successfully increased the accountability and technical capacity of the system as evidenced by the way it encouraged planning and transparency, which helped lead to the initial success of the system. However, the technocratic global governance risk led local leaders to favor technical legitimization over democratic legitimization, which increased global favorability but, as Hunt described, hurt the local relationship with the project.

Along with the technocratic risks, the case of Bogotá exhibited the political global governance risks as demonstrated by the personalization and politicization that stemmed from using the international institutions as a source of political legitimacy. Despite trying to create a *cultura ciudadana* as early as 1996, the emphasis on the technical and global authority inhibited TransMilenio's ability to gain local support. Of course, the endogenous factors in Bogotá, namely its relatively new democracy, its political structure, and its diverse population without ties to the city, all contributed significantly to the low local support for the system. One could even argue that the system is unpopular because it was both poorly designed and poorly managed by citing controversies over overcrowding, sexual assault, and low-quality buses. However, this research focuses on the global factors that contribute to low social investment not in attempt to dispute any of these alternative explanations, merely to complicate them by offering a window into the sometimes-obscured influence of global institutions in the local articulation of urban projects.

Moving forward, Bogotá's earlier integration into these systems had two somewhat contradictory effects. First, Bogotá did not initially need to legitimize or brand itself as fully within the global system in this period because the multilateral governments provided them with legitimacy through their programs. Second, the increased international focus on the system created more scrutiny and bad press when issues from overcrowding to sexual assault began to plague the system around 2006. The lack of legitimization to either local or global actors meant that Bogotá struggled to generate the social transitions needed for effective climate change governance. The next chapter will continue with this framework and use the Metro de Medellín as a point of comparison to highlight the role of multilateral global governance in Bogotá and as an introduction to the neoliberal risks for climate change governance in a multilevel global system.

Chapter Three

Medellín and the Neoliberal Risk of Global Governance

Introduction

While Bogotá forged closer relationships with global actors during a period where multilateral institutions were actively promoting decentralization and engaging with cities, Medellín sought to increase its globalness when multilevel governance led to new relationships between both public and private actors. Public private partnerships, city networks, prizes sponsored by private groups, higher FDI, and an increase in international conferences all created new opportunities for cities to benefit from global engagement. The multiplicity of partners created more competition within the system and cities like Medellín began competing to prove themselves in capital markets just as any company would. Calvin calls this phenomenon “city branding,” a phrase that emphasizes how cities have, in some ways, behaved like corporations in the multilevel system.¹¹⁰ The similarity between cities and corporations also comes out in literature that lumps cities and companies in the “subnational” actor category. Unsurprisingly, this new global system and changing city behavior creates new global governance risks, namely the neoliberal risk, which occurs when cities focus on branding at the expense of systemic change.

This chapter will explore the neoliberal risk through the case of Medellín. It will start by analyzing the development of the Metro, which occurred prior to Medellín actively engaging with global governance. This history will both serve to define Medellín’s endogenous environment and to highlight how multilateral governance in Bogotá resulted in the technocratic and political risks that do not appear in Medellín. After establishing the endogenous

¹¹⁰ Ellis Calvin, “Small Scale/Global Ambition: Strategies of Architectural Production and Global Urban Competitiveness in Medellín, Colombia” (Columbia University, 2014), <https://doi.org/10.7916/D8XP7323>.

environment, the rest of the chapter will analyze how the 2008 pivot to global engagement through city branding drew out the neoliberal risks that are more prevalent in the multilevel governance system. Finally, the chapter will look at how a strong social fabric in Medellín has helped to mitigate some of the risks of global governance.

Endogenous Environment

Initial Crisis

As was the case with TransMilenio, the story of the Metro begins with crisis. Unlike Bogotá, Medellín's initial problem, or problems, centered around social control, extreme violence, and restoring lost cultural capital. The nature of the crisis helps to explain why the Metro developed its highly social nature. In Medellín, two crises defined the creation of the Metro de Medellín: the initial economic crisis and the rise of cartel violence. The initial crisis that triggered the Metro project came from the decline in industry in the 1970s and 80s; coupled with Medellín's fastest period of urbanization, it led to increasing economic trouble and rising informal labor markets, especially drugs.¹¹¹ To counteract the economic contraction, in 1979, Medellín established La Empresa de Transporte Masivo del Valle de Aburrá Limitada (EMVA), commonly known as Metro de Medellín.¹¹² The Medellín elite believed that a Metro would bring about economic revitalization and saw the project as their ticket back to the top.¹¹³ In his statement approving the Metro construction in 1982, President Betancur exemplified this thought process saying: "the project was essential to restore Medellín's lost dynamism and to open new

¹¹¹ Ibid.

¹¹² "Historia," accessed November 29, 2018, <https://www.metrodeMedellin.gov.co/qui%C3%A9nessomos/historia>.

¹¹³ Angela Stienen. "Urban Technology, Conflict Education, and Disputed Space." *Journal of Urban Technology* 16, no. 2–3 (December 1, 2009): 109–42.,

horizons, to regain the leadership of Antioquia it had traditionally exercised.”¹¹⁴ In her work analyzing the rise of *cultura metro* (Metro Culture), Stienen argued that the Medellín elite’s moves to repair the social fabric of the city really began with the Metro itself.

The city’s financial situation, as well as its ties with the national government, helped Medellín quickly secure a private loan for its metro; however, this speedy financing came with corruption, according to Carlos Moreno, currently a senior advisor to President Duque, Moreno noticed the corruption during his time as working for Antioquia’s governor, Alberto Vásquez.

The poorly executed initial financing resulted in the project depleting its funding (\$655.4 million USD) by 1988 and stopping mid-construction. This pause in construction not only wasted money, but also further destroyed any sense of local unity. Stienen argues that the Metro project, designed to restore Medellín’s former glory, ended up generating criticism for its perceived contribution to the peak in the cartel violence after the pause in construction left city center in a state of disarray without creating new infrastructure.¹¹⁵

The combination of the economic decline with the rise in violence meant that Medellín faced a more severe initial urban crisis than Bogotá that centered around complex social and governmental issues. The degree of endogenous turmoil and the prominence of the drug trade in Medellín made it an undesirable target for global loans, which in part explains the lower global involvement. Medellín also received significant national attention as the national government sought to regain control of the city. In solving this initial local crisis, the Medellín elite created a transport system with a strong social grounding and restructured the endogenous environment. The next sections will focus on explaining the endogenous environment before and after the Metro with an eye to how these changes differ from those in Bogotá.

¹¹⁴ Arturo Ardila Gómez, “Transit Planning in Curitiba and Bogotá : Roles in Interaction, Risk, and Change”

¹¹⁵ Stienen, “Urban Technology, Conflict Education, and Disputed Space.”

Paisa Pride and The Medellín Elite

Interviewees and scholars alike sound almost jealous when they refer to the social advantages granted to Medellín by their strong *paisa* identity claiming that it stems from the similar geographic and racial profile of citizens in Medellín whose families have lived there for generations. However, they often fail to mention that this homogeneity applies mainly to the upper classes. Walking around in Medellín, the racial makeup does not differ greatly from that of Bogotá. While Medellín is considered the whiter and more homogenous of the two cities, this identity corresponds more with the elite and their culture than the city at large. As of 2015, 5.4% of people in Bogotá identified as some type of afro descendant and 4.2% of people in Medellín identified as afro descendant.¹¹⁶ While some amount of the social cohesion comes from generation after generation living in the same area, overall, the “strong *paisa* culture” that *bogotanos* so envy stems from the homogeneity of the elite who can then export this culture to the lower classes and who can reach political consensus more quickly.

The elite in Medellín are some of the most powerful private actors in the country, and many of them had ties to narcos. Their economic power initially developed during the 1950s and the 1970s when Medellín was known as “the Manchester of Colombia,” as it was a powerful industrial center with industrialization patterns that gave the city a culture of entrepreneurship.¹¹⁷ The elite also developed a culture of “Catholic corporatism,” which held that the elite and middle classes have an obligation to protect the lower classes.¹¹⁸ While this sense of duty was not enough to prevent Medellín from becoming the murder capital of the world in the 1990s, the

¹¹⁶ *Bogotá Como Vamos*. “Informe de Calidad de Vida en Bogotá” (2017).

¹¹⁷ Victoria A Beard, Anjali Mahendra, and Michael I Westphal, “Framing the Challenges and Opportunities,” WRI, 48, 2016.

¹¹⁸ “The Trouble with Miracles,” *The Economist*, June 7, 2014, <https://www.economist.com/the-americas/2014/06/07/the-trouble-with-miracles>.

This term came both from the this article, the literature, and discussions with Colombians like Jaime Jaramillo as they attempted to describe the unique *paisa* culture.

loyalty of the elite to the city can be seen by the fact that throughout the period of violence the elite retreated from the city center, but never left the city. This group is particularly important because from the start, the success of the Metro hinged on the willpower of the Medellín elite. In his dissertation, Ardila Gómez claims that the Medellín Metro was a failed project due to the powerful coalition and their ability to keep a plan unchanged despite diverging stakeholder interest.¹¹⁹

Despite studies finding the project was not feasible, both before and after the project was approved, Medellín's eagerness to complete a metro overcame the very reasonable doubt. Just sixth months after President Betancur came to power, the mayor of Medellín submitted an official funding request and the national government approved the metro project.¹²⁰ The project began under a design-build scheme, where the government holds an auction and the winning firm, in this case a Spanish-German consortium, designs, builds, and finances the project.¹²¹ When the project went bankrupt due to the poor planning, the refinancing process was so difficult that the Spanish Government got involved. The final cost of the project had risen from \$654 million to over \$2 billion.¹²² The initial phase was a fiscal disaster to say the least. Not only Medellín is still paying off the debt, but the project resulted in the 1989 Metro Law, that, as discussed, limited Bogotá's ability to finance its own metro.

This history of President Betancur, who won on the promise to channel more funding to Medellín, and his relationship to the initial project highlights the local and national political

¹¹⁹ Ardila Gómez, "Transit Planning in Curitiba and Bogotá."

¹²⁰ Ibid.

¹²¹ Ardila Gómez, "On the Industrial Backward Linkages of Bus Rapid Transit: The TransMilenio Case in Bogotá," *Transportation and Economic Development Conference*, n.d.

¹²² Ardila Gómez, "Transit Planning in Curitiba and Bogotá."

As mentioned in the previous section, the financing through these national banks constituted far less international involvement in the creation of the system and no international ownership of the system. So, while this financing does involve global actors, the level of influence at this stage does not match that of the World Bank in the creation of TransMilenio.

power of the Medellín elite.¹²³ While Bogotá also has an important relationship with the national government, the position as a capital city meant, that “unlike the country’s regional elites [namely the elites of Medellín], the elite of Bogotá rarely link their political interests to the city where they live—perhaps because their economic interests are played out on a national and, increasingly, international stage.”¹²⁴ The difference in social cohesion among the elite impacted each city’s relationship with the national government as well as their ability to transpose their social identity onto other citizens and create the sense of democratic legitimacy and local engagement required for successful urban climate change governance. When assessing the transportation system outcomes, this elite driven culture will be important for understanding some of the realities in Brand’s assessment of the risks involved in neoliberal urbanism and city branding.¹²⁵

Fiscal and Political Autonomy

Local resources played a large role in Medellín’s political cohesion and ability to govern. In comparison to Bogotá, and most municipalities, Medellín has historically had ample municipal resources. Not only has Medellín collected more tax per capita than Bogotá, but they also generated significant resources from semi-public companies.¹²⁶ The larger pool of municipal resources, pre-decentralization likely contributed to Medellín’s stronger local character and to the strength of its public institutions when it came to public-private partnerships.

The most unique source of municipal revenue and municipal autonomy comes from Medellín’s hydropower resources and its municipal utilities company, Empresas Públicas de

¹²³ Ardila Gómez, “Transit Planning in Curitiba and Bogotá.”

¹²⁴ Myers and Dietz, *Capital City Politics In Latin America*.

¹²⁵ Peter Brand, “Green Subjection: The Politics of Neoliberal Urban Environmental Management”

¹²⁶ Victoria Beard, Anjali Mahendra, and Michael I Westphal, “Framing the Challenges and Opportunities,” n.d., 48.

Medellín (EPM), played a role in Medellín's public finances and endogenous environment. Since its founding in 1955 roughly 25% of the municipal budget has come from EPM. The market structure, specifically the existence of unique actors like Industrial and Commercial State Companies, a category of company that the citizens of Medellín lobbied for when utilities companies in Colombia were being privatized.¹²⁷ According to the EPM website an Industrial and Commercial State Company "is endowed with legal personality, administrative and financial autonomy and independent capital in accordance with Article 85 of Law 489 of 1998. In connection with its acts and contracts, and as a utility company regulated by Law 142 of 1994, EPM is governed by the rules of private law except as provided expressly in the Constitution of Colombia, the law and other regulations."¹²⁸ Not only did EPM play a vital economic role, but the citizen's investment in the company speaks to an impressive expression of community power: "The *paisas*, as the locals are called, cherish their utility: politicians mess with EPM at their peril. 'There is a massive social control of what we do,' says Juan Calle, the firm's chief executive." By control, he means citizen control of the company. However, because EPM contributes so heavily to the municipality's budget and has garnered such international success, EPM, like the Metro, seems almost above criticism.¹²⁹

The existence of companies like EPM shaped the structure of the Metro company, which also qualifies as an Industrial and State Commercial Company. While the CEOs of both TransMilenio and Metro de Medellín are appointed by local politicians, Metro de Medellín operates more independently. Furthermore, TransMilenio coordinates private owners who operate the buses and collect the fares, and the city government provides the infrastructure.

¹²⁷ Mejía-Dugand, Hjelm, and Baas, "Public Utility Companies in Liberalized Markets -- The Impact of Management Models on Local and Regional Stability."

¹²⁸ "About Us," accessed November 30, 2018, <https://www.epm.com.co/site/investors/general-information/about-us>.

¹²⁹ Ibid.

TransMilenio, IDU, and the Secretary of Mobility work together closely. Metro de Medellín on the other hand handles the infrastructure and the operation. The relationship between the Metro company and the mayors appears to be strong. According to Dávila, “Mayors find the Metro Company to be a partner focused on functional autonomy and financial stability.”¹³⁰ This relationship allowed for CEOs of the Metro, like Ramiro Marquez, to have longer terms and execute long term visions in comparison to their counterparts in TransMilenio.¹³¹ Medellín is also unique in that the STIMVA company does not just serve the municipality of Medellín, but 50% is owned by the governor of Antioquia and 50% by Medellín. This co-ownership helps depoliticize the transportation system in comparison with TransMilenio.

Not only does this structure provide larger municipal resources and, in theory, enable Medellín to act more independently, but it is important to note that this structure creates a less competitive economic environment. As with the social and political cohesion described in the section, Medellín’s endogenous financial environment would indicate that Medellín has a stronger endogenous ability to govern (at least once they resolve the cartel violence).

The Construction of Medellín’s Social Fabric: Metro Culture and Social Urbanism

The political and social crisis, stemming from the drug cartels, as well as the unique culture of the Medellín elite influenced the construction of the system as a social project. While Mockus tried and failed to construct *cultura ciudadana* in Bogotá as a solution to some of the city’s problems, the Medellín elite utilized the Metro and created Metro Culture to successfully unify the city. Stienen argues that the material interventions were related to the municipal

¹³⁰ Dávila, Julio, “Urban Fragmentation, ‘good Governance’ and the Emergence of the Competitive City,” in *The Routledge Handbook on Cities of the Global South*, ed. Parnell, S and Oldfield, S (London, UK: Routledge, 2014), 474–86.

¹³¹ While CEOs of TransMilenio held terms for about 3 years, Ramiro Marquez held his office for 14 years.

government's symbolic reconstruction of the city and were as much political projects as they were tools for reducing violence and enhancing economic growth. This argument not only emphasizes the social significance of the Metro, but also places the project well before the city's increase in global engagement thus emphasizing the importance of building a strong local culture prior engaging in global-local partnerships as a buffer to global governance risks.

When the project was suspended, from 1988 to 1993, the municipal government had to find a way to keep stakeholders, particularly the local community, engaged. The government decided to start an awareness campaign with the help of the Colombian Industrial Bank.¹³² According to Stienen, this campaign was about more than the Metro, it was about returning to the city's industrial past and many compared the Metro to the city's railway that helped its initial industrialization.¹³³ The material interventions of the Metro thus became as much of a political project as an infrastructure project, and Metro Culture became a social ideal of order and civility. *The Economist* cites Ramiro Márquez, ex-CEO of the Metro de Medellín, who describes the Metro as "not only a means of transport but a statement of intent; it is clean, no graffiti, a security guard on every platform, passengers are expected to queue, and some stations even have libraries or concert venues."¹³⁴ Today Metro Culture has an entire section of their website dedicated to discussing it. The website states that:

"The Metro Culture is understood as the result of the social, educational and cultural management model that METro has built, consolidated and delivered to the city... Since 1994, the purpose of the Company was to generate a new culture among the people of Valle de Aburrá, while consolidating relationships of trust with stations' and Metro lines' neighbors, in order to generate a sense of belonging and an attitude of caring and preservation of the transportation system."

¹³² Stienen, "Urban Technology, Conflict Education, and Disputed Space."

¹³³ Ibid.

¹³⁴ "The Trouble with Miracles," *The Economist*, June 7, 2014, <https://www.economist.com/the-americas/2014/06/07/the-trouble-with-miracles>.

Other interventions during this period such as the *Mesas de Concentración* (public round tables) and Open Forums, which included NGOs, trade unions, universities, local businesses, and municipal representatives, helped to enhance local engagement and expand the circle of elite.¹³⁵ Today most articles attribute Medellín's miraculous turn around to Mayor Sergio Fajardo (2004-2008) and his *social urbanism*, a style of integrated and participatory urban upgrading that emphasizes the idea that the elites have a responsibility to repay the "historic debt" owed to the lower classes. However, as seen in Stienen's work, the Metro and the *Mesas de Concentración* actually expanded the circle of elites who participated in the planning process and gave birth to mayors like Sergio Fajardo and Alonso Salazar (2008-2012). In more ways than one, the construction of the Metro exemplified the importance of engaging with and appealing to local actors for creating a strong social fabric that in turn helps increase the transport system's long-term sustainability.

Implications for TransMilenio: Re-Examining the Technocratic and Political Risks

Prior to discussing Medellín's relationship with the multilevel global governance, it is important to highlight how the initial formation of the transport systems exemplifies some of the costs and benefits of multilateral global governance interventions in Bogotá. The Metro Culture, strong local planning coalitions, and the less political nature of the Metro all indicate that Medellín benefited from developing its public transportation system more independently. However, the benefits of technocratic global governance can be seen through the financial disaster that defined the Metro's early years. Compared with the numerous technical studies

¹³⁵ Ibid.

conducted in Bogotá, the Metro project moved forward with only one feasibility study done by Mott, Hay, & Anderson, a British firm.¹³⁶

Despite the initial corruption, the development of the system prior to the city joining the global stage, contributed to a weaker focus on individual mayors in relation to the system and a lower politicization of transportation in Medellín. In general, interviewees mentioned the mayors by name more frequently in Bogotá than in Medellín. Even when referring to the current mayor, interviewees in Medellín frequently said only “the current mayor.”¹³⁷ During my six-hour presentation and tour of the Metro de Medellín with Juan Alvaro, the lead sociologist, and Alexander Castano, Mobility Specialist in the Planning Department, they highlighted how the Metro works with each mayor and explicitly detailed each mayor’s contribution to the Metro.

Sergio Fajardo could be seen as a counterpoint to this trend given he has gained international renown similar to that of Peñalosa, which makes sense as both mayors bring their respective city much closer to global networks. However, because Fajardo did not create the Metro itself and because the company is co-owned by the governor, Fajardo’s name becomes associated with “social urbanism” and less with the Metro. The development of a public transportation system with less politicization in Medellín both lends evidence to the impact of the World Bank on the political nature of TransMilenio and reveals the importance of a lack of politicization for creating a sense of local ownership.

Moving forward, remembering that the political and social changes that shaped the Metro project and helped reduce violence in the city created an endogenous environment that allowed

¹³⁶ Ardila Gómez, “Transit Planning in Curitiba and Bogotá.”

¹³⁷ This could potentially be because they did not believe I would know who the current mayor was; however, it lines up with the rest of my evidence as an indication that the metro is less personalized.

for strong and consistent local governance will be key to understanding Medellín's relationship with global actors.

Medellín and Multilevel Governance: Competition for Global Capital

As noted before, Medellín was not truly separate from the global market prior to its concerted effort to appeal to global markets, but the level of global engagement was much lower. As the violence in the city wound down in 2002 after the national government signed an agreement with the paramilitary groups. As the violence wound down and Sergio Fajardo took office, Medellín's government began spending more as part of social urbanism.¹³⁸ To pursue these social urbanism policies, Medellín needed both short term capital and long-term capital, so Medellín began to actively engage with the multilevel governance network. The nature of the multilevel system encouraged Medellín to seek global recognition, or "symbolic capital," from a variety of global actors through city branding.

Brand identifies 2008 as the year Medellín began actively engaging with global governance, which places its emergence in the wake of the financial crisis. After the crisis, the global system went through a period of transition as multilateral institutions were dealt another blow. The emergence waning power can be seen as the number of loans distributed by the World Bank decreased compared to the 1990s and 2000s, just as foreign direct investment (FDI) and overseas remittances increased.¹³⁹ The transition empowered a variety of new global actors to give out global governing incentives through both FDI and through normative measures. This

¹³⁸ Peter Brand, "Governing Inequality in the South through the Barcelona Model: 'Social Urbanism' in Medellín, Colombia," n.d., 17.

¹³⁹ Julio D Dávila, "Urban Fragmentation, 'Good Governance,' and the Emergence of the Competitive City,"

change represented a break from the direct, often conditional, loans that defined multilateral global governance during the development of TransMilenio.

The multilevel governance system at this time also demonstrates Foucault's governmentality and social control through internalized norms and increased accountability. This focus can be seen as the corporate social responsibility (CSR) literature gains more salience during this period as well as private actors work to justify continuing with the neoliberal world order by arguing that the soft-law and normative incentives given by multilateral institutions successfully allowed for "social regulation of the economy" through CSR.¹⁴⁰ While the multilateral model rested its authority more in national governments and conditional loan giving, this multilevel model emphasizes soft law incentives, goal setting, and competition. Drawing on Foucault, Brand and Bulkeley argue that *environmentality* is a central characteristic of the new political economy where eco-knowledge and enviro-discipline compel groups to stay within the new world order.¹⁴¹

Before examining the ways that Medellín takes up global governing incentives and how that contributes to the neoliberal global governance risks, it will be helpful to frame the city's actions and the neoliberal risk with the analysis of two prominent scholars on Medellín's urban development. Brand argues that because social urbanism both encouraged city branding and became a key component of Medellín's image, social urbanism's goals become external and its commodification weakens the social fabric of the city.¹⁴² Conversely, Dávila argues that, while the elite espouses global discourses that indicate neoliberal policies to attract investment, they must also continue to invest heavily in urban infrastructure and strengthen local democracy as a

¹⁴⁰ Weber and Soderstrom, "Sustainability Discourse and Capitalist Variety."

¹⁴¹ Peter Brand, "Green Subjection: The Politics of Neoliberal Urban Environmental Management"

¹⁴² Ibid.

way to appeal to local legitimacy, because they recognize the high risk associated with losing local confidence.¹⁴³ Diving further into these theories reveals that both arguments contribute to our understanding of Medellín's experience with neoliberal risks of global governance.

Responses to Global Incentives in Medellín: Branding an Innovative, Green City

As noted in the introduction, Brand finds that links between environmentalism and neoliberal urbanism create a competitive requirement of a “clean-green” city image to attract “symbolic capital” in the form of prizes and international events and real capital in the form of money, labor, and tourists, and to demonstrate the city's global responsibility. The increased emphasis on image and on environment in the global capital markets, as well as the increased competition among cities, means that as Medellín looks to actively engage in the global system, the municipality will mimic global rhetoric, namely market liberal ideologies and appeals to efficiency, while also increasing its green rhetoric and promoting its environmental initiatives.

While official measures of “globalness” are limited, there are many indicators that Medellín did indeed increase in globalness around 2008. The emergence of agencies like the Agencia de Cooperacion y Inversion de Medellín (ACI Medellín) indicated that Medellín was consciously seeking to increase global investment in the city. On ACI's website, the director states he coordinated the “internationalization” of Sergio Fajardo's 2004 Development Plan and this work led to the creation of ACI whose goal was to “establish international relations, so that later it would be easier to attract investment.”¹⁴⁴

¹⁴³ Julio D Dávila, “Urban Fragmentation, ‘Good Governance,’ and the Emergence of the Competitive City.”

¹⁴⁴ “Medellín's Challenge: To Become a Global City.” *ACI Medellín* (blog), March 1, 2018.
<http://aciMedellin.org/Medellíns-challenge-to-become-a-global-city/?lang=en>.

The language used by mayors also indicated a shift towards the global. The increased use of terms that align with market liberal ideology and “good urban governance” serve as indicators of Medellín’s city branding strategies. Sergio Fajardo (2004-2008) used the word “competitive” 32 times in his 286-page report. Alonso Salazar (2008-2012) used competitiveness in his title “Medellín: Solidarity and Competitiveness” and it appeared 26 times in his 209-page document. Anibal Gaviria (2012-2016) used the term 114 times in the 510-page document.¹⁴⁵

The increase in global rhetoric is, of course, a feedback loop. More global engagement results in the discourse being normalized and dispersed through multiple parts of the urban network. Medellín’s international marketing capacity can be seen on through its websites and statistics. While both Bogotá and Medellín have *ComoVamos* websites, Medellín’s has a tab devoted to “internationalization.” As a whole, their government websites are more modern and accessible. The government even has a statistics website that features an interactive infographic comparing the latest Medellín development plan to the SDGs. During the presentation the Metro de Medellín gave me during my interview in January 2019, the strategy map featured the same graphic and verbal characteristics as the SDGs as seen in Figure 7 and 8. These rhetorical strategies indicate that Medellín has bought into the global norms especially in discussing long term planning key for securing investment.

¹⁴⁵ Julio D Dávila, “Urban Fragmentation, ‘Good Governance,’ and the Emergence of the Competitive City.”

Figure 7: Metro de Medellín's 2016-2020 Strategic Objectives Map



Source: Author's Interview with the Metro de Medellín, January 2019.

Figure 8: Screenshot of the Mayor of Medellín's Website MEdata.gov

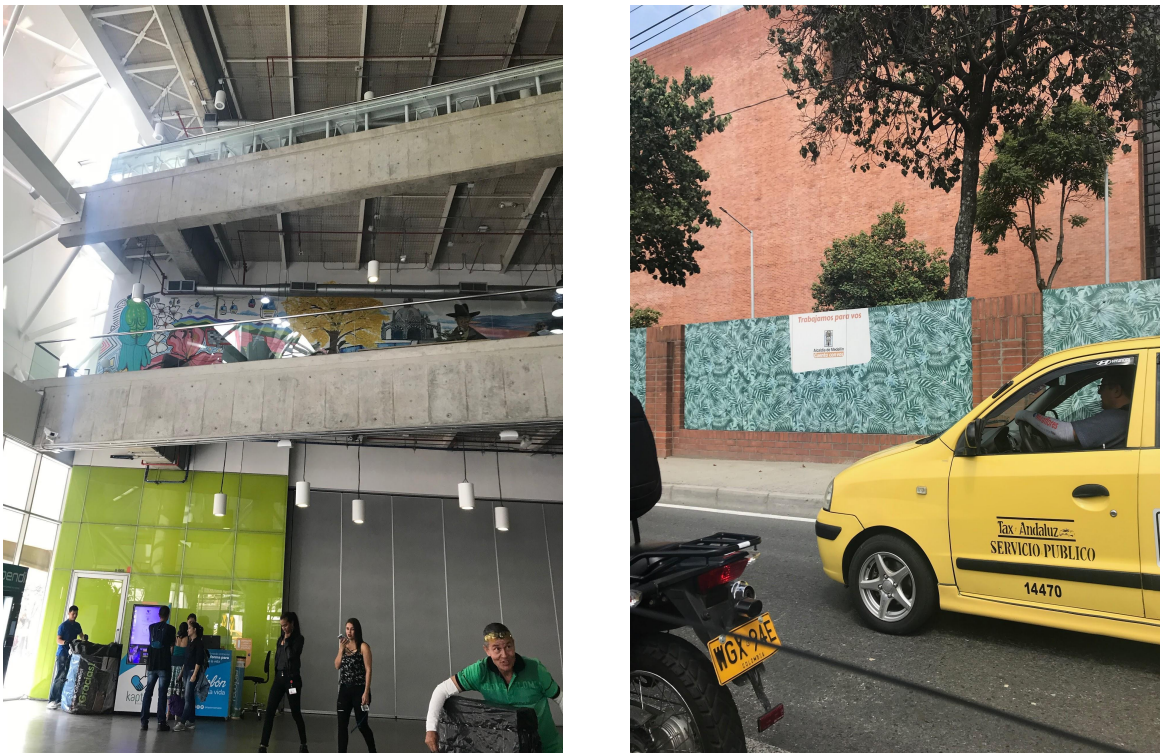


Source: MEdata.gov

This type of rhetorical appeal extends past the Metro project. Figure 8 shows both the green imagery inside Ruta N and the image of the Metrocable in the mural on the second floor. This art in Ruta N, a leading incubator in Medellín, is particularly important as Calvin, explains that the company itself is part of Medellín's branding in that it leverages Medellín's

entrepreneurial heritage to attract capital.¹⁴⁶ Consistent with the “clean green” city image, Figure 8 shows how the construction projects in Medellín are branded with an eye to green. These signs stretched on for a few miles on one of the main highways in Medellín during my visit in January. The signs say, “we are working for you,” and the tropical leaf pattern behind them presents green imagery. This imagery is not only key for attracting global capital, but it also features heavily in attracting tourism.

Figure 9: Photo from the highway in Medellín, January 2019 (Left). The inside of Ruta N, January 2019 (right).



Source: Photos taken by Eleanor Jackson, January 2019.

During my visit to Medellín in January 2019, I also noticed the Metro appealing to tourists in a variety of ways. First, the Metro was featured in an ad on the tourist map in our Airbnb as an attraction, and the Avianca video advertising Medellín focused on the Metro.

¹⁴⁶ Calvin, “Small Scale Global Ambition.”

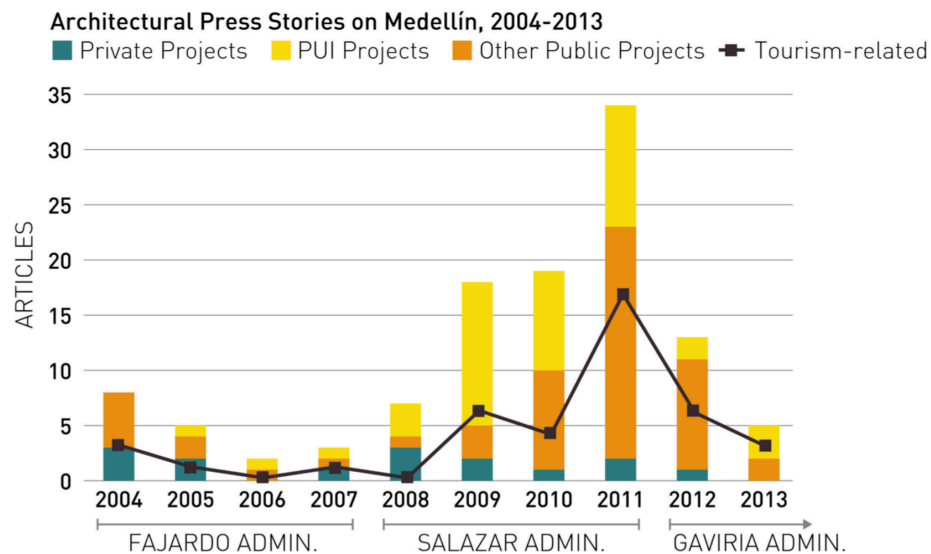
Second, one line of the Metro, Linea K, is dedicated entirely to tourism, though it has a higher rate to compensate for that. On a more subtle level, the fact that, unlike TransMilenio, the Metro has signage in English and Spanish indicates the system is built to welcome tourists. Brand goes as far as to argue that the socio-spatial structure of the Metro does more to appeal to international actors than to serve local people.¹⁴⁷ He argues that the elegant cables allow tourists, international experts, and journalists, to find a peculiar proximity to a distant world as they travel in a glass box that glides silently over the rooftops of poor neighborhoods. While in some places, gliding over rooftops would mean little, in the “land of eternal spring” many residents sat on their roofs, often half dressed, as we glided over them. Additionally, the large windows or missing roof sections occasionally made it seem as though someone lifted the lid off a house for us to give a better view. The tour guide from my graffiti tour in Medellín confirmed the local discomfort with this gawking. He told me that the main complaint residents have about tourists was that they no longer felt free to hang out in their homes.¹⁴⁸

The linkage between tourism and green terminology appears through analyzing international news articles on the Metro de Medellín, where on average, the articles related to tourism used more green words. Figure 10 shows further links between tourism and these projects which further emphasizes the ties between tourism, branding, and the Metro.

¹⁴⁷ Brand, “Governing Inequality in the South through the Barcelona Model: ‘Social Urbanism’ in Medellín, Colombia.”

¹⁴⁸ Personal conversation with the 19-year-old tour guide from the *Free Graffiti tour taken in January, 2019*, *Zippy Walking Tour Communs 13*,

Figure 10: The Relationship Between Articles on The Metro Projects (PUI) and Articles That Were Tourism Related



Source: Calvin, “Small Scale Global Ambition” (2014).

From the ways the municipal government appeals to global capital markets as well as marketing by the Metro de Medellín, we see a level of global focus that supports Brand’s warnings about the commodification of social urbanism. In general, Medellín’s city branding heavily features the Metro de Medellín building off the Metro Culture and the local pride tied to the system. The Metro and the Metrocables themselves have served as a major selling point not just for local communities but also for international companies. In a 2014 *El Espectador* interview with Jean-Marc Laforet, the head of French diplomacy in Colombia, he talks about French private interests in Colombia in both highways and the Bogotá metro project. However, he says that he gets the impression that “the Antioqueños work hard on the projects and there is a strong alliance between all the businessmen, the civil society, and the universities... in terms of urban transport, I get the impression that there is more organization in Medellín than in

Bogotá.”¹⁴⁹ This assessment as well as the reference to the Metrocables indicates the importance of these projects in securing international investment. This quote also emphasizes how Medellín outpaces Bogotá in global capital competition.

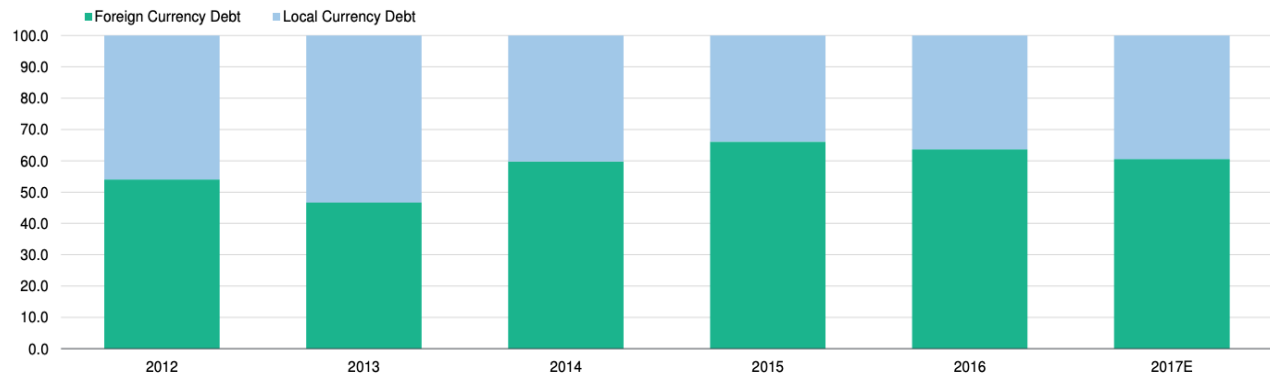
The increase in both agencies devoted to international engagement and in the overall use of global correlate with the increase international prizes and events, two key incentives offered by multilevel global actors. Medellín hosted the General Assembly of the OAS in 2008, the South American Games in 2010, and the World Tourism Organization General Assembly in 2015.¹⁵⁰ Medellín began receiving global awards. In 2013 *The Wall Street Journal*’s “Innovative City of the Year” Award served as a particularly important seal of approval for the city and is referenced in nearly every piece of international research or journalism on the city. In 2008, the IDB began supporting the “Medellín model” of urban development.¹⁵¹ These awards and events all indicate the success of Medellín’s city branding as they represent the “symbolic capital” that cities compete for in the global market.

Both international scales and measures of actual investment indicate that Medellín has been turning these symbolic prizes into real capital. On the “Index of Attraction of Investment” Medellín rose from 30 in 2001 to 12 in 2013. Additionally, as seen in Figure 11, the share of debt in the city registered to foreign currency has increased since 2012, indicating that it has been capturing global lending.

¹⁴⁹ “Francia ofrece ayuda para el tema agrario,” *El Espectador*; Bogotá, October 8, 2014, sec. Noticias, <https://search.proquest.com/globalnews/docview/1609026185/citation/88075964A6FD45CEPQ/1>.

¹⁵⁰ Brand, “Governing Inequality in the South through the Barcelona Model: ‘Social Urbanism’ in Medellín, Colombia.”

¹⁵¹ Ibid.

Figure 11: Medellín's Share of Debt Denominated in Foreign Currency

Source: Moody's Investors Service, and financial statements of the City of Medellín.

Source: Moody's Investor Service

Buffers to the Neoliberal Global Governance Risks: Medellín's Social Superpower

Medellín's city branding and appeals to global governance indicate a strong global focus in many of the city's projects. While the links between green images and neoliberal rhetoric are clear, whether or not Medellín exhibits the neoliberal risks of global governance depends on two things. First, has global engagement alienated citizens, decreased local participation, or otherwise inhibited the social aspects of socio-technical transitions. Second, does green language correspond with increased sustainability? To address the first issue, Dávila argues that part of Medellín's ability to avoid the potential risks associated with increasing global engagement stems from the city's experience with violence and inequality¹⁵². He finds that successive local governments had no choice but to work together fill the major gaps in infrastructure and repay the "historic debt" owed to the marginalized communities.¹⁵³ Because elites recognize the high risk associated with losing local confidence, they can espouse global discourses that indicate

¹⁵²Julio Dávila "Urban Fragmentation, 'Good Governance' and the Emergence of the Competitive City."

¹⁵³ This "historic debt" terminology comes from social urbanism and appeals to the Catholic guilt in the Medellín elite as a way to encourage investment in underfunded areas.

neoliberal policies to attract investment, while continuing to invest heavily in urban infrastructure and strengthen local democracy as a way to appeal to local legitimacy.¹⁵⁴ As mentioned before, Medellín's ability to avoid the risks of global engagement also stems from the existence of a cohesive culture among the political elite which they can then successfully export to other city groups and can amend without rocking the boat.

Despite its appeals to international audiences, because the system was developed independently of global engagement with an eye to solving local social inequalities and increasing social cohesion, the Metro continues to appeal to the *paisas*, increasing local pride and boosting local authority. Metro Culture has only grown stronger through time. Overall, the Metro boasted that they had invested over 6.4 million pesos in to "Metro Culture" and 18.6 million pesos into ecological support.¹⁵⁵ The social cost of each project represents roughly 5% of the total project cost according to Juan Alvaro, Head Sociologist for Metro de Medellín.¹⁵⁶

During an interview with Juan Alvaro, he carefully detailed the socio-linguistic tools the Metro uses to ensure community support. He emphasized the importance of setting up "official communication" for every Metro worker so that the community cannot accuse the Metro of lying due to a miscommunication. He showed many pictures of the Metro workers interviewing local residents in churches and their homes emphasizing the importance of going out to them and respecting their community spaces. Additionally, the importance of using terms like "we" and calling the Metro card "*cívica*" to evoke a sense of communal responsibility feed into the careful

¹⁵⁴ The large municipal budget also allows the Medellín elite to more effectively tend to both global and local audiences. In many ways, a large budget becomes a double-edged sword for environmentalism as cities can afford to do some of everything.

¹⁵⁵ Alvaro. Interview, January 2019.

¹⁵⁶ Ibid.

maintenance of local communities.¹⁵⁷ Juan Alvaro also highlighted how the Metro consults with local residents on what terminology they should use for different aspects of the cable cars. The Metro also sends workers to teach kids about the system in school and hires local workers both to construction and to run the stations. Additionally, the drivers for the Metro, the trams, and the cable cars are all college students who receive scholarships for their work and many of them, such as Alexander Castano, currently a Mobility Specialist in the Planning Department, end up working for the Metro afterwards.

The Metro's branding also extends to activists and art groups. As opposed to Peñalosa, who takes a hard stand against graffiti, the government in Medellín works closely with graffiti artists. Along the tram line constructed in 2015, the Metro hired graffiti artists through Fundación Orbis to paint buildings along the tram line to help get the community involved in the project and to make the route more beautiful.¹⁵⁸ Based on *ComoVamos* statistics, articles, conversations, and the local graffiti, these tactics appear to be working. In Medellín, poor neighborhoods, like *Comuna 13*, have adopted the Metro along with the idea of sustainable development. In 2012, researchers found that the Metrocables made residents prouder of their communities.¹⁵⁹ The influence of these ideas can also be seen in the street art, paid for both independently and funded by the city, which references the Metro, the moving escalators, and environmentalism. Figure 12 shows the transformation of the city featuring green hillsides (on the right) and a painting of an elephant, one of the symbols of Medellín, with the escalator project on one side and the Metrocable on the other representing the significance of the projects (on the left).

¹⁵⁷Ibid.

¹⁵⁸ Ibid.

¹⁵⁹ "Why Latin America is seeing a cable-car boom" *The Economist*.

Figure 12: Photos of Graffiti in *Communa 13*



Source: Photos by Ethan Schuler on Free Zippy Graffiti Tour of Communa 13, January 2019

Metro Culture was not just symbolic. Along with emphasizing Metro Culture, the Medellín government worked to integrate new groups into the policy making process through social urbanism provided substantive local participation and increased democratic authority. The revision 2006 Territorial Development Plans (POT) was co-written with universities, namely CEHAP, and involved community-based workshops with management organizations like *Consejo Territorial de Planeación de Medellín* and *Empresa de Desarrollo Urbano* (EDU).¹⁶⁰ Carlos Cadena, talked about how universities, like EAFIT, were hiring and protecting activists like himself in order to incorporate them and their opinions into the policy system. The masters students I talked to all submitted their research to the Metro de Medellín despite only citing one project as coming from university research during my interview (the streamlining of the train shape) they eagerly solicit all academic research on the company (including mine).¹⁶¹ In tandem

¹⁶⁰ Soledad Garcia Ferrari et al., “City Profile: Medellín,” *Cities: The International Journal of Urban Policy and Planning*, December 2017.

¹⁶¹ This comes from interviews with Diego Zapatta, Carlos Cadena, and Emmanuel Ospina.

with increasing civic engagement and partnerships, Medellín instituted participatory budgeting where locals in the *communas* can allocate 5% of the city's budget to projects of their choice. This process is heralded as one of the “most innovative forms of city democracy anywhere.”¹⁶² Talking to the local guide of our Medellín graffiti tour, he corroborated the success of this participatory planning when I asked him what he thought about the giant covered 384 meters escalator project in *Comuna 13*. He said the *communa* was allowed to vote on where to allocate the municipal money for a new development project and they came up with the idea for the stairs. The *communa* then felt further integrated into the project as locals were hired for the construction. He credited its success in part to the participatory planning aspect. This practice shows that Medellín still appeals heavily to local authority and democracy.

Despite these practices, the elite, government officials and businessmen, continue to have the power to accept or reject the community input and, by incorporating dissenters into official channels, they provide strong incentives for them not to rock the boat too much. While the universities have protected researchers from backlash against certain critical news articles, the idea that private companies may call up the university over slight criticism raises some alarm bells for academics.

In Medellín, interviewees were hesitant to criticize the Metro or the government. For instance, whenever Lina Lopez, founder of the *Bici* program and current C40 consultant, criticized the Metro, she would quickly follow up with something positive that the Metro did.¹⁶³ This trend held true for interviewees to varying degrees. While some might find the sense of unity preferable to the negativity in Bogotá, the idea that criticizing the systems is taboo reveals

¹⁶² “Participatory Budgeting Is Music To Medellín’s Poor,” NPR.org, accessed March 12, 2019, <https://www.npr.org/2011/04/20/135152789/participatory-budgeting-is-music-to-Medellín-s-poor>.

¹⁶³ Lopez, Lina. Interview with Eleanor Jackson. Personal Interview, Skype. January 2019.

a potential problem for the city and an undemocratic undertone. This problematic dynamic also came out when Carlos Cadena, Academic Coordinator for Urban and Environmental Studies (URBAM) at EAFIT, described the Metro's reaction to one of the few protests the system experienced.¹⁶⁴ A group of poets entered the system and read poetry to disrupt the social order of the Metro system. Carlos told me to Google it when I got home; however, my initial searches (with my location set to Colombia and then to the US) yielded only stories about the day the Metro allowed poets to come entertain the passengers. After years of violence and division, the elite in Medellín appear to form a tight circle hesitant to critique as they work to bring the city into their system again. While the practice of recruiting activists from universities and asking universities to contribute studies to the government and the Metro has made a more cohesive and well represented civil society, it also has helped create a system where people feel their voices are heard, without that always being true. In Medellín, it seems the Metro looks to actively enlist community and university members; however, it does not always listen.

While a sense of community and social cohesion is key to creating more environmentally sustainable cities, simply exercising control over citizens does not necessarily mean that the municipality will be able to more effectively govern climate change. Effective climate change governance requires good communication between the citizens and the government and between citizens of multiple classes. Medellín appears to have made strides in this effort, but some aspects of *paisa* pride make it difficult to determine if local participation is genuinely strong, or if, as Brand might argue, the global orientation of the city minimizes voices of dissent.

¹⁶⁴ Cadena, Carlos, Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

Effects of The Neoliberal Global Governance Risk

Even with this social success, Medellín exhibits signs of Brand's neoliberal risk of global governance where symbolic action leads to inequality and obscuring problematic actors. While the Metro appeals to green language, the city continues with a "bimodal" development plan that promotes public and private transport infrastructure equally.¹⁶⁵ The Metro has also struggled to integrate with other modes of sustainable transit, especially bikes. This indicates an inconsistent application of environmentalism that may stem from the power of certain private actors, namely motorcycle companies. Finally, the way that officials focus on aspects of the system that generate global praise, such as the operational financial sustainability, appears to align with neoliberal risks.¹⁶⁶

Beginning with "bimodal" development, Hidalgo and Cadena point to the contradictions between words and deeds in Medellín and Bogotá.¹⁶⁷ While Medellín began receiving more press after the increase in globalness, Bogotá remained more sustainable in practical terms. According to their findings, Bogotá reported a nearly three times greater share of trips on foot and by bicycle (15%) than that of Medellín (6%). Bogotá had more participation of total trips in public transport (67%) than Medellín's (57%). Additionally, although the Medellín Metro became one of the flagship institutions of urban mobility in Colombia, TransMilenio-SITP completed many more trips than both the Metro de Medellín and Metroplus (47% to 28%). In attempting to explain why this difference exists, Hidalgo and Cadena identify motorcycles as a key problem

¹⁶⁵ Ospina, Emanuel. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁶⁶ I recognize that my position as an American university student who gained these contacts through global networks may have influenced what the officials chose to highlight.

¹⁶⁷ Darío Hidalgo and Carlos Cadena, "Medellín vs. Bogotá En Movilidad," *Las2orillas* (blog), February 2015, <https://www.las2orillas.co/Medellin-vs-bogota-en-movilidad/>.

finding that in 2014, motorcycle use increased three times more in Medellín (21%) than in Bogotá (6%).¹⁶⁸

While an increase in motorcycle use could be explained simply by their offer of cheap, private, and fast transportation, the influence of business owners in Medellín's public institutions offers another explanation. Manuel Santiago Mejía Corraera, the owner Colombiana de Comercia SA (which manufactures motorcycles) holds the ears of the political elite and the boards of Metro de Medellín, EPM, and Grupo Empresarial Antioqueño somewhat suspicious.¹⁶⁹ In light of his power, the city promoting "bimodal" transportation policies combined with the Metro hesitating to integrate with bikes routes, could have a more sinister explanation.¹⁷⁰ Full-fledged corruption seems unlikely, but the size of motorcycle manufacturing's contribution to the local economy would be enough to create conflicts of interest even if Mejía Corraera was not on these boards. Regardless of the reasons, allowing both sustainable and unsustainable modes of transport to develop simultaneously diminishes the overall sustainability of transportation. While corruption would be a thrilling explanation, the mere existence of this trend indicates the existence of the neoliberal global risk.

As was the case with technocratic authority not always aligning with local desires, international accolades and financial market pressures may have a negative impact on citizen satisfaction and system use. After the straightening out the initial financial crisis, the Metro de Medellín became "operationally self-sufficient" meaning that is one of the few public transportation systems in the world that can say it does not use government subsidies to cover

¹⁶⁸ Ibid.

¹⁶⁹ "Manuel Santiago Mejía Corraera," La Silla Vacía, November 2017, <https://lasillavacia.com/quienesquien/perfilquien/manuel-santiago-mejia-correa>.

¹⁷⁰ While recognizing the problematic nature of this term, I use it here because that the term interviewees used to describe the system.

operational costs. During my interview with Ramiro Marquez, ex-CEO of Metro de Medellín, I asked him what he was most proud of and he cited this “financial sustainability” as one of his two greatest accomplishments and recounted of World Bank members and other global actors coming to him to ask for advice.¹⁷¹ The relationship between greatest accomplishment and international validation that played out in Marquez’s story highlights the ways that global actors have legitimized their position as metrics for success to the extent that it plays out in personal pride.

When I later told this story to Diego Zappata, a young transportation expert who conducted studies on the Metro at EAFIT, he looked annoyed and stated that the high price of the system prevented poor communities from attending the skill workshops offered by Ruta-N, the largest incubator in the city, and that it is the government’s job to provide cheap and effective private transportation.¹⁷² While he did not explicitly advocate for subsidies, he did argue that the Metro and the local government should have done a better job of capturing the economic gains that are generated through the increased economic activity in the areas around the stations by implementing a new tax scheme. Zappata also argued that the waiting time for the cable cars presents a major opportunity cost for the local people and went as far as to say that the pricing of the Metro is less affordable than the Tube in London.¹⁷³ This assessment supports Brand’s argument that the MetroCable may be more for show than for impact.

The tensions inherent in the neoliberal risk can also be seen in the abrupt termination of Claudia Restrepo’s term (March 2015 to June 2016) as CEO of the Metro company. Carlos Cadena described Claudia as young, progressive, environmentally conscious woman who shook

¹⁷¹ Ramiro, Marquez. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁷² Zappata, Diego. Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁷³ Ibid.

up the company.¹⁷⁴ Despite their focus on Metro Culture, Restrepo finally brought the company to social media in 2015. More importantly, she also helped to increase the integration between the bike and the Metro allowing bikes to enter the cars after years of back and forth over the issue.¹⁷⁵ While the terms of her resignation are hazy, they are rumored to have something to do with conflicts between the governor and the mayor.¹⁷⁶ When Restrepo stepped down, Tomás Escobar, a vet of the Metro was appointed in her place. The decision to appoint Escobar raises a few interesting themes. First, in the *El Espectador* headline announcing Tomás Escobar they called him “the new head of Metro de Medellín, a technical man.”¹⁷⁷ This call out of to the “technical” aspect of Tomás indicates an appeal to the expertise that the TCCG work equates with a typical global discourse. Second, the ousting of Restrepo, arguable the most environmentally friendly and progressive CEO, indicates that the Metro values environmentalism when economically convenient.

Looking at how individual citizens in Medellín value environmentalism ties these examples of the neoliberal risk in Medellín. While creating social cohesion as a means to increase civic responsibility and incentivize collection action is key for climate change governance, conditioning citizens to care about climate change is also part of the social transition required for good climate governance. Because elites interact more with global actors who champion these environmental causes, they are more likely to value environmentalism. This idea is confirmed by Medellín’s 2018 *ComoVamos* Citizen Perception Poll, which found that 8% of upper class citizens believe the environment should be one of Medellín’s top priorities and only

¹⁷⁴ Cadena, Carlos, Interview with Eleanor Jackson. Personal Interview. Medellín, January 2019.

¹⁷⁵ “Bicicletas Convencionales Podrán Ingresar a Trenes de Las Líneas A y B Del Metro,” Blog. *Metro de Medellín*. (2016) <https://www.metrodeMedellin.gov.co/ald%C3%ADa/noticiasmetro/bicisconvencionale singresaranatrenesdelmetro>.

¹⁷⁶ “Nuevo gerente del Metro de Medellín, un hombre técnico,” *El Espectador*; Bogotá, July 28, 2016, sec. Noticias, <https://search.proquest.com/globalnews/docview/1807434356/citation/6BF71C1DA76A42C6PQ/2>.

¹⁷⁷ Ibid.

4% of lower class citizens do.¹⁷⁸ The difference in upper and lower class perceptions indicate the ties between environmentalism and neoliberalism, and show that the elite may take up an environmentally friendly mentality themselves while struggling to extend it to the rest of the city.¹⁷⁹ This relationship, as well as the fact that neither group seems to value climate change action particularly highly, serve as evidence that the multilevel governance incentives allow actors to use green discourse without necessarily internalizing the values.

Conclusion

The case of the Metro de Medellín first helps to highlight the costs as well as the benefits of Bogotá's relationship with multilateral global governance institutions. To begin, the nature of the crisis itself not only discouraged global actors from getting involved, but also necessitated a social solution. The lower multilateral influence in Medellín further contributed to the social nature of the Metro as the local government did not initially derive political and social legitimacy from global actors. By the time Medellín began actively appealing to global markets, the Metro project had already become one of the linchpins of the Medellín identity. Contrasting this case with Bogotá emphasizes how a lower level of global governance also helped to leave space for a strong social fabric.

With this initial social foundation, under Sergio Fajardo the city and the Metro worked hard to legitimate themselves to both local and global actors. Based on the increase in both symbolic and real capital, Medellín successfully gained global attention and projected a "clean green" city image. While Medellín does not represent a true case of greenwashing, in part due to the social buffers that Dávila highlights, the Metro does not project the values of environmental

¹⁷⁸ "Encuesta de Percepción Medellín." *Medellín CómoVamos*. (2018).

¹⁷⁹ Bogotá's poll did not measure this.

sustainability to its citizens as much as it does to international actors. This discrepancy, along with other oddities such as the Metro using sustainable materials and tactics while also having a tense relationship pedestrian and bike cultures, indicates that the city's environmental concerns take a backseat to their economic concerns.

Chapter Four

Bogotá and the Neoliberal Global Governance Risk

Introduction

In light of the neoliberal governance risks exhibited in Medellín, returning to the case of TransMilenio in 2016 reveals how the multilevel governance system has increased in influence and spurred new change in Bogotá. As of 2014, Bogotá scored a 36 on the UN-Habitat City Prosperity, a fairly weak score. Bogotá ranked especially low in environmental areas (a 3.6 out of 100).¹⁸⁰ Medellín, on the other hand scored a 47 overall and scored much higher on environmental issues with a 21.2%.¹⁸¹ While water and energy ratings were the same (7%), but the air quality in Medellín was significantly higher at 35.5% as compared to 0.2% in Bogotá. Interestingly, Medellín's summary page lists numerous prizes, but there is no mention of prizes for Bogotá's page, despite the fact that Bogotá has won comparable international prizes. While difference in score claims to show that Medellín has been more successful in implementing its urban projects, particularly its environmental projects, the real difference in performance of these two cities is highly debatable. This discrepancy in rating, and particularly the lack of prize references in Bogotá's profile, really shows how the in the multilevel system global institutions have embraced Medellín. The emphasis on prizes speaks volumes to how this form of normative governance can work to shift perception of a city and generate symbolic capital.

As this multilevel governance system gains importance, Bogotá must work to rebrand and appeal to new global powers now that the advantages Bogotá had gained from international institution's support no longer guarantees their place on the world stage. Since his return to office in 2016, Peñalosa has not only increased his global identity, but has also doubled down on

¹⁸⁰ "Bogotá (Colombia) | City Prosperity Initiative," accessed April 27, 2019, <http://cpi.unhabitat.org/bogota>.

¹⁸¹ "Medellín (Colombia) | City Prosperity Initiative," accessed April 27, 2019, <http://cpi.unhabitat.org/bogota>.

his transportation investments. In implementing his new policies, Peñalosa not only follows Medellín's lead by implementing cable cars and a Metro, but also promotes *Cultura TransMi*, clearly based on Metro Culture (*Cultura Metro*).

Comparing modern day Bogotá with the case of Medellín also highlights how the effects of technocratic and political governance risks that decreased the initial benefits of local governance, namely increased social investment, left Bogotá more vulnerable to the neoliberal risks associated with this multilevel system. While Peñalosa's decisions during his second term benefit some sectors of society, the backlash against him shows a more pronounced neoliberal global governance risk than in Medellín due in part to the fact that Bogotá never established the same local participation or social consensus.

The Neoliberal Risk: Towards Local Authority or Global Capital?

Depending on which factors you look at, Peñalosa is either finally learning from the initial mistakes in the system by putting an emphasis on cultivating local support through re-emphasizing cultura ciudadana and following Medellín's lead, or Peñalosa has bought into the neoliberal urbanism and city branding to the extent he is engaging in municipal greenwashing. The question becomes, does Peñalosa learn from the past and truly listen to local opinion and increase social engagement with the projects, or does he continue to fall into the traps of engaging too much with global governance?

From a rhetorical standpoint, Peñalosa and his administrators appeal heavily to global competition. In an interview with Andres Ortiz, the Head of Planning for Bogotá, he stated that Bogotá's goal was to be the city with the lowest carbon emissions in the world and proceeded to describe the advantages, such as the temperate climate, that Bogotá had in making that a

reality.¹⁸² This appeal to global competition aligns with Medellín's city branding. While the *ComoVamos* website for Bogotá does not yet have an international section, Peñalosa's most recent territorial development plan (POT) references international institutions and the SDGs heavily and also includes numerous green terms.

The TransMilenio website itself balances global and local appeals more fully. The use of political legitimation and international legitimation can be seen in the history of TransMilenio as presented on its website. First, the history highlights a technocratic study done by the Japan International Cooperation Agency (JICA) that found the cost would be higher on a Metro as a way to justify using a bus rapid transit (BRT) system over a Metro system. This justification aligns with a market liberal ideology and thus appeals to global authority. The history also singles out Peñalosa with his own paragraph about the start of the system while the other mayors are lumped into one. However, the description also invokes Antanas Mockus, the most popular and respected of the local mayors, and his role in the project. In general, Mockus is more associated with the implementation of the public bike system than of TransMilenio. Invoking Mockus in this case indicates a need to appeal to local political power and brings us to the double edged towards of invoking mayoral power.

Perhaps the biggest indicator of the Medellín Metro's success in generating community engagement is that in March 2019 TransMilenio updated their website to look remarkably similar to that of the Metro and began featuring the hashtag “#CulturaTransMi,” as seen in Figure 13. While this communication strategy appeals to global prestige by following Medellín's template for success, it also emphasizes local approval. The growing importance of local investment is emphasized by TransMilenio's partnerships with groups like *Despacio*, a local

¹⁸² Ortíz, Andres. Interview with Eleanor Jackson. Personal Interview, Medellín. January 2019.

NGO that contracts with TransMilenio to help solve issues like sexual misconduct in the system.¹⁸³

Figure 13: Screenshot of TransMilenio’s Front Page, March 2019



Source: TransMilenio.com

When it comes to actual changes to the transport system, Peñalosa appears to tilt towards the “greenwashing” end of the city branding spectrum. Apart from those interviewees directly involved in the Peñalosa administration, people in both Medellín and Bogotá were skeptical of Peñalosa’s new policies and particularly of his relationship with Volvo, a primary supplier of buses. According to 2018 *El Tiempo* articles, the majority of the buses operating as part of the TransMilenio currently are very old and would not meet environmental standards in Europe (where they come from) or the US.¹⁸⁴ An article in *El Espectador* talks about Volvo defending

¹⁸³ Rodriguez, Laura. Interview with Eleanor Jackson. Personal Interview, Bogotá. January 2019.

¹⁸⁴ Casa Editorial El Tiempo, “El grave impacto del atraso medioambiental del sistema TransMilenio,” *El Tiempo*, April 21, 2018, <https://www.eltiempo.com/Bogotá/la-contaminacion-que-generan-los-TransMilenio-en-Bogotá-y-el-impacto-para-la-salud-207958>.

its market share against Scania in 2018.¹⁸⁵ While TransMilenio struggles to get rid of diesel buses, Metroplús, the BRT system in Medellín, has already taken the first step to implement electric buses. The fact that Bogotá lags behind Metroplús seems particularly strange given the Inter-American Development Bank (IDB) gave Bogotá funding for an electric bus fleet.¹⁸⁶ This scandal has drawn a lot of skepticism, even from Peñalosa supporters, due to the mayor's close ties with Volvo. Nothing represents the problematic nature of this relationship better than Peñalosa's Wikipedia page which features "Volvo" as one of his political affiliations. Furthermore, projects like Peñalosa's butterfly path, which would build a nature trail through protected forest that surrounds the city, have been questioned by environmental groups for the effect on the land itself. Even his party's name "the green party" has been pointed to as an example of the party's attempts to come off as environmentally conscious while serving its own agenda.

Perhaps the biggest potential change for both Bogotá and Peñalosa comes from the decision to construction a metro. After over forty years of debating a metro project, the World Bank issued a loan for Bogotá's Metro Line 1 Section 1 project in August of 2018.¹⁸⁷ The question of the Bogotá Metro proves interesting given that metros are generally seen as a global status symbol for cities, that it follows Medellín's lead, and that it also panders to continued local push for a metro project.¹⁸⁸ The costly financial reality of a metro remaining the same as it

¹⁸⁵ "Volvo y Scania Se 'Muestran Los Dientes' En Licitación de TransMilenio" *Elespectador.com*. accessed November 12, 2018, <https://www.elespectador.com/noticias/Bogotá/volvo-y-scania-se-muestran-los-dientes-en-licitacion-de-TransMilenio-articulo-817801>.

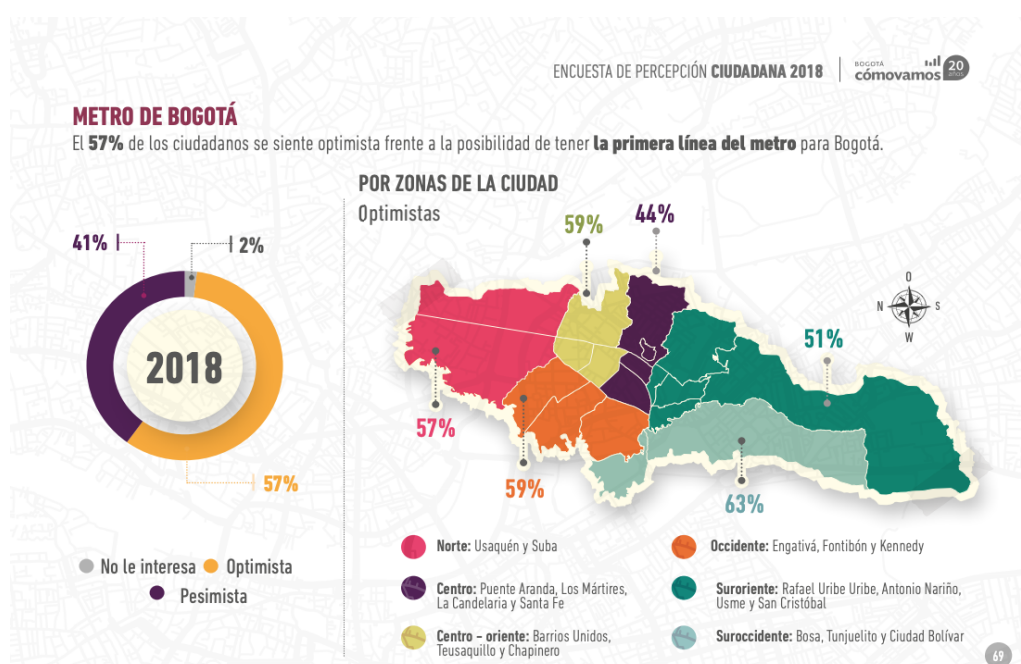
¹⁸⁶ "Buses eléctricos para TransMilenio: una contrarreloj," *Elespectador.com*, September 3, 2018, <https://www.elespectador.com/noticias/Bogotá/buses-electricos-para-TransMilenio-una-contrarreloj-articulo-810025>.

¹⁸⁷ World Bank, "Support to the Bogotá Metro Line 1 Section 1 Project - (Series 1)," Project Report, (August 2, 2018).

¹⁸⁸ Many news articles reference the fact that Medellín is the only city in Colombia with a metro as though that puts it into some kind of special club.

always has been, the metro also continues to find the same popular support as seen in Figure 12. Despite this support, during my interviews with city planners and ex-CEO's of TransMilenio would roll their eyes and say something along the lines of, “who knows” and “it’s been a long time coming.” While this eye roll may have represented simple exasperation at the 40 plus year debate over a metro in Bogotá, there also seemed to be a sense that building a metro was simply giving into local demand. However, from an international perspective, the metro, and TransMicable can be seen as projects that put Bogotá in an elite club of highly developed cities.

Figure 14: Local Opinions on the Metro de Bogotá



Source: BogotáComoVamos.com, “Encuesta de Percepción Ciudadana” (2018)

The metro project in Bogotá in some ways appears similar to the 2015 development of the Tramvia (tram) in Medellín. The tram appealed heavily to both global and local ideals. The review of the tram features photos of the 1922 tram in the city center. The Metro also sent me an entire book titled, *Entre Rieles y Cables*, dedicated to the history of the city and the development

of the original tram in Medellín.¹⁸⁹ Complete with old paintings, copious sepia photos, and artful quotes from prominent historical figures, this book situates the tram project as a piece of the local history more than a global marvel. The simultaneously global and local appeals made by these projects both underlines and undermines the concept of neoliberal governance risks. While the emphasis on branding and global capital has increased in Bogotá, the need to sell the system to local groups appears to be valued more evenly than before.

Conclusion

As noted in the second chapter, Peñalosa's mayorship is in many ways emblematic of Bogotá's character as a global and exemplifies the pros and cons of using global governance as a means of political legitimation. His current term highlights the initial risks associated with global governance and his increased emphasis on *cultura ciudadana*. However, these initiatives can also be framed through a city branding and good governance context, in which case, they are motivated more by the multilevel governance system than by a move towards stronger local governance.

While the true legacy of Peñalosa's second term has yet to be determined, this analysis leans towards the assumption that the multilevel governance system was the main motivator for his actions. The new found need to actively promote the city incentivized Bogotá to improve its legitimation strategies and emulate the Medellín model. Peñalosa's low ratings, a continuing dissatisfaction with TransMilenio, and the comparative admiration of Mockus, all reveal that global backing does not help legitimate Peñalosa the way it once did. As Bogotá begins to appeal to more the multilevel governance incentives, the controversies over Volvo, the accusations of

¹⁸⁹ *Entre Rieles y Cables* (Medellín: Publicación de la Empresa de Transporte Masivo del Valle de Aburrá Ltda., 2015).

greenwashing, and decision to go ahead to move ahead on the Bogotá metro, can all be understood through the lens of neoliberal risks.

Chapter Five

Conclusions and Future Work

Overview of the Argument: Insights for Climate Change Governance

A significant amount of scholarship has worked to explain why global and local actors should be more involved in climate change governance. Thesis sought to take these theories a step further and worked to conceptualize how global and local governance has combined to deliver effective and sustainable public transportation in cities. Using the framework of global governance risks, the past four chapters have addressed potential flaws in a “glocal” solution to climate change by asking if global governance inhibits or even cancels out the strengths local government can provide when addressing climate change? To help the answer to this question, Table 6 gives an overview of the major features of each of the three cases.

Overall, these three cases demonstrate that multilateral global governance incurs the political and technocratic governance risks, while multilevel global governance creates neoliberal governance risks. Looking at Bogotá during the creation of TransMilenio reveals how the multilateral global governance can create a more environmentally sustainable transportation from a technical standpoint and help overcome collective action problems by encouraging transparency. However, as the city struggled to follow through on the initial plans for the system, the innovative BRT system became an overcrowded, over politicized point of tension with low local support. The political risk helps explain this failure as the system became tied to Peñalosa and the World Bank due to their need to establish their respective governing authority. These ties made the system overly political while also decreasing a sense of local ownership. The political risk combined with the technocratic risk encouraged city elite to place the global above the local as they negotiated between divergent interests.

Table 6: Case Overview

	Bogotá (1996–2006): Political and Technocratic Risks in the Creation of TransMilenio	Medellín (2008–Present): Neoliberal Risks and Social Urbanism	Bogotá (2016–Present): Neoliberal Risks and <i>Cultura Ciudadana</i>
Key System Features	TransMilenio- Bus Rapid Transit (BRT), Private Bus Companies Contract with government, CEO appointed by Mayor	Metro de Medellín, Metro Culture (Pre-Increase in Globalness), Metrocable, Tramvia (50% Mayor, 50% Governor)	TransMiCable, CulturaTransMi, Metro de Bogotá, Electric Bus Problems
Crisis	<i>La Guerra Centavo</i> (The Penny Wars)	Economic decline to a rise in cartel violence and elite retreat	Low support for TransMilenio + Rise of Medellín
Endogenous Environment	-Poor municipal bureaucracy -Social, <i>cultura ciudadana</i> + Decentralization, Taxes	+ <i>Paisa</i> pride + Social Urbanism +EPM, High Taxes	+/- <i>cultura ciudadana</i> - “Adam and Eve Complex”
Type of Global Governance	Multilateral (World Bank + IDB)	Multilevel (Spanish-German Consortium, Innovative City of the Year)	Multilevel (Remaining multilateral, but new focus on private)
Strengths and Weaknesses	+ Bici, Ciclovía, coordination with other systems + Strong planning - Protests, “Adam and Eve” complex	+ Participatory Budgeting + Metro Culture +Green Imagery -Bike system, Motorcycles - Elite value global > local	+ Implements new projects + Focus on <i>Cultura Ciudadana</i> -Volvo scandal -Low political support -“Greenwashing”

Source: Eleanor Jackson

The case of Medellín highlights the neoliberal governance risk of prioritizing symbolic action to the point of discouraging or impeding real action and allowing elites to quietly profit from unsustainable production models as accountability spreads too thin. The city’s decision to fund highways and public transit, the Metro’s role in promoting Medellín’s “clean green” image and encouraging tourism, and the Metro’s hesitancy to integrate with other modes of sustainable

transit, all correspond with the neoliberal risk. However, Medellín's story also reveals the importance of the endogenous environment as the cultivating of social cohesion through Metro Culture and the use of planning tools, like participatory budgeting, help the city balance the global and the local. This strength becomes particularly noticeable when comparing the Medellín's experience with multilevel governance to Bogotá's current situation. Under Peñalosa, Bogotá has begun to exhibit signs of succumbing to the neoliberal risks as evidenced by the Volvo controversy. The weaker social fabric in Bogotá has left the city more susceptible to the global governance risks.

When it comes to implementing sustainable transportation and the potential pitfalls in these projects, we see that the elite in a city are responsible for negotiating global and local conflicts of interest and they often fall prey to global governance risks that decrease long-term sustainability and obscure other local issues. Regardless of the type of governance risk, all three cases show that an increase in "globalness" tends to correspond with an increase in sustainable discourse, in appeals to market liberal ideology, and in the power of private corporations and elites. The link between the global and the green becomes particularly important in understanding the complexities of understanding and constructing authority in the new global system. Global actors have used climate change to construct their moral authority in the new world order and used their financial power to influence local action. Within the global regime, cities have effectively become clients competing for funds. In both Bogotá and Medellín, urban environmental concerns resonate with local actors, but find far more influence among the global and the elite. While citizens in Bogotá have begun to care more about air pollution, in part as a response to the Volvo bus scandals, in general the transport companies and local governments

promote the sustainability of the public transport system to global audiences while local actors remain more concerned with security, price, and convenience.

The key question moving forward in this work consists a complex moral dilemma. How can we overcome the real challenges created by climate change while environmentalism is increasingly used to legitimize environmentally unfriendly actors and obscure the origins of these issues? While this thesis did not provide a solution to that question, it worked to further articulate the costs and benefits of different governance tactics and reiterate the importance of continuing to look for solutions to this paradox.

Weaknesses in the Theoretical Framework and Questions for Future Research

Of course, this theoretical framework still has many weaknesses. First off, this framework downplays the historical factors at play in these issues, which makes it more difficult to explain some of the local complexities of governance and their relationship to longstanding global networks. I attempt to bring in some historical factors from both in analyzing the cities and developing governance framework; however, a fuller analysis would weave these factors in more fully. This work also entirely ignores the role of national governments in governing over climate change issues. While they are implicitly part of the story due to their influence on both the autonomy of urban governance and the power dynamics of global governance, a full analysis of the effects of global and local interactions on climate change governance would both articulate the national government's role to provide more specific arguments as to why or why not the national government should act as an intermediary between the vertical governance levels.

With more time, I would carry out my initial plan to conduct a well-grounded discourse analysis similar to that in TCCG using the language found POTs, newspapers, advertisements, company/institutional reports, and interviews. To understand at how these actors, construct their

authority linguistically in comparison with how other actors interpret and uptake their authority, a substantive and careful analysis of both quantitative and qualitative linguistic data is necessary to fully unpack how climate change governance is differently employed across groups. This more extensive and systemic discourse analysis would not only be fruitful for tracking power dynamics, but it could also help to better clarify the role of media in the cities. The role of media appears particularly important in these cases given the *paisa* pride that discourages the Medellín elite from criticizing their city. When thinking about this discourse analysis, it would be important to draw in as many interviews as possible given that focusing on written text and formal plans from both local governments and global institutions creates a bias towards global and elite systems as the outward facing and edited material is often designed for them.

Finally, going forward, sharpening the evaluation of the environmental outcomes will be a major challenge given the measures of success are entirely baked into the global governing systems and people still contest even the most well-established metrics. Similarly, measuring “globalness” in cities is incredibly imprecise and many of the metrics favor financial flows. Defining stages of globalness and degrees of globalness while useful, may inadvertently imply that these areas were not always part of some larger global networks. Finally, using words like “response” when looking at how cities interact with global governance may signal that the city acts in response to these groups when in fact many of the examples in these cases are part of a feedback loop.

Appendix A: Interviews

1. Andres Ortiz- Head of Urban Planning for Bogotá, connected by Carlos Moreno, advisor to President Uribe.
2. Angelica Castro- Ex CEO TransMilenio, connected through Astrid Martinez
3. Ana- Advocates for the rights of graffiti artists, works for the cities most popular graffiti tour, degree in political science, met on graffiti tour
4. Astrid Martinez - Ex CEO of TransMilenio, currently works at a Fedesarollo, a local think tank, connected to me by Ethan Schuler, fellow Colby Senior, who interviewed her for his thesis as well.
5. Carlos Cadena - PhD on Sustainable Urban Transporte, works for URBAM (the urban environment research center of EAFIT that frequently contracts with the government on urban development projects) founder of Ciudad Verde a big environmental NGO in Bogotá and Medellín (SUPER willing to help), connected through Professor Julio Dávila (professor at University College London)
6. Diego Zapata- Works at EAFIT and has conducted studies for the expansion of the metro, now does AI at Ruta N, one of the largest entrepreneur hubs in Medellín, connected through Emmanuel Ospina.
7. Emmanuel Ospina- Masters student at URBAM working on biking and pedestrian rights, cold email.
8. Fernando Rojas- PhD on TransMilenio, huge transportation activist, currently working for a PR firm as a retraining time. (SUPER willing to help), connected by Zoraida Rueda
9. Ingrid Joanna Portilla Galindo, Director of Transport and Infrastructure for the Secretary of Mobility connected by Nancy Sanchez
10. Juan Alvaro, Head of Sociology, and Alexander Castano, Mobility Specialist in the Planning Department, they spent 3 hours giving me presentation and 3 hours taking me on a tour of every aspect of the metro, connected through Rodrigo Puyo, prominent lawyers in Medellín.
11. Laura Rodriguez- Member of NGO Despacio, did a masters on TransMilenio, they have worked with TransMilenio on promoting women's rights and safety, cold emailed.
12. Lina Lopez, co-created the city's bike program, currently works for C40, connected through Carlos Cadena.
13. Ramiro Marquez- CEO of Metro de Medellín for 14 years, solved the financial controversy with the Spanish/German group, connected through Carlos Moreno, advisor to President Duque.
14. Zoraida Rueda - City Council Bogotá, connected by Nancy Sanchez, journalist and former Oak Fellow

Appendix B: Examples of Green and Neoliberal Terms

Green Terms	Neoliberal Terms
Bikes	growth
Emissions	Competitive, Efficient
Verde	Innovative
Ecoeficiencia	Statistics
Eficiencia	cost effective
Medio Ambiente	Development, developing
Calidad del Aire	Any Global Institution or Company
Aire	Free Trade
Pollución	globalization, foreign affairs
Electrico	"liveable cities"
Sostenibilidad	public goods
Sostenible	the Enlightenment
Ambiental	economic laws
“Ciudad Verde”	Any US university
Limpia	neoliberal
Civolica	"liveable cities"
cycling/walking	public private partnerships

These words come from the literature and from a statistics project I conducted this semester that surveyed the relationship between green and neoliberal terminology in 80 randomly selected articles on TransMilenio and the Metro from 2008 to the present. I did not include the results in this paper due to the small amount of data collected; however, building out this dataset would be helpful for any future research.

Appendix C: Mayors and Presidents

President	Bogotá	Medellín
Julio César Turbay Ayala (1978-82)	Hernando Dúran Dussán (1978-82)	Jorge Valencia Jaramillo (1978-79) Bernardo Guerra Serna (1979-81) Jose Jaime Nicholls (1981-82)
Belisario Betancur Cuartas (1982-86) (Medellín)	Augusto Ramirez Ocampo (1982-84) Hisnardo Ardila (1985-86)	Alvaro Uribe (1982-82) Juan Gaviria Gutierrez (1983-84) Pablo Pelaez Gonzalez (1984-86)
Virgilio Barco Vargas (1986-90) (Bogotá and World Bank connections)	Julio César Sánchez (1986-88) Andres Pastrana Arango (1988-90) *First Elected*	William Jaramillo Gomez (1988-1990)
César Gaviria Trujillo (1990-94) (enemy of Escobar)	Juan Martín Caicedo Ferrer (1991-92) Jaime Castro (1992-94)	Omar Florez Velez (1990-92)
Ernesto Samper Pizano (1994-98) (Bogotá)	Antanas Mockus (1995-96) Paul Bromberg Silverstein (1997-98)	Luis Alfredo Ramos (1992-95) Sergio Naranjo (1995-98)
Andres Pastrana Arango (1998-2002) Alvaro Uribe Velez (2002-2010) (Medellín) (Colombia First)	Enrique Peñalosa (1998-2000) Antanas Mockus (2001-2003) Luis Eduardo Garzón (2004-2007) (PDI, Independent Democratic Pole)	Juan Gomez Martinez (1998-2001) Luis Perez Gutierrez (2001-2004) Sergio Fajardo (2004-2008)
Juan Manuel Santos Calderon (2010-2018) (National Unity) (Bogotá) (Family owned ElTiempo)	Samuel Moreno Rojas (2008-2011) (removed for corruption) Gustavo Petro Urrego 2012-2014 (Guerrilla past) 2 Acting Mayors Gustavo Petro Urrego (2014-2015) Enrique Peñalosa Londono 2016-Present	Alonso Salazar (2008-2012) Anibal Gaviria (2012-2016)
Ivan Duque Marquez (2018-Present) (Democratic Center)		Federico Gutierrez (2016-Present)

Bibliography

- “About Us.” Accessed November 30, 2018. <https://www.epm.com.co/site/investors/general-information/about-us>.
- Acuto, Michele. “The New Climate Leaders?,” February 2013. <https://doi.org/10.1017/S0260210512000502>.
- Andonova, Liliana. *Governance Entrepreneurs: International Organizations and the Rise of Global Public-Private Partnerships*. Business and Public Policy. Cambridge: Cambridge University Press, 2017.
- “Approval_by_Mail_Colombia_Technological_Transformation_Program_for_Bogota_Integrated_Public_Transport_System_IDB_comments_WRI.Pdf.” Accessed December 18, 2018. https://www.climateinvestmentfunds.org/sites/cif_enc/files/Approval_by_Mail_Colombia_Technological_Transformation_Program_for_Bogota_Integrated_Public_Transport_System_IDB_comments_WRI.pdf.
- Ardila, A. “On the Industrial Backward Linkages of Bus Rapid Transit: The TransMilenio Case in Bogota.” *Transportation and Economic Development Conference*, n.d.
- Ardila Gómez, Arturo. “Transit Planning in Curitiba and Bogotá : Roles in Interaction, Risk, and Change.” Thesis, Massachusetts Institute of Technology, 2004. <http://dspace.mit.edu/handle/1721.1/28791>.
- Bansard, Jennifer, Phillip Pattberg, and Oscar Widerberg. “Cities to the Rescue? Assessing the Performance of Transnational Municipal Networks in Global Climate Governance.” *International Environmental Agreements* 17 (2016): 229–46. <https://doi.org/10.1007/s10784-016-9318-9>.
- Bassett, T, and A. Marpillero-Colomina. “Sustaining Mobility: Bus Rapid Transit and the Role of Local Politics in Bogotá.” *Latin American Perspectives* 40, no. 2 (2013): 125–45.
- Beard, Victoria A, Anjali Mahendra, and Michael I Westphal. “Framing the Challenges and Opportunities,” n.d., 48.
- Bejarano, Mauricio, Lina M. Ceballos, and Jorge Maya. “A User-Centred Assessment of a New Bicycle Sharing System in Medellín.” *Transportation Research Part F: Traffic Psychology and Behaviour* 44 (January 1, 2017): 145–58. <https://doi.org/10.1016/j.trf.2016.11.004>.
- “Bogotanos: Más Optimistas Pero Más Insatisfechos Con El Transporte, La Seguridad y El Medio Ambiente de La Ciudad.” *Bogotá Cómo Vamos* (blog), November 15, 2018. <http://www.bogotacomovamos.org/blog/bogotanos-mas-optimistas-pero-mas-insatisfechos-con-la-seguridad-el-transporte-y-el-medio-ambiente-de-la-ciudad/>.
- Brand, Peter. “Governing Inequality in the South through the Barcelona Model: ‘Social Urbanism’ in Medellín, Colombia,” n.d., 17.
- Brand, Peter. “Green Subjection: The Politics of Neoliberal Urban Environmental Management.” *International Journal of Urban and Regional Research* 31, no. 3 (September 1, 2007): 616–32. <https://doi.org/10.1111/j.1468-2427.2007.00748.x>.
- Brand, Peter. “La construcción ambiental del bienestar urbano. Caso de Medellín, Colombia.” *Economía Sociedad y Territorio* 0, no. 0 (January 1, 2001). <https://doi.org/10.22136/est002001363>.
- Bulkeley, Harriet, Liliana B. Andonova, Michele M. Betsill, Daniel Compagnon, Thomas Hale,

- Matthew J. Hoffmann, Peter Newell, et al. *Transnational Climate Change Governance*. Cambridge University Press, 2014. <https://doi.org/10.1017/CBO9781107706033>.
- Bulkeley, Harriet, Liliana Andonova, Michele M. Betsill, Daniel Compagnon, Thomas Hale, Matthew J. Hoffmann, Peter Newell, Matthew Paterson, Charles Roger, and Stacy D. VanDeveer. *Transnational Climate Change Governance*. Cambridge: Cambridge University Press, 2014. <https://doi.org/10.1017/CBO9781107706033>.
- Bulkeley, Harriet, and Michele Betsill. "Rethinking Sustainable Cities: Multilevel Governance and the 'Urban' Politics of Climate Change." *Environmental Politics* 14, no. 1 (2005): 42–63. <https://doi.org/10.1080/0964401042000310178>.
- Bulkeley, Harriet, and Kristine Kern. "Local Government and the Governing of Climate Change in Germany and the UK." *Urban Studies (Routledge)* 43, no. 12 (November 2006): 2237–59.
- "Buses eléctricos para TransMilenio: una contrarreloj." Text. ELESPECTADOR.COM, September 3, 2018. <https://www.elespectador.com/noticias/bogota/buses-electricos-para-TransMilenio-una-contrarreloj-articulo-810025>.
- "C40: Press Release: Bogotá and Mexico City to Receive up to \$1 Million Each in Technical Sup..." C40. Accessed November 11, 2018. https://www.c40.org/press_releases/press-release-bogota-and-mexico-city-to-receive-up-to-1-million-each-in-technical-support-for-low-carbon-resilient-transportation-infrastructure.
- Calvin, Ellis. "Small Scale/Global Ambition: Strategies of Architectural Production and Global Urban Competitiveness in Medellín, Colombia." Columbia University, 2014. <https://doi.org/10.7916/D8XP7323>.
- Castán-Broto, Vanesa, and Harriet Bulkeley. "A Survey of Urban Climate Change Experiments in 100 Cities." *Global Environmental Change* 23 (2013): 92–102.
- Chan, Chung-Shing, Lawal M. Marafa, Cecil C. Konijnendijk Van Den Bosch, and Thomas Barfoed Randrup. "Starting Conditions for the Green Branding of a City." *Journal of Destination Marketing & Management* 10 (December 1, 2018): 10–24. <https://doi.org/10.1016/j.jdmm.2018.05.006>.
- Chu, Eric, Isabelle Anguelovski, and Debra Roberts. "Climate Adaptation as Strategic Urbanism: Assessing Opportunities and Uncertainties for Equity and Inclusive Development in Cities." *Cities* 60 (February 1, 2017): 378–87. <https://doi.org/10.1016/j.cities.2016.10.016>.
- Clark, Greg. *Global Cities*. Washington, DC: Brookings Institute Press, 2016.
- "Co-Benefits of Sustainable Final Lowres.Pdf." Accessed December 4, 2018. <https://international.kk.dk/sites/international.kk.dk/files/uploaded-files/Co-Benefits%20of%20Sustainable%20final%20lowres.pdf>.
- "Colombia: Fuera Uber!" Accessed November 12, 2018. https://www.latinnews.com/component/k2/item/65775.html?period=%20&archive=3&se arch=Bus%20AND%20Bogota&Itemid=6&cat_id=798691:colombia-fuera-uber.
- "Colombia y la OCDE: Rezago fiscal en contexto histórico | Tiempo y economía." Accessed November 11, 2018. <https://revistas.utadeo.edu.co/index.php/TyE/article/view/1097>.
- "Colombian Cities: More Livable, Green, and Inclusive." Text/HTML. World Bank. Accessed March 19, 2019. <http://projects-beta.worldbank.org/en/results/2013/04/03/colombian-cities-more-livable-green-and-inclusive>.
- "Comparan sistema de transporte TransMilenio con Metro de Medellín;" *Noticias Financieras; Miami*. April 12, 2004.

- “Construyendo Nuestra Séptima.” *Bogotá Cómo Vamos* (blog). Accessed February 26, 2019. <http://www.bogotacomovamos.org/proyectos/construyendo-nuestra-septima/>.
- Corfee-Morlot, J, L Kamal-Chaoui, M G Donovan, I Cochran, A Robert, and P J Teasdale. “Cities, Climate Change and Multilevel Governance,” n.d., 125.
- “Coupe_antecedentes_institucionales_y_de_planeacion.Pdf.” Accessed March 3, 2019. https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/coupe_antecedentes_institucionales_y_de_planeacion.pdf.
- Crowson, N.J. *Britain and Europe: A Political History since 1918*. New York, NY: Routledge, 2011.
- Dávila, Julio. “Urban Fragmentation, ‘good Governance’ and the Emergence of the Competitive City.” In *The Routledge Handbook on Cities of the Global South*, edited by Parnell, S and Oldfield, S, 474–86. London, UK: Routledge, 2014.
- “Datos Abiertos Colombia.” la plataforma de datos abiertos del gobierno colombiano. Accessed March 19, 2019. <https://www.datos.gov.co/browse?q=F-TWITTER-ESPA%C3%91OL&sortBy=relevan>
- “Debates de Gobierno Urbano 8 - Instituto de Estudios Urbanos.” Accessed November 11, 2018. <http://www.institutodeestudiosurbanos.info/observatorio-de-gobierno-urbano/publicaciones-de-debates-urbanos/1401-debates-de-gobierno-urbano-8>.
- Echavarria, Juan Jose, Carolina Renteria, and Roberto Steiner. “Decentralization and Bailouts in Colombia.” *SSRN Electronic Journal*, 2002. <https://doi.org/10.2139/ssrn.1814702>.
- Eco-Business. “Medellín Wins the Lee Kuan Yew World City Prize.” Eco-Business. Accessed November 28, 2018. <http://www.eco-business.com/videos/Medellin-wins-the-lee-kuan-yew-world-city-prize/>.
- “EFTA through the Years | European Free Trade Association.” Accessed March 11, 2019. <https://www.efta.int/About-EFTA/EFTA-through-years-747>.
- “Encuesta de Percepción Bogotá Cómo Vamos 2004.” Accessed November 11, 2018. <http://www.bogotacomovamos.org/documentos/encuesta-de-percepcion-bogota-como-vamos-2004/>.
- “Encuesta de Percepción Bogotá Cómo Vamos 2010.” *Bogotá Cómo Vamos* (blog). Accessed March 13, 2019. <http://www.bogotacomovamos.org/documentos/encuesta-de-percepcion-bogota-como-vamos-2010/>.
- “Encuesta de Percepción Bogotá Cómo Vamos 2018.” *Bogotá Cómo Vamos*.
- “Encuesta de Percepción Medellín Cómo Vamos 2006.” *Medellín Cómo Vamos*.
- “Encuesta de Percepción Medellín Cómo Vamos 2012.” *Medellín Cómo Vamos*.
- “Encuesta de Percepción Medellín Cómo Vamos 2018.” *Medellín Cómo Vamos*.
- Epting, Shane. “The Peñalosa Principle of Transportation Democracy: Lessons from Bogotá on the Morality of Urban Mobility.” *Science and Engineering Ethics* 23, no. 4 (August 2017): 1085–96. <https://doi.org/10.1007/s11948-016-9839-1>.
- Escobar, Luis Fernando González. “¡Un ‘premio Nobel’ para Medellín!,” n.d., 8.
- Eslava, Luis. *Local Space, Global Life: The Everyday Operation of International Law and Development*. Cambridge University Press, 2015.
- Figueiredo, Paulo Negreiros. “Implications Of Innovation For Inclusive Growth: A Study Of Medellín, Colombia’s Metro System And Integral Urban Projects,” N.D., 76.
- “Financial Innovation Lab | Iadb.” Accessed November 11, 2018. <https://www.iadb.org/en/sector/financial-markets/financial-innovation-lab/shifting-investments-from-diesel-to-electric-urban-buses%2C20115.html>.

- Foucault, Michel. "Governmentality", in G. Burchell, C. Gordon and P. Miller (eds) *The Foucault effect: studies in governmentality*, Chicago: University of Chicago Press, 1991, 87 – 104.
- Fossaert, Philippe, and Jaime Morales. "Medellín's Metamorphosis: An Interview with Mayor Aníbal Gaviria | McKinsey." Accessed November 29, 2018. <https://www.mckinsey.com/industries/public-sector/our-insights/Medellíns-metamorphosis-an-interview-with-mayor-anibal-gaviria>.
- "Francia ofrece ayuda para el tema agrario." *El Espectador; Bogotá*. October 8, 2014, sec. Noticias. <https://search.proquest.com/globalnews/docview/1609026185/citation/88075964A6FD45CEPQ/1>.
- Gamble, Andrew. *Between Europe and America: The Future of British Politics*. New York, NY: Palgrave MacMillan, 2003.
- Garcia Ferrari, Soledad, Harry Smith, Francoise Coupe, and Helena Rivera. "City Profile: Medellín." *Cities: The International Journal of Urban Policy and Planning*, December 2017.
- "Gestión Ambiental En Cifras." Accessed March 19, 2019. http://pruebas-TransMilenio.nexura.com/publicaciones/146136/gestion_ambiental_en_cifras/.
- Gilbert, Alan. "Good Urban Governance: Evidence from a Model City?" *Bulletin of Latin American Research* 25, no. 3 (July 2006): 392–419. <https://doi.org/10.1111/j.0261-3050.2006.00204.x>.
- Gonzalo Felipe, Caicedo Esper. "Project Finance en infraestructura urbana: caso de Medellín Colombia retos y oportunidades." Mastería en Administración Financiera - MAF, Universidad EAFIT, 2017.
- Guerrero, Alejandro. "Rebuilding Trust in Government via Service Delivery: The Case of Medellín, Colombia," n.d., 28.
- "Hacia Nuevas Formas de Movilidad Sostenible En Las Ciudades." *Bogotá Cómo Vamos* (blog), January 28, 2019. <http://www.bogotacomovamos.org/blog/hacia-nuevas-formas-de-movilidad-sostenible-en-las-ciudades/>.
- Hackworth, Jason. *The Neoliberal City: Governance, Ideology, and Development in American Urbanism*. Ithaca, New York: Cornell University Press, 2007.
- Harriet Bulkeley, Vanesa Castán Broto, and Gareth A.S. Edwards. *An Urban Politics of Climate Change: Experimentation and the Governing of Socio-Technical Transitions*. London, UK: Routledge, 2015.
- Hidalgo, D, and J Velásquez. "Chapter 4: Colombia." In *The Urban Transport Crisis in Emerging Economies*, edited by D Pojani and D Stead, 59–75. Urban Book Series, 2017.
- Homsy, George C. "Size, Sustainability, and Urban Climate Planning in a Multilevel Governance Framework." In *Climate Change in Cities*, edited by Sara Hughes, Eric K. Chu, and Susan G. Mason, 19–38. Cham: Springer International Publishing, 2018. https://doi.org/10.1007/978-3-319-65003-6_2.
- Hooghe, Liesbet, and Gary Marks. "A Postfunctionalist Theory of European Integration: From Permissive Consensus to Constraining Dissensus." *British Journal of Political Science* 39, no. 01 (January 2009): 1. <https://doi.org/10.1017/S0007123408000409>.
- Hunt, S. "Conflict and Convergence between Experts and Citizens: Bogotá's TransMilenio." *Latin American Perspectives* 44, no. 2 (2017): 91–110. <https://doi.org/10.1177/009458X16668319>.

- IDB, Fundacion Ecología y Desarrollo. "Study of Social Entrepreneurship and Innovation Ecosystems in the Latin American-Pacific Countries: Country Analysis: Colombia.," 2016.
- "Infografía: Encuesta de Percepción Ciudadana de Medellín, 2018." *Medellín Cómo Vamos* (blog), November 30, 2018. <https://www.Medellincomovamos.org/download/infografia-encuesta-de-percepcion-ciudadana-de-Medellin-2018/>.
- "Inmisiones - Datos De Contaminantes Y Climatológicos 2016 | Datos Abiertos Colombia." Accessed March 19, 2019. <https://www.Datos.Gov.Co/Ambiente-Y-Desarrollo-Sostenible/Inmisiones-Datos-De-Contaminantes-Y-Climatol-Gicos/V3ny-6yj9>.
- Instituto Caro y Cuervo. "F-TWITTER-ESPAÑOL (Parte 1 de 8): Frecuencias de Palabras En Español En Twitter Para 333 Ciudades de Latinoamérica, España y Los Estados Unidos | Datos Abiertos Colombia." Bogotá: Grupo de Investigación en Lingüística, November 27, 2017. <https://www.datos.gov.co/Ciencia-Tecnolog-a-e-Innovaci-n/F-TWITTER-ESPA-OL-parte-1-de-8-Frecuencias-de-pala/9c5s-m3ku>.
- "Informe de Calidad de Vida en Bogotá" *Bogotá ComoVamos*. 2017.
- "Investigacion-Planes-de-Desarrollo-Local.Pdf." Accessed March 3, 2019. <http://www.eafit.edu.co/centros/analisis-politico/publicaciones/observatorio/Documents/investigacion-planes-de-desarrollo-local.pdf>.
- Jaffe, Eric. "Why Are People Rioting Over Bogotá's Public Transit System?" CityLab. Accessed November 28, 2018. <http://www.theatlanticcities.com/commute/2012/03/why-are-people-rioting-over-bogotas-public-transit-system/1537/>.
- Joseph, Gilbert M., and Greg Grandin. *A Century of Revolution: Insurgent and Counterinsurgent Violence during Latin America's Long Cold War*. Duke University Press, 2010.
- Kaufmann, Daniel, Frannie Léautier, and Massimo Mastruzzi. "An Empirical Exploration into Global Determinants of Urban Performance," n.d., 40.
- King, Robin, Juan Miguel Velasquez, Matthew Raifman, Nicolae Duduta, Nick Price, and Alizah Epstein. "Report by: Aileen Carrigan, Senior Associate," n.d., 151.
- Koch, Florian. "Mainstreaming Adaptation: A Content Analysis of Political Agendas in Colombian Cities." *Climate and Development* 10, no. 2 (February 17, 2018): 179–92. <https://doi.org/10.1080/17565529.2016.1223592>.
- Krellenberg, Kerstin, Ricardo Jordán, Johannes Rehner, Anke Schwarz, Benjamín Infante, Katrin Barth, and Alejandra Pérez. "Adaptation to Climate Change in Megacities of Latin America Regional Learning Network of the Research Project ClimateAdaptationSantiago (CAS)," n.d., 99.
- La Junta Directiva de la Empresa de Transporte Masivo de Valle de Aburrá. "Por Medio de Cual Se Adopta El Reglamento de Contratación de La Empresa de Transporte Masivo de Valle de Aburrá." Metro de Medellín, 2007. <https://www.metrodeMedellin.gov.co/Portals/3/Images/Contenido/NORMATIVIDAD/reglamento-contratacion.pdf>.
- "La UN En Los Medios - UNIMEDIOS: Universidad Nacional de Colombia." Accessed November 27, 2018. [http://agenciadenoticias.unal.edu.co/enlosmedios.html&tx_ttnews\[tt_news\]=](http://agenciadenoticias.unal.edu.co/enlosmedios.html&tx_ttnews[tt_news]=).
- Lampis, Andrea. "Cities and Climate Change Challenges: Institutions, Policy Style and Adaptation Capacity in Bogotá." *International Journal of Urban and Regional Research*

- 37, no. 6 (November 1, 2013): 1879–1901. <https://doi.org/10.1111/1468-2427.12034>.
- Las2orillas. “Medellín vs. Bogotá En Movilidad.” *Las2orillas* (blog), February 3, 2015. <https://www.las2orillas.co/Medellín-vs-bogota-en-movilidad/>.
- Lascar Posada, Angélica, María de los Ángeles González Pérez, Samira Kadamani, and Juliette Ospina. “Design Value in Citizen’s Safety: Bogotá City-Hall 1995–2003.” *City, Culture and Society* 13 (June 1, 2018): 22–31. <https://doi.org/10.1016/j.ccs.2017.06.003>.
- “Legal Controversy Due to the Arrival of Ministers to the Metro Board.” Accessed April 2, 2019. https://www.elcolombiano.com/historico/polemica_juridica_por_llegada_de_ministros_a_la_junta_del_metro-KWEC_282945.
- Lessmann, Christian. “Regional Inequality and Decentralization: An Empirical Analysis.” *Environment and Planning A: Economy and Space* 44, no. 6 (June 1, 2012): 1363–88. <https://doi.org/10.1068/a44267>.
- Lindau, Luis Antonio, Dario Hidalgo, and Adriana de Almeida Lobo. “Barriers to Planning and Implementing Bus Rapid Transit Systems.” *Research in Transportation Economics*, Competition and Ownership in Land Passenger Transport (selected papers from the Thredbo 13 conference), 48 (December 1, 2014): 9–15. <https://doi.org/10.1016/j.retrec.2014.09.026>.
- Lopez, Miguel Rodriguez. “Disabling the Steering Wheel? National and International Actors’ Climate Change Mitigation Strategies in Latin America,” n.d., 27.
- “Los Convenios de Cooperación Empresarial No Son La Mejor Alternativa Para La Modernización Del Transporte Público En Medellín y La Región Metropolitana | Hábitat.” *Medellín Cómo Vamos* (blog), March 27, 2015. <https://www.Medellíncomovamos.org/los-convenios-de-cooperaci-n-empresarial-no-son-la-mejor-alternativa-para-la-modernizaci-n-del-trans/>.
- “Más Allá de Transporte: Movilidad Urbana Sostenible - Instituto de Estudios Urbanos.” Accessed November 27, 2018. <http://ie.u.unal.edu.co/noticias-del-ieu/item/del-transporte-a-la-movilidad-urbana-sostenible>.
- “MAYOR WHO MOONED FINDS HIS STAR RISING IN BOGOTA.” *Washington Post*, June 14, 1995. <https://www.washingtonpost.com/archive/politics/1995/06/14/mayor-who-mooned-finds-his-star-rising-in-bogota/86acff6d-bce9-4dff-b715-ce47e0f0e44c/>.
- “MEData.” Accessed February 1, 2019. <http://medata.gov.co/>.
- “Medellín Da Ejemplo a Bogotá En La Implementación Del Sistema de Bicicletas Públicas – Instituto de Estudios Urbanos.” Accessed November 27, 2018. <http://ie.u.unal.edu.co/noticias-del-ieu/item/Medellín-da-ejemplo-a-bogota-en-la-implementacion-del-sistema-de-bicicletas-publicas>.
- “Medellín Espera Que Gobierno de Duque Sí Le Cumpla Con Ley de Metros – ELMUNDO.COM.” Accessed December 5, 2018. <http://www.elmundo.com/noticia/Medellín-espera-que-Gobierno-de-Duque-si-le-cumpla-con-Ley-de-Metros/374215>.
- “Medellín’s Challenge: To Become a Global City.” *ACI Medellín* (blog), March 1, 2018. <http://aciMedellín.org/Medellíns-challenge-to-become-a-global-city/?lang=en>.
- Medina, Pilar Andrade, and Diana Carolina Bermúdez Cárdenas. “La Sostenibilidad Ambiental Urbana En Colombia.” *Bitácora Urbano Territorial; Bogotá* 2, no. 17 (2010): 73–93.
- Meyer, John W., Shawn M. Pope, and Andrew Isaacson. “Legitimizing the

- Transnational Corporation in a Stateless World Society.” Chapter. In *Corporate Social Responsibility in a Globalizing World*, edited by Kiyoteru Tsutsui and Alwyn Lim, 27–72. Business and Public Policy. Cambridge: Cambridge University Press, 2015. doi:10.1017/CBO9781316162354.002.
- Bus Rapid Transit in Developing Cities.” Institute for Transportation and Development Policy. Accessed November 18, 2018. <https://www.itdp.org/category/location/south-america/colombia/>.
- Mejía-Dugand, Santiago, Olof Hjelm, and Leo Baas. “Public Utility Companies in Liberalized Markets -- The Impact of Management Models on Local and Regional Stability.” *Utilities Policy*, 2017.
- Münchau, Wolfgang. “Norway Shows the UK a Better Way to Brexit.” *Financial Times*, March 10, 2019. <https://www.ft.com/content/046006ec-41bd-11e9-9bee-efab61506f44>.
- Myers, David, and Henry Dietz, eds. *Capital City Politics In Latin America*. United States: Lynne Rienner Publishers, 2002.
- Newman, Joshua. *Governing Private Partnerships*. Canada: McGill-Queen’s University Press, 2017.
- “Nuevo gerente del Metro de Medellín, un hombre técnico.” *El Espectador; Bogotá*. July 28, 2016, sec. Noticias. <https://search.proquest.com/globalnews/docview/1807434356/citation/6BF71C1DA76A42C6PQ/2>.
- OECD. “Integrity and Citizen Participation in Regional Colombia.” OECD Territorial Reviews: Colombia, 2014.
- “OECD Encironmental Performance Revies: Colombia,” 2014.
- “Policy Making Environment.” OECD Territorial Reviews: Colombia, 2014.
- “Sub-National Public Finance in Colombia.” OECD Territorial Reviews: Colombia, 2014.
- “Organizational Structure.” Accessed November 27, 2018. <https://www.metrodeMedellin.gov.co/en/whoweare/organizationalstructure>.
- Parnell, Susan. “Defining a Global Urban Development Agenda.” *World Development* 78 (February 1, 2016): 529–40. <https://doi.org/10.1016/j.worlddev.2015.10.028>.
- “Participatory Budgeting Is Music To Medellín’s Poor.” NPR.org. Accessed March 12, 2019. <https://www.npr.org/2011/04/20/135152789/participatory-budgeting-is-music-to-Medellin-s-poor>.
- Peñalosa, Enrique. “1a The Role of Transport in Urban Development Policy,” n.d., 22.
- Peñalosa, Enrique. *Why Buses Represent Democracy in Action*. Accessed December 6, 2018. https://www.ted.com/talks/enrique_Peñalosa_why_buses_represent_democracy_in_action.
- Pino, Juan Federico. “Entre democracias y autoritarismos: una mirada crítica al estudio de la democracia subnacional en Colombia y Latinoamérica.” *Colombia Internacional* 91 (July 1, 2017): 215–42. <https://doi.org/10.7440/colombiaint91.2017.07>.
- Porras, Ana María Ramos. “ANÁLISIS DEL TRANSPORTE PÚBLICO EN UNA ECONOMÍA INTELIGENTE: ESTUDIO DE CASO LIMA Y MEDELLÍN,” n.d., 72.
- “Presentación: Encuesta de Percepción Ciudadana de Medellín, 2018.” *Medellín Cómo Vamos* (blog), November 30, 2018. <https://www.Medellincomovamos.org/download/presentacion-encuesta-de-percepcion-ciudadana-de-Medellin-2018/>.
- “Proveedores y Contratistas.” Accessed February 1, 2019.

- <https://www.metrodeMedellin.gov.co/proveedoresycontratistas>.
 “Publicados Los Prepliegos Para La Licitación En TransMilenio.” Accessed November 28, 2018. <http://www.TransMilenio.gov.co/publicaciones.php?dPrint=1&id=150008>.
- Pulido, Daniel, Georges Darido, Ramon Munoz-Raskin, and Moody Joanna. *The Urban Rail Development Handbook*. Wahsington, DC: World Bank, 2018.
<https://openknowledge.worldbank.org/handle/10986/30392> License: CC BY 3.0 IGO.
 “Region: Urbanisation Increases the Need for ‘Smart Cities.’” Accessed November 12, 2018.
https://www.latinnews.com/component/k2/item/69520.html?period=%20&archive=25&search=Metro%20AND%20Medellin&Itemid=6&cat_id=803163:region-urbanisation-ssincreases-the-need-for-smart-cities.
- “Reglamento-Contratacion.Pdf.” Accessed November 30, 2018.
<https://www.metrodeMedellin.gov.co/Portals/3/Images/Contenido/NORMATIVIDAD/reglamento-contratacion.pdf>.
- Restrepo, Estefanía Carvajal. “22 datos curiosos para celebrar el cumpleaños del Metro de Medellín.” www.elcolombiano.com. Accessed November 12, 2018.
<http://www.elcolombiano.com/antioquia/movilidad/datos-curiosos-del-metro-de-Medellin-DG7787984>.
- “Revista Semana.” YouTube. Accessed November 30, 2018.
<https://www.youtube.com/channel/UC4oQAvXFuNlKivYjUynQKTA>.
- “Revolcón al transporte masivo.” *El Espectador; Bogotá*. December 2, 2014, sec. Noticias.
<https://search.proquest.com/globalnews/docview/1629463135/citation/7732187CA7B54834PQ/1>.
- Rodríguez, Laura Daniela Gómez, Ángela María Herrera Puyana, and María Fernanda García Fonseca. “¿Por qué TransMilenio en Bogotá está en crisis?” *Revista Ciudades, Estados y Política* 4, no. 3 (September 1, 2017): 103–18.
- Román, M. “Governing from the Middle: The C40 Cities Leadership Group.” *Corporate Governance* 10, no. 1 (n.d.): 73–84.
- S.A.S, Editorial La República. “Siemens Instalará Tecnología de Señalización Ferroviaria En El Metro de Medellín.” Accessed February 26, 2019.
<https://www.larepublica.co/empresas/siemens-instalara-tecnologia-de-senalizacion-ferroviaria-en-el-metro-de-Medellin-2831327>.
- Scott, J., and L. Rajamani. “EU Climate Change Unilateralism.” *European Journal of International Law* 23, no. 2 (May 1, 2012): 469–94. <https://doi.org/10.1093/ejil/chs020>.
- Semana. “¿Por qué es tan difícil renovar la flota de TransMilenio?” Renovación de la flota de TransMilenio ¿Por qué es tan difícil? Accessed November 28, 2018.
<https://www.semana.com/nacion/articulo/renovacion-de-la-flota-de-TransMilenio-porque-es-tan-dificil/576058>.
- Semana. “Si no le temes al diablo témele a las motos.” Accidentes y robos en motociclistas Columna de Germán Manga, por Germán Manga. Accessed February 25, 2019.
<https://www.semana.com/opinion/articulo/accidentes-y-robos-en-motociclistas-columna-de-german-manga/554078>.
- Stienen, Angela. “Urban Technology, Conflict Education, and Disputed Space.” *Journal of Urban Technology* 16, no. 2–3 (December 1, 2009): 109–42.
<https://doi.org/10.1080/10630730903278603>.
- “Sub-National Governments of Brazil, Colombia, and Mexico Win the Gobernarte Contest with

- Gender-Sensitive Initiatives | IADB.” Accessed November 28, 2018.
<https://www.iadb.org/en/news/announcements/2016-12-07/2016-winners-of-gobernarte-award-announced%2C11680.html>.
- “Tarifas del Sistema TransMilenio.” Accessed February 25, 2019.
<https://www.TransMilenio.gov.co/publicaciones/146280/tarifas/>.
- “The Future of Latin America’s Cities.” Accessed November 12, 2018.
https://www.latinnews.com/component/k2/item/76034.html?period=%20&archive=28&search=sustainable%20AND%20bogota&Itemid=6&cat_id=812119:the-future-of-latin-america-s-cities.
- “The Macroeconomic and Financial Context of Public-Private Partnerships,” n.d.
- “The Trouble with Miracles.” *The Economist*, June 7, 2014. <https://www.economist.com/the-americas/2014/06/07/the-trouble-with-miracles>.
- Tiempo, Casa Editorial El. “Alcalde Peñalosa responde a supuestos pagos de Volvo, años atrás.” *El Tiempo*, February 18, 2019. <https://www.eltiempo.com/bogota/enrique-Peñalosa-responde-a-supuestos-pagos-de-la-empresa-volvo-anos-atras-328312>.
- . “Aún con tecnología vieja, buses híbridos contaminan 30 % menos.” *El Tiempo*, February 26, 2018. <https://www.eltiempo.com/bogota/niveles-de-contaminacion-de-buses-de-TransMilenio-187036>.
- . “El grave impacto del atraso medioambiental del sistema TransMilenio.” *El Tiempo*, April 21, 2018. <https://www.eltiempo.com/bogota/la-contaminacion-que-generan-los-TransMilenio-en-bogota-y-el-impacto-para-la-salud-207958>.
- . “Gerente de TransMilenio niega supuesto uso de folleto para favorecer campaña de Enrique Peñalosa.” *El Tiempo*, September 12, 2007. <https://www.eltiempo.com/archivo/documento/CMS-3720525>.
- . “Las motos siguen invadiendo la vía del Metroplús en Medellín.” *El Tiempo*, September 15, 2018. <https://www.eltiempo.com/colombia/Medellin/las-motos-siguen-invadiendo-via-del-metroplus-en-Medellin-268708>.
- . “Lo que sufrió Medellín para tener su metro.” *El Tiempo*, November 27, 2015. <http://www.eltiempo.com/archivo/documento/CMS-16443482>.
- . “TransMilenio recibe 1.300 millones por lo que dejó de contaminar durante 2008.” *El Tiempo*, November 19, 2009. <https://www.eltiempo.com/archivo/documento/CMS6632087>.
- Andonova, Liliana. *Governance Entrepreneurs: International Organizations and the Rise of Global Public-Private Partnerships*. Business and Public Policy. Cambridge: Cambridge University Press, 2017.
- “Bicicletas Convencionales Podrán Ingresar a Trenes de Las Líneas A y B Del Metro.” Accessed May 15, 2019. <https://www.metrodeMedellin.gov.co/ald%C3%ADa/noticiasmetro/bicisconvencionalesingresaranatrenesdelmetro>.
- Carmin J., Anguelovski I., and Roberts D. “Urban Climate Adaption in the Global South: Planning in an Emerging Policy Domain.” *Journal of Planning Education and Reserach* 32, no. 1 (2012): 357–96.
- Darío Hidalgo, and Carlos Cadena. “Medellín vs. Bogotá En Movilidad.” *Las2orillas* (blog), February 2015. <https://www.las2orillas.co/Medellin-vs-bogota-en-movilidad/>.

- Dávila, Julio. "Urban Fragmentation, 'good Governance' and the Emergence of the Competitive City." In *The Routledge Handbook on Cities of the Global South*, edited by Parnell, S and Oldfield, S, 474–86. London, UK: Routledge, 2014.
- "Manuel Santiago Mejía Correa." *La Silla Vacía*, November 2017.
<https://lasillavacia.com/quienesquien/perfilquien/manuel-santiago-mejia-correa>.
- "Projects : Municipal Development Project | The World Bank." Accessed November 24, 2018.
<http://projects.worldbank.org/P006852/municipal-development-project?lang=en>.
- Rodríguez, Laura Daniela Gómez, Ángela María Herrera Puyana, and María Fernanda García Fonseca. "¿Por qué TransMilenio en Bogotá está en crisis?" *Revista Ciudades, Estados y Política* 4, no. 3 (September 1, 2017): 103–18.
- "TransMilenio: Renewing Bogotá's Transport System." *Centre for Public Impact (CPI)* (blog). Accessed April 19, 2019. <https://www.centreforpublicimpact.org/case-study/TransMilenio/>.
- "Transparency and Access to Public Information | District Department of Mobility." Accessed February 1, 2019. <https://www.movilidadbogota.gov.co/web/transparencia>.
- "Transport Protest Chaos in Bogota," March 10, 2012, sec. Latin America & Caribbean.
<https://www.bbc.com/news/world-latin-america-17320247>.
- United Nations. "World Urbanization Prospects: The 2018 Revision," 2018.
<http://ie.u.nal.edu.co/centro-editorial/publicacionesieu/itemlist/category/17-documentos>.
- "Universidad Nacional de Colombia : Escuela Del Hábitat - Facultad de Arquitectura - Sede Medellín - Formulación Participativa de Política Pública de Regulación y Atención Integral En Medellín." Accessed November 27, 2018.
<https://arquitectura.Medellin.unal.edu.co/escuelas/habitat/ie/10-investigaciones/52-formulacion-participativa.html>.
- Valderrama Pineda, A. "How Do We Co-Produce Urban Transport Systems and the City? The Case of TransMilenio and Bogota." In *Urban Assemblages: How Actor-Network Theory Changes Urban Studies.*, 2010.
- Vinueza, Pamela Sofia Duran. "Medellín: A Model for Cities Worldwide." Text. Latin America & Caribbean: Opportunities for All, June 28, 2017.
<http://blogs.worldbank.org/latinamerica/Medellin-model-cities-worldwide>.
- "Vision Zero: Work to Save Lives in the Streets of Bogotá | District Department of Mobility." Accessed February 1, 2019. <https://www.movilidadbogota.gov.co/web/node/2282>.
- Voegtlin, C, and A Scherer. "Responsible Innovation and the Innovation of Responsibility: Governing Sustainable Development in a Globalized World." *Journal of Business Ethics* 143 (2010): 227–43.
- "Volvo y Scania Se 'Muestran Los Dientes' En Licitación de TransMilenio | ELESPECTADOR.COM." Accessed November 12, 2018.
<https://www.elespectador.com/noticias/bogota/volvo-y-scania-se-muestran-los-dientes-en-licitacion-de-TransMilenio-articulo-817801>.
- Weber, Klaus, and Sara B. Soderstrom. "Sustainability Discourse and Capitalist Variety: A Comparative Institutional Analysis." *Corporate Social Responsibility in a Globalizing World*, January 1, 2015, 218–48. <https://doi.org/10.1017/CBO9781316162354.007>.
- World Bank, "Support to the Bogotá Metro Line 1 Section 1 Project - (Series 1)," Project Report, August 2, 2018.
- . "Projects : Municipal Development Project" May 9, 1991.
<http://projects.worldbank.org/P006852/municipal-development-project?lang=en>

- “ICR Review: Co Urban Transport” Operations Evaluations Department, 2001.
- “TransMilenio Phase I PPP Contract for Bus Transport System | Public Private Partnership.” Accessed December 5, 2018. <https://ppp.worldbank.org/public-private-partnership/library/TransMilenio-phase-i-ppp-contract-bus-transport-system>.
- “Staff Appraisal Report: Bogotá Urban Transport Project” Environment and Urban Development Division, April 25, 1996.
- “Why Latin America Is Seeing a Cable-Car Boom.” *The Economist*, October 26, 2017. <https://www.economist.com/the-americas/2017/10/26/why-latin-america-is-seeing-a-cable-car-boom>.
- Zapata-Cortés, Olga Lucía. “Valorización e internacionalización de Medellín, 2008-2015 1.” *Revista; Medellín* 47, no. 126 (June 2017): 111–41. <http://dx.doi.org/10.18566/rfdcp.v47n126.a06>.
- Zhang, Xue, Mildred E. Warner, and George C. Homsy. “Environment, Equity, and Economic Development Goals: Understanding Differences in Local Economic Development Strategies.” *Economic Development Quarterly* 31, no. 3 (August 2017): 196–209. <https://doi.org/10.1177/0891242417712003>.